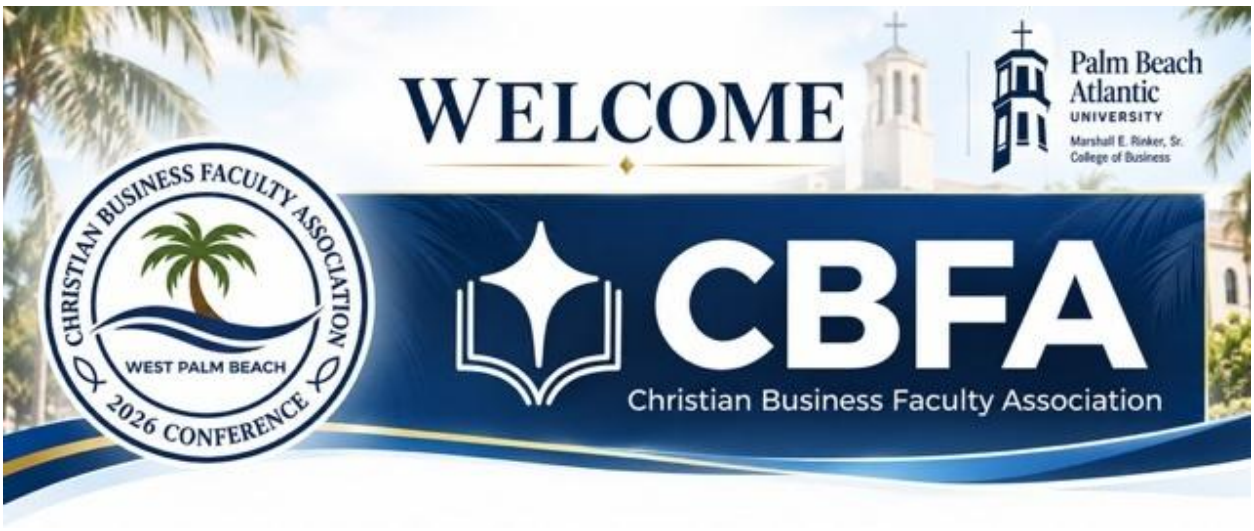
CONFERENCE PROCEEDINGS

INNOVATION AND BIBLICAL PRINCIPLES:

EMPOWERING CHRISTIAN BUSINESS LEADERS

TO DRIVE ETHICAL INNOVATION



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INNOVATION AND BIBICAL PRINCIPLES: EMPOWERING CHRISTIAN BUSINESS LEADERS TO DRIVE ETHICAL INNOVATION

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Learning the Language of Business: An Intentionally Designed Experiential Campus Partnership in Principles of Accounting

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Abstract

Accounting is often described as the language of business, yet introductory accounting courses can struggle to create authentic opportunities for learners to experience this. For many students, the introductory accounting course is their first and only accounting course, making it an important opportunity for faculty to intentionally design authentic learning experiences that connect conceptual knowledge with practice while developing professional skills. This paper examines an intentionally designed experiential campus partnership implemented in Principles of Accounting II at a small private liberal arts university. Luke 14:28 served as a recurring theme throughout the course. The learning experience was intentionally structured to balance authenticity with support. Learning was examined using a mixed-methods design. Group-level conceptual performance increased after instruction and was maintained after the project, while mean reported confidence in applying activity-based costing was higher after the project. Qualitative findings emphasized professional judgment and teamwork. The findings illustrate how a carefully selected campus partnership can help introductory accounting students engage with the language of business while providing a framework that other institutions can adapt.

Keywords: experiential learning, introductory accounting, activity-based costing, campus partnerships, professional skills

Learning the Language of Business: An Intentionally Designed Experiential Campus Partnership in Principles of Accounting

Although accounting is commonly described as the language of business, students in introductory courses often encounter this language through structured problems in which relevant data are identified, assumptions are simplified, and decision contexts are largely removed. This can be especially limiting in principles-level courses, where many students are not accounting majors but will still use accounting information as future managers, entrepreneurs, analysts, or organizational leaders. For some, the introductory sequence may be their only formal exposure to accounting. These courses therefore play an important role in helping students understand accounting not simply as a set of procedures, but as information used to understand operations and support decisions. Prior research suggests that active and experiential approaches can improve learning, engagement, and students' perceptions of accounting (Geiger & Ogilby, 2000; Matherly et al., 2013; Tsay et al., 2023).

Experiential learning offers one way to connect introductory accounting concepts with business practice. Its value, however, does not arise simply because students are assigned a project. The setting must be authentic but manageable, the work must require judgment, and students must receive enough structure to work successfully with incomplete information. Teamwork must also be supported rather than treated as the simple division of an assignment (Christensen et al., 2019; Gittings et al., 2020; Opdecam & Everaert, 2012; Pollock et al., 2023).

This paper examines an intentionally designed experiential campus partnership implemented in Principles of Accounting II at a small private liberal arts university. The course is the second and final introductory accounting course required of business majors and enrolls accounting majors and students from other business disciplines. Luke 14:28 (New International Version, 2011) served as a recurring theme by asking whether a person beginning a significant undertaking would first "sit

down and estimate the cost." The verse connected thoughtful planning and stewardship with the role of cost information in business and personal decisions.

The organizational partner was a university makerspace, referred to throughout the paper as the Hub. The Hub supports student innovation and produces customized products for campus departments and other users. Because many orders involve materials, labor, setup, equipment use, overhead, customization, and pricing judgment, the Hub functions in some respects as a small production-oriented business unit. The partnership began when the Hub director asked whether a business class could help evaluate product pricing. Students responded to this genuine organizational need by observing production, gathering cost information, developing and justifying an activity-based costing (ABC) model, and presenting a pricing recommendation to the Hub director.

The learning experience was structured to balance authenticity with support. Students progressed through staged milestones, identified information needs before receiving all available data, documented assumptions and team decisions, rotated responsibilities, received class time for collaboration, met with the instructor, completed peer evaluations, and presented recommendations to an organizational stakeholder.

This study examines learning before formal instruction in job order costing and ABC, after classroom instruction and a structured case, and after completion of the Hub project. The paper contributes to accounting education by showing how an authentic partnership with an accessible campus organization can be intentionally designed as a manageable experiential setting in which introductory students apply costing concepts, exercise judgment, collaborate around incomplete information, and communicate with a real decision maker. The project also provides a practical business application of Luke 14:28 by requiring students to estimate costs before recommending prices.

Literature Review

Introductory Accounting and Decision-Oriented Relevance

Introductory accounting courses serve both accounting and non-accounting business majors. They are often the first courses to show how accounting information supports business decisions and therefore play a significant role in shaping students' perceptions of accounting. Yet many introductory courses still rely heavily on lecture and demonstration. Geiger and Ogilby (2000) found that students began the first accounting course with favorable perceptions but viewed it as more boring by the end. Tsay et al. (2023), in contrast, found that a redesign creating room for active and metacognitive learning improved learning and retention.

Active and experiential approaches can be particularly useful in introductory courses serving diverse business majors. Olson (2023) used a hands-on project in which students prepared financial projections for a start-up business, while Miller et al. (2026) used a mini pre-capstone project to help introductory students analyze financial statements across industries. For many non-accounting majors, the introductory sequence may be their only formal exposure to accounting.

Experiential and Authentic Learning in Accounting Education

Many universities have responded to industry demands for graduates with transferable skills by implementing experiential learning activities (Gittings et al., 2020). Experiential learning theory, articulated by Kolb (1984), emphasizes a cycle of concrete experience, reflective observation, abstract conceptualization, and active experimentation. This framework is particularly relevant to topics such as ABC, which require both conceptual understanding and practical application.

Introductory courses nevertheless present a design challenge: students need enough conceptual preparation to engage with authentic activities, while authentic application can reinforce and contextualize that preparation. In this study, instruction and a structured case established the conceptual foundation before students moved into a more open-ended project. The project then

required students to apply, analyze, evaluate, and create while continuing to revisit the underlying costing concepts. Consistent with Dean et al. (2020), this approach treats experiential learning as part of preparing business students for complex and ambiguous professional decisions, not merely as a technique for increasing engagement.

The redesign also involved a partnership with a university makerspace. Makerspaces are collaborative, project-based environments in which participants create tangible products and develop technical and interpersonal skills. Turakhia et al. (2024) identify scaffolding, collaboration, relationship building, and contextual reflection among practices used by makerspace educators. In the present study, the Hub served not only as a learning environment but also as an operating campus unit with genuine costing and pricing needs. Its combination of materials, labor, equipment use, setup, customization, and stakeholder interaction created authentic operational complexity at a scale accessible to principles-level students.

Costing, Activity-Based Costing, and Pricing as Experiential Decision-Making Contexts

Management accounting education has used experiential projects, ABC cases, and simulations to address the complexity of cost allocation and performance measurement. Matherly et al. (2013) implemented active learning activities for ABC and other managerial concepts in an introductory managerial accounting course and reported positive effects on content knowledge, attitudes, and interest. Harrison et al. (2008) used a computerized business simulation as an active and discovery-learning tool for ABC. Reginato et al. (2021) used a guided manufacturing case in which students built miniature wooden planes, recorded time and costs, and compared actual results with standards, while Ditkaew et al. (2023) used a mask-manufacturing case to connect ABC concepts with production activities.

These studies show how hands-on tasks can help students connect cost systems with the activities and judgments underlying them. The present study extends that work through a whole-

class, principles-level project in which students worked with a university makerspace functioning as a microbusiness with a genuine need for costing and pricing information. The Hub therefore became more than a physical location; it provided a manageable, real-world environment involving materials, labor, overhead, setup, customization, pricing, and organizational stakeholders.

Intentional Design for Meaningful Teamwork, Ambiguity, and Professional Skills

Experiential learning in business education can develop both technical knowledge and professional skills. England et al. (2020) found that collaborative learning can strengthen interpersonal skills, while Ritter et al. (2018) emphasized employer demand for teamwork, communication, leadership, and problem solving alongside technical competence.

Pollock et al. (2023) similarly found that team-based explanations of accounting content supported knowledge transfer while developing communication and teamwork skills. These benefits, however, are not automatic. Opdecam and Everaert (2012) found that an intentionally structured team-learning environment in an introductory accounting course produced greater satisfaction and a more positive course experience than lecture-based instruction.

Christensen et al. (2019) address an additional challenge: students' negative perceptions of group work, including the inconvenience of coordinating meetings and concern about uneven contributions. Their intentional team-based redesign improved attitudes toward accounting and perceptions of teamwork ability. This evidence suggests that collaboration must be designed as a learning process rather than treated as a simple division of an assignment.

The present project incorporated staged milestones, class time for group work, a team charter, process documentation, role rotation, peer evaluation, instructor meetings, guest speakers, production observation, and a final presentation. These choices were intended to make collaboration substantive and help students work through incomplete information. Although prior studies have used cases, simulations, and project-based approaches to managerial accounting, less attention has

been given to how an experiential partnership with an accessible campus organization can be intentionally designed to support conceptual learning, applied judgment, confidence, collaborative reasoning, and professional skill development in a principles-level course.

Method

Course and Makerspace Context

The project was implemented in Principles of Accounting II at a small private liberal arts university. The course is the second and final introductory accounting course required of business majors and focuses primarily on managerial accounting. Approximately 50 students are typically enrolled across two spring sections, including accounting majors and students from other business disciplines. The project therefore provided an opportunity to help a broad group of students view accounting not only as computational procedures, but also as a language for framing operational questions and supporting managerial decisions.

The organizational partner was the Hub, the campus makerspace introduced earlier. It supports student innovation and produces customized products for campus departments and other users using equipment such as 3D printers, sewing and embroidery equipment, sublimation printers, laser engravers and cutters, and vinyl and plasma cutters. Trained student employees operate the equipment and assist users. The Hub was selected because it presented a genuine organizational need and enough operational complexity to require judgment while remaining manageable for principles-level students.

Project Origin and Learning Objectives

The project originated in Spring 2025 after the Hub director asked whether a business class could help evaluate product pricing. The Hub generally priced products at three times raw-material cost, a rule that did not explicitly account for labor, equipment usage, setup, learning time, and overhead. The instructor therefore designed a project in which students identified direct materials,

direct labor, and overhead; connected activities with cost drivers; developed and justified an ABC product-cost model; compared their results with the existing method and market information; and communicated a pricing recommendation. The project also emphasized teamwork, communication, time management, and reasoned decision making when information was incomplete.

Pilot Implementation and Project Revision

The Spring 2025 implementation served as a pilot organized around framing the problem, identifying required cost information, and developing a costing model and pricing recommendation. Formative feedback identified two recurring problems: difficulty coordinating team meetings near the final deadline and uneven participation. The Spring 2026 version was therefore redesigned to provide clearer sequencing, direct engagement with production, dedicated collaboration time, and stronger mechanisms for documenting and evaluating teamwork. The primary analyses in this paper are based on the Spring 2026 implementation.

Instructional Design of the Revised Experiential Project

The revised project was organized around four design principles: authentic organizational engagement, scaffolded professional judgment, structured collaboration and faculty support, and communication with organizational stakeholders. These features were intended to preserve the open-ended nature of professional work while providing enough structure for introductory students. Table 1 shows the sequence and purposes of the project.

Authentic Organizational Engagement

Each team ordered one approved Hub product, participated in a class-time facility visit, and later observed a Hub technician produce the selected product or a closely related item. These experiences required students to gather operational information outside the classroom and connect textbook cost categories with materials, labor, setup, machine usage, and other production activities. Students also completed a brief individual reflection after the site visit.

Scaffolded Professional Judgment

The project moved students from understanding the organizational setting to framing the costing problem, identifying information needs, observing production, developing a cost model, and recommending a price. Teams identified the information needed for job order costing and ABC before receiving all available cost data. They then selected and justified activity pools and cost drivers, developed an ABC model, compared it with the Hub's three-times-material-cost method and external prices, and defended a final recommendation. The progressive release of information shifted the task from applying a prepackaged formula to making accounting judgments under realistic constraints.

Structured Collaboration and Faculty Support

Teams completed a charter addressing communication, meeting expectations, role rotation, review procedures, and shared responsibility. Each milestone also included a process and decision-making log documenting key decisions, contributions, use of assistance, and final review. Class time was reserved for the Hub visit and team planning, and each team met with the instructor for approximately 15 minutes before the final milestone. CATME SMARTER Teamwork, a web-based system that supports peer evaluation and management of student teams (Christensen et al., 2019), was used with process documentation and instructor observations to support individual accountability.

Communication, Reflection, and Stakeholder Engagement

The university finance director discussed overhead allocation in a university setting, and a second guest speaker addressed teamwork. The culminating deliverable was an Excel costing model and PowerPoint presentation to the class and Hub director. Teams explained their assumptions, allocation choices, limitations, market comparisons, and recommendations to an organizational stakeholder rather than merely submitting a computational exercise.

Table 1

Sequence and Instructional Purpose of the Hub Costing Project

Project stage	Student activity	Instructional purpose	Deliverable
Pre-milestone	Complete team charter; order a Hub product.	Set expectations; establish a product reference.	Charter and order confirmation
Site visit	Tour operations; ask questions; reflect.	Connect course concepts with production.	Individual reflection
Milestone 1	Describe operations and pricing; identify assumptions and gaps.	Frame pricing as an accounting decision.	Group report
Milestone 2	Observe production; identify data and allocation bases.	Link activities to costs before receiving complete data.	Data and assumptions memo
Milestone 3	Develop ABC cost; compare current and market prices; recommend.	Apply concepts, justify judgments, and communicate.	Excel model and presentation

Note. A process and decision-making log were required for each milestone, and project roles rotated across milestones.

Project Deliverables and Course Assessment

The project accounted for 25% of the course grade and included the team charter, three milestones, the final presentation, and documented decision processes. After the project, students also completed an individual professional-skills reflection of approximately 200 words describing a

skill developed, a specific situation in which it was used, and its relevance to future professional work.

At the end of the course, students also completed an individual "Count the Cost" reflection connecting Luke 14:28 with a course topic and a personal application. These reflections were not analyzed as part of the current study.

Research Design and Data Collection

The data collection described in this section was designed to examine incremental learning across the instructional sequence and students' perceptions of professional development. The study received institutional review board approval. Participation was voluntary, and responses were anonymous. Before each administration, the instructor briefly explained the purpose of the data collection and reserved approximately 10 minutes of class time for students who chose to complete the survey. Because responses were anonymous, they could not be matched across administrations. T0 was administered before coverage of job order costing and ABC, T1 after lectures, homework, and a structured costing case (Barton et al., 2005), and T2 after the Hub project. Effective quantitative sample sizes were 48 at T0, 48 at T1, and 44 at T2.

Six conceptual questions were repeated at all three stages (see Table 2). T1 and T2 also included application-oriented ABC questions, one common anchor item concerning the allocation base for setup costs, and an open-ended explanation of why ABC may produce more accurate product costs in a multiproduct setting. Forty-six students answered the open-ended item at T1 and 42 at T2.

Confidence was measured on a five-point scale. T0 assessed confidence in identifying direct materials, direct labor, and overhead. T1 and T2 used the same item assessing confidence in applying ABC to a structured problem, and T2 also assessed confidence in developing a job order cost sheet

and pricing recommendation. Forty-seven professional-skills reflections were analyzed as qualitative evidence of learning beyond technical accounting knowledge.

Table 2

Measures Administered Across the Three Instructional Stages

Measure	T0	T1	T2	Purpose
Six conceptual items	Yes	Yes	Yes	Conceptual knowledge of job order costing and ABC
ABC application anchor	No	Yes	Yes	Application of an activity-based allocation base
Confidence item(s)	Yes	Yes	Yes	Confidence at increasingly complex stages
Open-ended ABC explanation	No	Yes	Yes	Specificity and contextual grounding of reasoning
Professional-skills reflection	No	No	Yes	Judgment, teamwork, communication, and uncertainty

Note. Quantitative sample sizes were T0 = 48, T1 = 48, and T2 = 44. Only the ABC confidence item was identical at T1 and T2.

Data Analysis

For the six repeated conceptual items, each respondent's score was the proportion answered correctly. Descriptive statistics were calculated for all quantitative measures. Because anonymous responses could not be matched, Welch independent-samples *t* tests were used for pairwise comparisons of conceptual scores across T0, T1, and T2 and for the identical ABC-confidence item at T1 and T2. Cohen's *d* was reported for the *t* tests. A Pearson chi-square test compared T1 and T2

performance on the common ABC application item, with phi reported as the effect size. Other confidence items were summarized descriptively.

The open-ended ABC explanations and professional-skills reflections were examined through an inductive, consensus-based thematic review. The lead researcher read the full response set, and two additional researchers independently reviewed assigned samples using structured worksheets without a predetermined framework. For professional skills, the additional reviewers examined 30 reflections; a parallel worksheet guided comparison of T1 and T2 ABC explanations for precision, terminology, cost drivers, and connections to Hub activities. The researchers then compared observations, reconciled differences, and agreed on the final themes. No interrater reliability statistic was calculated because the process emphasized independent theme identification followed by consensus rather than application of a fixed coding scheme.

Results

Results are organized around four forms of learning evidence: conceptual costing knowledge, application of ABC, confidence in applying costing concepts, and qualitative evidence concerning the nature of students' reasoning and professional learning. Because survey responses were anonymous and could not be matched across administrations, the quantitative comparisons reflect differences in group-level performance across successive instructional stages rather than within-student change.

Development of Conceptual Costing Knowledge Across the Instructional Sequence

Performance on the six conceptual items repeated across T0, T1, and T2 increased substantially following classroom instruction and the structured case study and remained at a similar level after completion of the experiential project. The mean proportion correct increased from .54 at T0 to .84 at T1 and was maintained at .82 at T2 (see Table 3).

Table 3

Performance on Repeated Conceptual Costing Items

Stage	*N*	Mean proportion correct	*SD*
T0: Baseline	48	.54	.22
T1: Post-instruction/post-case	48	.84	.20
T2: Post-project	44	.82	.19

Welch independent-samples *t* tests indicated that T0 scores were significantly lower than both T1 scores, $t(92.40) = -7.13$, $p < .001$, $d = 1.45$, and T2 scores, $t(89.61) = -6.56$, $p < .001$, $d = 1.36$. No significant difference was observed between T1 and T2, $t(89.60) = 0.54$, $p = .591$, $d = 0.11$. These findings indicate that the largest improvement in conceptual understanding occurred following classroom instruction and the case study and that these gains were maintained after students completed the experiential project.

Application of Activity-Based Costing to Cost Allocation

The percentage of correct responses on the common ABC application item increased from 39.6% at T1 to 59.1% at T2 (see Table 4). The item required students to identify the most appropriate activity base for allocating setup-related overhead costs. This descriptive difference indicates higher group-level performance on the same structured application task after completion of the Hub project.

Table 4

Performance on the Common ABC Application Item

Stage	*N*	Percent correct
T1: Post-instruction/post-case	48	39.6%
T2: Post-project	44	59.1%

Although the increase did not reach conventional levels of statistical significance, $\chi^2(1, N = 92) = 3.50$, $p = .062$, $\varphi = .19$, the descriptive improvement aligns with the qualitative findings presented below, which suggest that students developed a more precise, context-specific understanding of how ABC is applied within an authentic organizational setting.

Confidence in Applying Costing Concepts

Mean reported confidence in applying ABC to a structured costing problem was higher after completion of the experiential project (see Table 5). On the identical T1 and T2 item, mean confidence increased from 2.98 (*SD* = .84) at T1 to 3.43 (*SD* = .82) at T2. A Welch independent-samples *t* test indicated that this difference was statistically significant, $t(89.63) = -2.62$, $p = .010$, $d = 0.55$, indicating a moderate difference in reported confidence between the two stages.

The stage-specific confidence measures provide additional descriptive context. Before instruction, mean confidence in correctly identifying direct materials, direct labor, and manufacturing overhead was 1.48 (*SD* = .65). After completing the project, mean confidence in developing a job order cost sheet and making a pricing recommendation was 3.39 (*SD* = .89). Because these measures addressed different learning tasks at different stages of the instructional sequence, they are presented descriptively rather than interpreted as repeated measures.

Table 5

Confidence Measures Across Instructional Stages

Stage and confidence task	*N*	Mean	*SD*
T0: Identify direct materials, direct labor, and manufacturing overhead	48	1.48	.65
T1: Apply ABC to a structured costing problem	48	2.98	.84
T2: Apply ABC to a structured costing problem	44	3.43	.82
T2: Develop a job order cost sheet and make a pricing recommendation	44	3.39	.89

Note. Responses were recorded on a five-point scale ranging from 1 (not confident at all) to 5 (very confident). The ABC confidence item was identical at T1 and T2; the remaining confidence measures were specific to the instructional stage.

From Conceptual Understanding to Contextualized Activity-Based Costing Reasoning

The open-ended ABC responses showed continuity in the central concepts discussed at T1 (n = 46) and T2 (n = 42). At both stages, students generally recognized that products consume overhead resources differently and that multiple activity-based allocation bases may produce more accurate product costs than a single traditional base. The principal difference was not whether students recognized the basic purpose of ABC, but how specifically and contextually they explained it.

At T1, responses were generally accurate but broad. Students commonly referred to improved accuracy, fairness, different levels of resource consumption, and the use of multiple allocation bases, but explanations often remained at a textbook or definitional level. One student wrote, "Different products consume the overhead at different rates. Activity based costing tries to get a closer and more accurate look at how much it consumes."

At T2, responses more often named specific cost drivers, production activities, and product-level resource differences observed in the Hub. They also tended to explain more directly how the selected drivers created a closer relationship between overhead costs and the activities that generated them. For example, one student wrote, "In our project involving the costing of a pickleball paddle, we assigned 3 different cost drivers: space, machine hours, and number of units produced. This made our costing more accurate because there were more direct correlations between different drivers and different overhead costs."

Taken together, the responses suggest that the project deepened rather than introduced students' understanding of ABC. Instruction and case analysis appeared to establish an accurate conceptual foundation, while the experiential project helped students explain the mechanism of ABC with greater precision and connect it to identifiable activities, cost drivers, and customizable products in an organizational setting.

Professional Learning Through Uncertainty and Collaborative Reasoning

The professional-skills reflections (n = 47) revealed two closely related themes: making reasoned decisions with incomplete information and using collaborative discussion to improve analysis and problem solving. Students also referred to communication, leadership, time management, conflict resolution, and exposure to a real organizational setting, but these observations frequently converged around the two broader themes.

Making Reasoned Decisions with Incomplete Information

Students repeatedly contrasted the Hub project with textbook exercises in which the necessary information is provided, and a single correct solution is expected. They described having to decide what information was relevant, develop reasonable assumptions, evaluate alternatives, and justify a course of action despite data limitations. One student observed that “there isn't always a single ‘correct’ answer, but rather a logical and acceptable one.” Another wrote that the project

"taught me how to be more comfortable with uncertainty. Instead of waiting for perfect information, we had to move forward with the best assumptions we could make and justify them."

The reflections indicate that students viewed uncertainty not simply as missing information, but as a condition requiring professional judgment. Several students described questioning which building area, depreciation amount, or allocation base was relevant to the product and considering whether the value of additional information justified the effort required to obtain it. They associated these decisions with critical thinking because the project required them to move beyond selecting a formula and instead explain why an assumption or allocation approach was reasonable in the Hub context.

Collaborative Discussion as a Source of Better Decisions

Students also described teamwork as a process of shared reasoning rather than merely dividing the assignment into separate tasks. Reflections emphasized communication, listening, scheduling, leadership, and constructive disagreement, but many students linked these skills directly to the quality of the decisions their teams reached. One student wrote, "I have never looked highly on group projects because I would rather do it all myself... but I really found value from working as a team in this project. There is value in different opinions and dividing up workflow based on different skills." Another reflected that "good teamwork is more than just dividing tasks; it means joining in discussions and building a common understanding."

Students described discussing competing assumptions, questioning one another's reasoning, and resolving disagreements about overhead allocation and other modeling choices. These interactions often led them to conclusions they regarded as stronger than those they would have developed individually. The reflections therefore suggest that the open-ended nature of the costing problem and the project's collaboration structures were mutually reinforcing: uncertainty created a need for discussion, and discussion helped teams evaluate alternatives and reach more defensible

conclusions. Students frequently connected these experiences to skills they expected to use in future professional settings.

Discussion and Conclusion

Introductory accounting courses have an important role in helping students see accounting not simply as calculations, but as a language for understanding operations and supporting decisions. This study examined an intentionally designed experiential partnership in which students worked with a university makerspace that had a genuine need for better product-cost information. The Hub provided the main elements of a costing problem within a setting that was accessible and manageable for introductory students.

The findings provide a nuanced picture of learning across the instructional sequence. Conceptual knowledge increased substantially after classroom instruction and the structured case and remained at a similar level after the Hub project. Performance on the common ABC application item was higher after the project, although the difference was not statistically significant. Students reported a statistically significant increase in confidence in applying ABC. Their written explanations also became more specific and contextually grounded, while their professional-skills reflections emphasized making reasoned decisions with incomplete information and using collaborative discussion to reach stronger conclusions.

Taken together, the findings suggest that the project deepened and contextualized learning rather than introduced the underlying concepts. Instruction and case analysis established the conceptual foundation; the project required students to apply that foundation, make assumptions, explain their reasoning, and communicate a recommendation to an organizational stakeholder. This is consistent with prior research on active and experiential learning in introductory accounting (Geiger & Ogilby, 2000; Matherly et al., 2013; Tsay et al., 2023). At the same time, the study suggests that experiential learning should not be viewed as effective simply because students are assigned a

project. Its value depends on how the partnership and learning process are selected, structured, and supported.

One implication is the need to select an appropriate campus partner. The Hub was useful not simply because it was a makerspace, but because it presented a genuine costing and pricing question with enough complexity to require judgment while remaining accessible to introductory students. Similar opportunities may exist through campus printing services, dining operations, coffee shops, bookstores, event services, or other units. The recommendation is not to reproduce this particular project, but to look intentionally for manageable campus-based problems in which accounting information can help an actual decision maker.

Intentionality is also important in designing the learning process. Students had to understand the organization, observe production, identify information needs, make assumptions, select cost drivers, compare alternatives, and explain the limitations of their analysis. Staged milestones and progressive release of information preserved the open-ended nature of the problem without leaving introductory students without direction. Teamwork was supported through a charter, rotating roles, process logs, peer evaluation, instructor meetings, and class time for group work. Although this reduced the time available for some additional course content, conceptual performance achieved after instruction was maintained after the project, suggesting that structured collaboration can be treated as part of the learning process.

The pilot also illustrates the importance of reviewing and improving experiential projects. Feedback concerning scheduling and uneven participation led to clearer milestones, additional class time, stronger process documentation, faculty meetings, and peer evaluation. The project also connected with the course's recurring emphasis on Luke 14:28 and the instruction to "sit down and estimate the cost." Students later completed an individual "Count the Cost" reflection connecting

the verse with a course topic and a personal application. These reflections were not examined in the current study, but their analysis represents a possible next step.

The study was conducted at one institution, did not include a control group, and used anonymous surveys that could not be matched across stages. The results therefore represent group-level differences and cannot establish that individual project features caused the outcomes. Future research could replicate the partnership model in other settings, compare alternative designs, examine learning over a longer period, and analyze the "Count the Cost" reflections separately. Even with these limitations, the study illustrates how a carefully selected campus partner and an intentionally designed learning process can help students use accounting to understand operations, exercise judgment, and support responsible decisions.

Generative AI Disclosure

During preparation of this manuscript, the authors used ChatGPT and Microsoft Copilot to assist with brainstorming, organization, restructuring, language refinement, statistical verification using author-provided data, table preparation, and formatting. The authors retained responsibility for the study design, data collection, qualitative analysis, source selection and verification, interpretation, and all final manuscript decisions. The authors reviewed and edited all AI-assisted output as needed and take full responsibility for the content of the manuscript.

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Quaker Capitalism and Faithful Representations

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Abstract

Capitalism seeks to accumulate capital by maximizing profits. The earnings retained in equity attempt to capture that accumulation, as the culmination of firm statements which strive to faithfully represent firm economics. How maximization and accumulation unfold may be a matter of preference, but it has become a source of debate between shareholders and stakeholders and how each conceptualize capitalism. We propose Quaker Capitalism. Inevitably conflicts arise when attempting to appease multiple interests, unless those interests have contracts to guide their rights and obligations. We consider fiduciary duties owed and revisit contractual claims, then demonstrate how capital markets prefer objectivity. Instead of limiting our focus to profit maximization, though, we consider minimum duties owed to shareholders and the consequences when agents wander below them, no matter how noble the intention. We invoke Quaker queries and advices to ponder how financial statements can maintain their integrity and continue to faithfully represent. We employ *Good Business* to ensure that net income represents what is left for equity to retain. Our theoretical model predicts negative consequences of environmental, social, and governance (ESG) factors to output and stock markets. Our empirical evidence presents the negative impact of the 2019 Business Roundtable Pledge for stakeholders over stockholders. We conclude that conflict among stakeholders comes at the expense of shareholders, thus distributing rather than accumulating capital, whereas Quaker Capitalism sheds light on these conflicts while considering all interest without losing sight of the alternatives investments compete against. The source of this light comes from the faithfulness of representations.

Keywords: ESG, stakeholder capitalism, shareholder primacy, Tobin's q, fiduciary duty, capital accumulation

Quaker Capitalism and Faithful Representations

Accounting theory suggests two primary characteristics for information to be useful to decision-makers. These are relevance and representational faithfulness. Of the two, representational faithfulness serves as the foundation upon which accounting information can then become more relevant, along the lines of what Georgiou et al. (2021) uncovered of decision usefulness. We consider faith in a general sense and invoke the common sense of *Good Business* provided by the Quakers of London (Quakers and Business Group, 2019). Their *Good Business* does not promote a particular doctrine or religion. In fact, "it is open to all of any faith, or none, who have an interest in business…" (p. 46). With respect to financial accounts, Quaker Advices recommend, "they should accurately reflect your business position" (p. 16).

To that effect, *Good Business* contains four main testimonies. They are Honesty and Integrity, Simplicity, Equality and Peace. We take them in that order because each rests on the one before it. Integrity requires that the accounts make a true statement about the firm. Simplicity identifies whose interest that statement concludes for. Equality honors every other claim as it was agreed rather than making all claims alike. Peace, built on claims kept distinct, allows conflict among them to be resolved so that capital can accumulate.

The first of these testimonies earned Quakers a strong reputation in the business community for fair dealings. "Integrity involves being open, honest, truthful and consistent with your beliefs and values in all business dealings" (Quakers and Business Group, 2019, p. 3). This testimony serves to embed representational faithfulness, above all, into Quaker Capitalism. Proverbs 10:9 (New International Version, 2011/1978) describes the result. "Whoever walks in integrity walks securely." Without honesty and integrity, the other testimonies cannot further assist *Good Business*. Each of the three that follow depends on it.

The next testimony of Simplicity emphasizes that we must prioritize. "The practice of simplicity helps us to eliminate the superfluous and to put first things first" (Quakers and Business Group, 2019, pp. 3–4). For financial statements, putting first things first means that net income and equity conclude for one claimant, the shareholder, whose claim is the residual. Stakeholder capitalism spawns multiplicity instead, by attempting to put different interests (often at odds) on an equal footing. This multiplicity is evident in the wide divergence of environmental, social, and governance (ESG) scores that fail to find consensus, or what Quakers strive to find among a congregation, unity. Simplicity names the priority. The testimony of Equality explains why that priority slights no one.

As a testimony, Equality does not mean equivalent. Quakers hold the belief that there is that of God in every person, and while all individuals may be equal in the eyes of the Lord (King James Version, 2017/1769, Galatians 3:28), not all interests are equal. *Good Business* advises that "small shareholders have a small voice in the running of a company, but their concerns should be listened to and considered" (Quakers and Business Group, 2019, p. 10). The Quaker Advices and Queries do not pretend that all shareholders are equal and have the same say, even if all are created in His image (imago Dei), any more than they extend notions of equality among all stakeholders, as shareholders have interests separate and distinct from all others. As suggested by *Good Business*, diversity should be employed "as a source of energy" (p. 5), not as one which leads to divisive outcomes. Unity can only be achieved when all interests are considered, but also only when each interest is recognized as agreed. Any attempt to equalize interests after they have been expressly contracted therefore defies the first testimony of honesty and integrity and denudes representations of their hope to remain faithful.

The testimony of Peace completes the sequence. Peace does not seek to eliminate conflict. It means, "work towards creating a culture of peace…. [S]ome conflict can be fruitful: creative

discontent and the peaceful sharing and debate of ideas can lead to better designs, better products, more effective marketing, and other business benefits" (Quakers and Business Group, 2019, p. 5). Conflict remains fruitful, however, only when each claim remains distinct and honestly represented. Such resolution embeds itself in the roots of capitalism, where fiduciary duty underlies Quaker Capitalism to resolve conflicts such that capital can accumulate, rather than ad hoc distributions among competing stakeholders, which dissipates value instead of accruing it.

Herein lies the main thrust of our research, and the primary distinction we hope to make between stockholder and stakeholder capitalism. Financial statements conclude to inform shareholders of their interest. Stakeholder capitalism, in our opinion, stretches the notion of capitalism beyond its foundation, trying to be too many things to too many competing interests, similar to relevance attempting to overshadow representational faithfulness. Quaker Capitalism not only retains the pillars of accounting representations that, by deliberate construction, conclude for stockholders with net income and equity, but it also ensures that firm commerce does not lose sight of the various stakeholders who also contribute to bottom lines and therefore should also benefit. Quaker Capitalism pursues profit within a free-enterprise system guided by a moral framework of faithful representation, in which professed values and actual conduct align. That alignment builds stakeholder trust, employee engagement, organizational productivity, and long-term profitability, without depriving stockholders of the faithful representation that financial statements attempt to make, much less defying the for-profit decision made when filing articles of incorporation.

The tension we describe is not one between ethics and profit. Quaker businesses of the 18th and 19th centuries built enduring brands through trust, fair dealing, and care of employees while remaining unapologetically profitable. Their modern heirs state the principle plainly, "There is nothing unethical in making a profit" (Quakers and Business Group, 2019, p. 7). The Quaker Advices hold that directors and managers "benefit by holding themselves responsible to all

stakeholders of the business" (p. 9)—they do not ask accountants to pretend that contractual claims have become residual ones. Our quarrel is not with firms that treat stakeholders well, but with the redefinition of who holds the residual claim.

In 2019, the Business Roundtable (BRT) Pledge replaced shareholder primacy with a concern for multiple stakeholders, and roughly one-third of S&P 500 CEOs signed it. Such a pledge goes too far, in that agents have no right to renegotiate claims. This violates the first testimony of Honesty and Integrity. It replaces Simplicity with multiplicity. It reinterprets Equality as equivalent interests, which in turn disrupts Peace among stakeholders, as some no longer have to compete among alternatives. By redefining primacy, the Pledge makes basic financial statements difficult to interpret. Net income used to tautologically represent what was available to equity. Now, net income no longer can when employees, suppliers, and communities are promised that value will accrue to them as well. Equity cannot be a residual claim when contractual claims are granted residual rights. Stakeholder primacy, however well intended, distorts the accounting equation and proliferates conflict, potentially the type of conflict shown to create *unintentional* bias known to corrupt the auditor-client relationship (Guiral et al., 2010). Something has to give. If the Pledge is credible, financial statements are not. If financial statements retain their integrity, the Pledge was public-relations bluster.

In 2024, the BRT doubled down, declaring that companies should deliver long-term value to all stakeholders—though, curiously, no signature page gathered for the renewal (Business Roundtable, 2024). Words matter, as do signatures. Value does not spontaneously combust. Value requires a capital investment with an expectation of a return both *of* and *on* that initial capital. Such value delivered to other stakeholders must come with the same expectations that earnings *not* distributed to shareholders have. They must earn a return on equity that shareholders could fetch elsewhere had the earnings been distributed to them. Otherwise, the value delivered to all other

stakeholders comes at the expense of shareholders, the only claimant with no fixed claim against the firm.

The difference between the stakeholder and shareholder approaches ultimately becomes a question of accountability. The BRT pledge aims to benefit all stakeholders, but in broadening its focus it blurs its vision. As Proverbs 29:18 explains, "Where there is no vision, the people perish." The pledge offers no clear intentions, no direct focus, and no strategic vision against which firms can be held to account. The pledge offers value to all. An ESG-style mandate to serve every constituency also muddies how returns are measured, whereas a clear commitment to faithful representation of shareholder interests gives managers a standard they can actually be judged by. This does not mean ignoring stakeholders. Quaker Capitalism keeps each claim distinct and represents it faithfully, so that shareholder and stakeholder interests are not blurred together, with shareholder interest retaining its identity as a residual, allowing net income and equity to faithfully represent as intended.

One can argue that ESG is simply another investor preference that temporarily allows asset prices to deviate from the risk-reward paradigm, alongside behavioral biases (Daniel, 2004; Lee, 2001) and investor sentiment (Baker & Wurgler, 2006, 2007; Lemmon & Portniaguina, 2006; Mian & Sankaraguruswamy, 2012). However, ESG allows shifts in risk and reward to occur outside the firm, at times with stockholder blessing (Dikolli et al., 2022), and thereby questions the very foundation of financial capital. Elevating all stakeholders dilutes stockholders, scarcity guarantees that interests compete, conflict invites bias, and absent objectivity no financial statement has credibility. Net income and equity must reflect what is left after contractual claims have been satisfied—an ending point, not a starting point for renegotiation.

The BRT's Statement of Corporate Purpose (Business Roundtable, 2019) effectively ended the era of shareholder primacy. In it, 181 CEOs of America's largest corporations overturned a 22-

year-old policy statement that defined a corporation's principal purpose as maximizing shareholder return. Unlike studies that infer contradictions between public statements and internal policies (Adams, 2004; Arvidsson & Sabelfeld, 2023; Rodrigue, 2014), the Pledge is a standardized, accept-or-reject commitment—although signatory CEOs appear to have made little change to explicit firm policies (Raghunandan & Rajgopal, 2024). Our purpose is not to derail ESG intent but to outline where interests stop complementing and start competing to the detriment of owners. In fact, stakeholder capitalism has been shown to be detrimental not only to stockholders but also to stakeholders (Bebchuk & Tallarita, 2020).

To elucidate, we invoke the fiduciary's duty of prudence. From *Harvard College v. Amory* in 1830 (26 Mass. 446, 9 Pick. 446) to the Uniform Prudent Investor Act of 1994 and Delaware's 2018 statute granting ESG explicit consideration (Del. Code tit. 12, § 3302), every tenet of prudence aims to advantage the beneficiary. We borrow this framework for owners and agents, allowing for the possibility that agents have reversed the roles—conceiving ESG as a duty to superimpose on owners of "An Economy that Serves All Americans." No matter how many signatures gather, only one claim can be residual, by definition (Damodaran, 2014). We contemplate not what managers owe stockholders at best, only at least.

Related work suggests the market is creatively destroying oil firms for their green patent activity (Cohen et al., 2026; Faria et al., 2022) and finds a tradeoff between pollution reduction and profitability (Attilio et al., 2024). At a certain point, continued engagement in value destruction invalidates a basic level of care and prudence. Delaware trust law makes clear that the governing instrument, not the fiduciary, determines whether to pursue sustainable strategies "with or without regard to investment performance" (§ 3303). Corporate law offers a parallel. Articles of incorporation are filed either for-profit or not-for-profit, and a CEO cannot repurpose the former as the latter by pledge.

This paper shows some consequences of this confusion in a stylized dynamic macroeconomic model, presented in the appendix, that introduces the Green Tobin's q of Faria et al. (2022) into Blanchard's (1981) framework. Theoretically, ESG has a negative impact on real activity and an ambiguous (with a tendency to turn negative) impact on the stock market. Empirically, signing the 2019 BRT Pledge narrowed the distance between replacement costs and market value as captured by Tobin's q. Evidence, discussion, and concluding remarks follow.

Some Evidence

To give some perspective on how these forces interact, we focus on S&P 500 firms. On August 19, 2019, the BRT released a statement on their website announcing "181 CEOs who commit to lead their companies for the benefit of all stakeholders — customers, employees, suppliers, communities and shareholders" (Business Roundtable, 2019), which grew to approximately 237, including 157 CEOs of firms in the S&P 500. We gather fundamental data from Compustat and stock price data from the Center for Research in Security Prices (CRSP) for all S&P 500 firms from 2016 to 2021—three years before and after the 2019 pledge. The signatures are not an "event" or a shock to firm policies, which were likely well-entrenched. We view the signing as symbolic confirmation of already public information. The pledge nevertheless separates firms that champion ESG policies from those that do not, in language that is standardized rather than subject to word-lists from which meaning may be derived (and gamed).

We proxy five variables. These are Tobin's q (q), BRT indicator (α), research and development (R&D) expenses (M), assets (K) and capital expenditures (I). Brainard and Tobin (1968) explain that an incentive to invest exists when the ratio of market value to replacement costs exceeds unity. We use the Tobin's q of Chung and Pruitt (1994). We proxy an ESG effect with an indicator equal to one for S&P 500 firms whose CEO signed the pledge in 2019, create a dummy

variable for the years 2019 and thereafter, and interact the two for BRT*2019 (see the note to Table A1 for variable construction). Table 1 provides summary statistics of firm characteristics.

Table 1

Firm Characteristics

	N	Mean	Median	Std. Dev.	min	max	p25	p75
q: Tobin's q	2932	2.181	1.543	2.172	0.046	23.121	0.958	2.587
M: R&D	2932	0.023	0.000	0.048	0.000	0.622	0.000	0.025
K: Capital Stock	2932	10.020	9.923	1.409	5.097	15.136	9.060	10.854
I: Investment	2932	0.073	0.034	0.132	0.000	2.740	0.016	0.068

Table 2 presents pair-wise correlations. The CEOs of firms which signed the BRT have a highly significant negative correlation with Tobin's q, on par in magnitude with investment, which is also highly significant and negative. The other correlations with Tobin's q follow the literature. They are positive with R&D and negative with capital stock.

Table 2

Pair-Wise Correlations

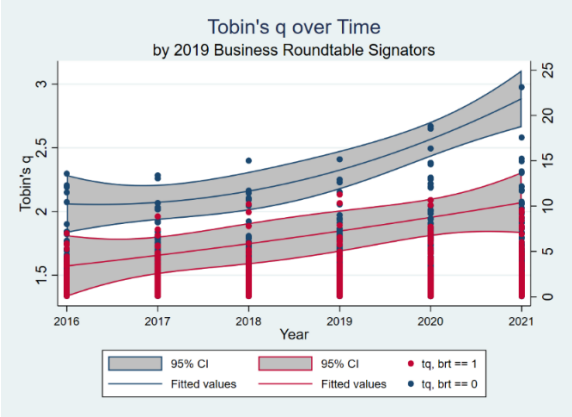
Variables	(tq)	(brt)	(rda)	(at_ln)	(capint)
q: Tobin's q	1.000				
a: BRT	-0.080*	1.000			
M: R&D	0.321*	0.023	1.000		
K: Capital Stock	-0.489*	0.339*	-0.157*	1.000	
I: Investment	-0.099*	-0.012	-0.095*	0.093*	1.000

**** p<0.01, ** p<0.05, * p<0.1*

To characterize firms whose CEOs signed the 2019 Pledge as "treated" would be misleading. The CEOs deliberately selected into the sample and likely ratified firm policies already in place. Even without allaying selection bias, we can compare the two samples. Figure 1 displays how Tobin's q trends between 2016 and 2021. The non-signatory firms (0) show a steep incline over time compared to the BRT firms (1). Surprisingly, no Covid effect appears to have suppressed Tobin's q for either sample.

Figure 1

Tobin's q Trends From 2016–2021 for BRT and Non-BRT Firms



Note. This figure shows the time trends of Tobin's q for those firms in the S&P 500 that signed the 2019 Business Roundtable pledge (1) and those that did not (0).

To formally evaluate these differences, we conduct a two-sample t-test. Table 3 provides a comparison of means between the BRT firms and the others in the S&P 500.

Table 3

BRT Firms and Non-BRT Firms in S&P 500: Comparison of Means

Variable	Control N	Treated N	Control Mean	Treated Mean	dif	St_Err	t_value	p_value
Q: Tobin's q	2019	913	2.349	1.81	.539	.086	6.25	0
M: R&D	2019	913	.025	.019	.005	.002	2.75	.005
k: Capital Stock	2019	913	9.656	10.825	-1.169	.052	-22.5	0
I: Investment	2019	913	.077	.063	.015	.005	2.8	.005

Meaningful differences exist along all characteristics. Compared to non-signatory firms, the S&P firms whose CEOs signed the 2019 BRT pledge have a smaller Tobin's q, spend less on R&D as a percent of assets, spend less on capital expenditures as a percent of revenues, and are much larger. To narrow these differences, we later match firms by industry (four-digit Standard Industrial Classification (SIC) code), year, and the characteristics M, K and I. First, we build ordinary least square (OLS) regressions and add an interaction between the BRT indicator and an indicator for the

years 2019 through 2021. Table 4 begins with no fixed effects and gradually incorporates time and firm invariant factors, with robust standard errors clustered at the firm level.

Table 4

OLS Regressions: Tobin's q on BRT Indicator

	(1) Tobin's_q	(2) Tobin's_q	(3) Tobin's_q	(4) Tobin's_q
a: BRT	.536***	.547***	-2.943***	-2.231***
	(6.882)	(7.022)	(-4.747)	(-3.438)
BRT*2019	-.292**	-.293**	-.197***	-.213***
	(-2.309)	(-2.324)	(-3.203)	(-3.481)
2019 and after	.759***	1.244***	.482***	.925***
	(8.854)	(9.208)	(7.801)	(8.989)
M: R&D	11.48***	11.46***	-.569	-1.565
	(9.61)	(9.645)	(-.11)	(-.303)
K: Capital Stock	-.75***	-.759***	.098	-.139
	(-20.507)	(-20.7)	(.484)	(-.667)
I: Investment	-.718***	-.702***	.065	.054
	(-4.803)	(-4.825)	(.286)	(.227)
_cons	8.981***	8.909***	2.624	4.38***
	(23.831)	(23.597)	(1.633)	(2.64)
Observations	2932	2932	2932	2932
R-squared	.35	.359	.815	.82
Year Dummy	No	Yes	No	Yes
Firm Dummy	No	No	Yes	Yes

t-values are in parentheses
*** p<.01, ** p<.05, * p<.1*

The BRT indicator has a highly significant positive relationship with Tobin's q in models 1 and 2, with no firm-level fixed effects. Once firm fixed effects enter, the relationship turns negative and highly significant, indicating that within-firm variation more accurately captures the relationship. The indicator *2019 and after* enjoys a positive, highly significant influence on Tobin's q across all models. However, the interaction *BRT*2019*, which captures the post-signature influence of the signing CEOs, displays a consistently negative relationship with Tobin's q that is highly significant across all models.

We interpret these results to mean that, at the firm level, the highly visible decision to assist "An Economy that Serves All Americans" likely has come at the expense of shareholders, whose market value of assets stayed closer to replacement costs. Even allowing for selection bias, the signature itself is meaningful. Although multicollinearity is endemic to accounting research, the

*BRT*2019* interaction is an indicator that does not suffer from scaling by revenues or assets. Raghunandan and Rajgopal (2024) offer an alternative explanation. Based on subsequent firm policies and formal Securities and Exchange Commission (SEC) filings, the BRT pledge lacks sincerity, so the market may be penalizing CEOs who fail to follow through. Under either interpretation, q declines, a consequence that Quaker Capitalism posits would result from violating the first testimony of Integrity.

The differences in Table 3 might explain the negative relationship documented above—"bigness" (Lucas, 1978) might keep market values closer to book values. To narrow these differences and reduce the likelihood of alternative explanations, we employ coarsened exact matching (CEM; Blackwell et al., 2009), which temporarily coarsens each variable into groups of common support, exact matches, and returns the uncoarsened data with weights—pruning both treated and control observations so that more meaningful comparisons can be made. Table 5 contains OLS regressions using the CEM estimator with firm and year fixed effects, finding the same significant, negative relationship between Tobin's q and the interaction between BRT and the 2019–2021 period.

Table 5

OLS Regressions With CEM Estimator: Tobin's q on BRT Indicator

	(1) Tobin's_q	(2) Tobin's_q	(3) Tobin's_q	(4) Tobin's_q
a: BRT	.508***	.517***	-2.268***	-1.652***
	(6.612)	(6.727)	(-5.554)	(-3.905)
BRT*2019	-.326***	-.324***	-.121**	-.128**
	(-2.679)	(-2.667)	(-2.171)	(-2.314)
2019 and after	.754***	1.199***	.424***	.831***
	(9.311)	(9.327)	(8.587)	(10.455)
M: R&D	15.06***	15.081***	13.949***	12.689***
	(10.512)	(10.645)	(3.999)	(3.823)
K: Capital Stock	-.75***	-.756***	-.029	-.254**
	(-20.767)	(-20.909)	(-.234)	(-2.006)
I: Investment	-.57***	-.503***	-.41	.21
	(-3.188)	(-2.793)	(-.541)	(.268)
_cons	8.887***	8.806***	3.377***	5.036***
	(24.526)	(24.539)	(3.401)	(5.047)
Observations	2727	2727	2727	2727
R-squared	.334	.343	.868	.872
Year Dummy	No	Yes	No	Yes
Firm Dummy	No	No	Yes	Yes

t-values are in parentheses
*** p<.01, ** p<.05, * p<.1

While we cannot make definitive causal statements, the correlations, regressions, and matching estimators corroborate the detrimental impact of stakeholder capitalism that Bebchuk and Tallarita (2020) advance, and fixed effects indicate the impact holds at the firm level.

For robustness, we replace Tobin's q with the natural log of operating profit (earnings before interest and taxes, or EBIT) and find strong results (available upon request) that maintain consistency across all specifications. Results are positive for the BRT indicator, negative for *BRT*2019*, and positive for *2019 and after*. The interaction is significant at the 1% level using the CEM estimator with firm and year fixed effects.

This robustness test provides additional guidance on the impact of sending capitalism in multiple directions. Operating profit reflects the income that remains after customers, employees, and vendors have been satisfied according to their contracts—the level of profit directly before debt

service. Curiously, the Business Roundtable never mentions bondholders, who clearly have a stake in firm fortunes. The highly significant, negative impact on EBIT supports our conjecture. Stakeholders have been overcompensated by profits from core operations that never became available to cover debt, retain for investment, or distribute to stockholders.

Discussion

We designed our model and regressions to avoid a central misgiving in the ESG literature. That misgiving is the "data" it relies upon. Net income fails to reflect what is available to stockholders, and equity cannot reflect a collective residual, when contractual claimants expect to collect some of it too. We therefore avoided such "data" altogether and chose a binary indicator of ESG preference. That indicator is an identical, signed statement, the BRT Pledge.

A number only becomes a statement when it sits at the center of a well-behaved distribution, otherwise it is a random symbol. The ESG "data" fails this test. Bond ratings across Moody's, Fitch, and S&P correlate at 99%. ESG ratings correlate between .38 and .71, with measurement accounting for 56% of the divergence (Berg et al., 2022)—partly because many measures assess intent rather than implementation, and partly because raters confirm ESG investor priors, creating halo effects. Edmans (2016) argues that such confusion among investors may even be a good thing. While firms are free to cater to investor preferences (Baker & Wurgler, 2004), managers have a fiduciary duty *not* to pander to stakeholder hopes of contracting residual claims.

Carbon emissions—in theory the most quantifiable of all ESG measures—illustrate the problem. Scope 3 emissions account for 70% to 90% of the total, are notoriously difficult to estimate, and lie beyond firm control. Most Scope 1 "data" is not collected but reverse-engineered from voluntarily disclosing firms, leaving samples roughly 70% estimated (Aswani et al., 2024)—casting doubt on claims of a carbon premium priced into returns (Bolton & Kacperczyk, 2021a, 2021b, 2023). Scope 2 emissions have been accused of double-counting (Elmalt & Kirti, 2021), and

Scope 4 can "make things (that don't exist) count" (Young-Ferris et al., 2025). Sustainability raters fare no better. No single agency has emerged a clear winner, and the literature reflects "moral fictionalism" (Boiral et al., 2021). When no basis exists for the data, an auditor disclaims from having an opinion—and when auditors say nothing, that should tell you something. Investors seem to have noticed. Shareholder support for Scope 3 reduction targets at Chevron and Exxon fell by roughly two-thirds between 2022 and 2023, with similar declines at BP and Shell (Eaton & Strasburg, 2023).

The CEOs who did *not* sign make the more telling statement. In effect, they affirm that contractual claims differ from residual ones, for-profit corporations favor profits, fiduciaries are not beneficiaries, and only one priority can top the list. Only 157 CEOs signed. Two-thirds of the S&P 500 appear less confused about primacy. Their answer is stock, not stake.

The confusion we document is a failure of the standard that ethical business traditions place first. The Quaker testimonies begin with honesty and integrity, and their advices on financial accounts pose queries any auditor would recognize. They ask whether accounts are true and accurate, reflect the business position, and are available to those who trade with the firm (Quakers and Business Group, 2019, pp. 16–17). Faithful representation is an ethical requirement before it is an accounting one. A pledge that renders net income uninterpretable fails the integrity test because it leaves the firm unable to make a true statement about itself. The same tradition honors the concerns behind ESG without confiscating the residual claim—prompt payment of suppliers, sustaining wages, safe workplaces, environmental care, charitable giving from profits that exist—stakeholder concern implemented through conduct, contract, and voluntary generosity rather than a redefinition of the accounting equation.

Conclusion

Taken together, our results indicate that managers focused on shareholder returns will create greater value than managers distracted by a variety of ESG goals. We acknowledge limitations. First,

we use only one proxy for ESG commitment, namely CEO signatures on the 2019 Business Roundtable Pledge. Other signals exist, such as distinct sustainability reports. Second, our study encompasses only S&P 500 firms—the largest and most scrutinized, but just over 10% of publicly traded U.S. firms. Most severely, stock price is not everything. We do not contemplate the welfare benefits ESG might provide, though we question whether such welfare is the responsibility of firms. Charitable donations should be voluntary, not mandatory, absent a switch from for- to non-profit through the articles of incorporation. When fiduciaries of other people's money do not seek returns *on* investments, such returns inevitably become returns *of* capital—and not even to the beneficiaries. Whatever the robustness of our causal claims, our model holds one truth self-evident. Contractual claims cannot become residual ones, unless explicitly stated in the original contract.

Our research suggests implications for policy. Around the world, governments are proposing greater ESG reporting requirements, such as new guidance from the SEC. Our model suggests these restrictions can hinder the capital accumulation of companies and economies, and our findings suggest the efforts are misguided with respect to Tobin's q (e.g., Wernerfelt & Montgomery, 1988). Even if our results on stakeholder primacy suffer from parallel trends, that bias is confined to the econometrics, whereas an entire line of climate literature suffers fundamental flaws in the very "data" it is built upon, with selection bias embedded. We appreciate the prudence that trust law lends to corporate duties, and the auditors' reminder that disclaiming an opinion can be the wisest statement financials make.

We close where the older tradition begins. Businesses known for their ethical conduct enjoy reputation, customer loyalty and a committed workforce—benefits that accrue to shareholders precisely because obligations to everyone else are honored in full and on time. Trust, not confusion, is the asset. The Quaker experience suggests that a firm can serve its customers, employees, suppliers and community faithfully while keeping its accounts, and its claims, faithful too (Quakers

and Business Group, 2019). What it cannot do is promise the residual to everyone. Generosity is a use of profit, not a claim upon it.

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Appendix

The Model

There are several theoretical and empirical models of gross domestic product (GDP), investment, and the stock market (e.g., Barro, 1990; Blanchard, 1981; Fama, 1981, 1990). We adapt Blanchard's (1981) dynamic investment–saving/liquidity–money (IS-LM) model for an economy in which ESG ideas influence the stock market through stockholder pressure, in line with the Green Tobin's q of Faria et al. (2022). Table A1 lists variables and parameters.

Table A1

List of Variables and Parameters

y = output	g = fiscal policy	q = stock market value	i = nominal rate of nterest
m = monetary policy	p = domestic price level	r = real rate of interest	$\dot{p}^*$=expected inflation rate
r = long-term rate of interest	φ = real profit	K = industry wide capital stock	k = firm's capital stock
V = knowledge	w(V) = subjective probability of green innovation	א(V) = probability that innovation doesn't occur	ב = maximized value of profits after innovation
M = R&D expenditures	τ = adjustment cost function	A = pollution abatement	α = stockholder pressure for green effort according to ESG

Note. Empirical proxies for the variables in Tables 1–5 are measured as follows. Tobin's q (q) is calculated as the market value of equity plus the book value of preferred stock, long term debt, and

current liabilities net of current assets, all scaled by the book value of total assets. The BRT variable (α) is an indicator equal to one for those firms in the S&P 500 whose CEO signed the BRT pledge in 2019 and serves as the CEM "treatment" indicator. The 2019 and after variable captures the years 2019, 2020, and 2021. The BRT*2019 variable interacts the two indicators. Expenses for R&D (M) are scaled by assets. Capital stock (K) is the natural log of assets. Investments (I) are capital expenditures scaled by revenues.

The LM relation expresses the nominal interest rate as a function of income and real money balances:

$$i = cy - h(m - p) \quad (1)$$

where *i* denotes the short-term nominal rate of interest, *m* and *p* are the logarithms of nominal money and domestic price level, respectively.

Output dynamics assume that spending adjusts over time:

$$\dot{y} = \sigma(aq + g - by) \quad (2)$$

All variables are real, where a dot denotes time derivative, $\dot{y} = dy/dt$. Here, g is a fiscal policy given by government expenditures, *q* is the stock market value. Since *q* is part of wealth and affects consumption, considering *q* as Tobin's q (market value/total assets) determines the value of capital relative to its replacement cost, affecting investment positively when the ratio is greater than unity (Tobin, 1969).

The long-term bonds are consols with yield *I* and price $1/I$. The expected short-term nominal return is the yield plus the expected nominal capital gain, $\frac{I^*}{I}$. Arbitrage between short and long bond implies

$$i = I - \frac{I^*}{I} \quad (3)$$

Note that from Eqs. (1) and (3) one gets the IS.

Following the same logic of (3) we define the long-term rate of interest *R*:

$$r^* = R - \frac{\dot{R}^*}{R} \quad (4)$$

The short-term expected real rate of interest, r^*, is the nominal rate minus the expected inflation rate:

$$r^* = i - \dot{p}^* \quad (5)$$

An asterisk denotes an expectation. The term $\dot{p}^*$ is the expected rate of inflation.

The real value of the stock market, *q*, is given by the Green Tobin's *q* of Faria et al. (2022), which relates to the Green Golden Rule (e.g., Chichilnisky et al., 1995; Faria et al., 2023). In their stochastic model, a representative firm invests in R&D to develop cleaner technologies and maximizes expected profits subject to pollution abatement. The first order conditions yield the green Tobin's *q*.

The expected real rate of return on holding shares is given by $\frac{\dot{q}^*}{q} + \frac{\varphi}{q}$, where φ is real profit. Arbitrage between short-term bonds and shares implies:

$$\frac{\dot{q}^*}{q} + \frac{\varphi}{q} = r^* \quad (6)$$

Real profits φ are given by:

$$\varphi = \aleph(V)[\pi(K) - \alpha A \tau_k] + w(V)h(M)\beth_k \quad (7)$$

where $\pi(K)$ is the part of the real profits, before ESG innovation occurs, that is decreasing in the industry-wide capital stock, *K*. The variable *A* is pollution abatement, *M* is R&D expenditures, and parameter α represents stockholder pressure according to ESG. The adjustment costs function τ is a convex function of the firm's capital stock *k*, and τ_k is its partial derivative. Unlike Faria et al. (2022), we associate the adjustment costs with the firm's capital stock k rather than its rate of change. The term $w(V)$ is the subjective probability density that the ESG innovation occurs at

knowledge state V, so the density of innovation at time t is $w(V)h(M)$. $\aleph(V)$ is the probability that the innovation will never occur. The term $\beth(k,A)$ is the maximized value of profits after innovation. The term $\beth_k$ is its partial derivative with respect to k.

From Eqs. (6) and (7) we have:

$$\frac{\dot{q}^*}{q} = r - q^{-1}\{\aleph(V)[\pi(K) - \alpha A\tau_k] + w(V)h(M)\beth_k\} \quad (8)$$

The system of equations (1)–(5) and (8) characterize output, the stock market, and interest rates as functions of policy variables m and g, expectations $\dot{q}^*$and $\dot{p}^*$ and the price level p. The system is block recursive. Eqs. (4) and (5) yield $r = i$. The link between goods and assets markets is the value of the stock market, q.

To close the model we assume rational expectations and consider the IS (Eqs. (1) and (3)), the LM (Eq. (2), with r replacing i), and Eq. (8) for Tobin's q, yielding the system:

$$\dot{y} = \sigma(aq + g - by) \quad (9)$$

$$r = cy - h(m - p) \quad (10)$$

$$\frac{\dot{q}^*}{q} + \frac{\{\aleph(V)[\pi(K) - \alpha A\tau_k] + w(V)h(M)\beth_k\}}{q} = r \quad (11)$$

Steady-State and Dynamics With Fixed Prices

In the steady-state with fixed prices we have from Eq. (9), $\dot{y} = 0$:

$$y = b^{-1}[aq + g] \quad (12)$$

Since prices do not adjust, output is demand determined by the stock market q, and fiscal policy g. In the steady-state the stock market is given by introducing Eq.(10) into (11) considering $\dot{q} = 0$, which yields:

$$q = \frac{\{\aleph(V)[\pi(K) - \alpha A\tau_k] + w(V)h(M)\beth_k\}}{cy - h(m - p)} \quad (13)$$

In the steady state the stock market equals profit over the real interest rate. Solving Eqs. (12) and (13) for the two unknowns *y* and *q* yields the steady-state equilibrium values of *y* and *q*:

$$y_{ss} = \frac{bh(m-p)-gc+\sqrt{(bh(m-p)-gc)^2-4bc\{gh(m-p)-a[\aleph(V)(\pi(K)-\alpha A\tau_k)+w(V)h(M)\beth_k]\}}}{2bc} \quad (14)$$

$$q_{ss} = \frac{\{\aleph(V)[\pi(K)-\alpha A\tau_k]+w(V)h(M)\beth_k\}}{cy_{ss}-h(m-p)} \quad (15)$$

Equation (14) is the only positive solution for *y* if the following inequality holds:

$$gh(m-p) < a\{\aleph(V)[\pi(K)-\alpha A\tau_k]+w(V)h(M)\beth_k\} \quad (16)$$

By Eqs. (14) and (15) the steady-state equilibrium output and stock market depend critically on the parameter of ESG, *a*. They also depend on fiscal and monetary policies (*g*, *m*), the stock of knowledge *V*, R&D expenditures *M*, capital stocks *k* and *K*, abatement *A*, and adjustment costs.

The key result is the marginal impact of an increase of α on optimal output, y_{ss}, and stock market, q_{ss}. When stakeholder pressure for ESG increases, the impact on optimal output is always negative:

$$\frac{dy_{ss}}{d\alpha} = \frac{-\aleph(V)A\tau_k}{\sqrt{(bh(m-p)-gc)^2-4bc\{gh(m-p)-a[\aleph(V)(\pi(K)-\alpha A\tau_k)+w(V)h(M)\beth_k]\}}} < 0 \quad (17)$$

The impact of ESG on the optimal stock market is ambiguous but negative, as in (17), if the following inequalities hold:

$$\frac{dq_{ss}}{d\alpha} < 0 \leftrightarrow -\aleph(V)A\tau_k < \left[\frac{c\{\aleph(V)[\pi(K)-\alpha A\tau_k]+w(V)h(M)\beth_k\}}{cy_{ss}-h(m-p)}\right]\frac{dy_{ss}}{d\alpha} < 0 \quad (18)$$

The system (9)–(11) linearized around the steady state yields the following Jacobian:

$$J = \begin{bmatrix} \frac{\partial \dot{y}}{\partial y} & \frac{\partial \dot{y}}{\partial q} \\ \frac{\partial \dot{q}}{\partial y} & \frac{\partial \dot{q}}{\partial q} \end{bmatrix}_{y_{ss},q_{ss}} = \begin{bmatrix} -b\sigma & a\sigma \\ cq_{ss} & cy_{ss}-h(m-p) \end{bmatrix} \quad (19)$$

As long as $r > 0 \rightarrow cy_{ss} - h(m-p) > 0$, then the determinant of the Jacobian is negative and the steady-state equilibrium is a saddle point.

To place the saddle point in the context of stakeholder capitalism, imagine a firm's probable profits as a potato-chip-shaped plane on which a marble—actual profits—rests. With stockholder capitalism, only owners exert a gravitational pull, holding the marble in place. With stakeholder capitalism, multiple forces pull in different directions, nearly all finding lower points on the chip, and earnings that might be retained as internal equity become conflicted.

Ethical Innovation and Moral Perception:

A Care Ethics Lens for Christian Business Education

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Abstract

This paper positions care ethics as a meaningful lens for Christian business education because it helps future leaders approach innovation as a moral and relational responsibility, rather than merely a strategic or economic activity. Whereas traditional business ethics frameworks remain useful for evaluating consequences, duties, fairness, and stakeholder obligations, care ethics emphasizes something especially important in innovation contexts: the capacity to recognize moral responsibility before harm is obvious or fully measurable. For Christian business students, this matters because business practice cannot be separated from faith, stewardship, love of neighbor, and responsibility before God. I propose a conceptual model for ethical innovation grounded in care ethics, organized around attentiveness to affected people, interpretation of relational obligations, responsiveness in action, and integration of care into organizational practice. In doing so, the model is intended to help form Christian business leaders who are not only prepared to make ethical decisions but also to perceive ethical significance early, discern responsibility faithfully, and shape innovation toward human flourishing.

Keywords: care ethics, Christian business education, ethical innovation, moral perception, business ethics pedagogy

Ethical Innovation and Moral Perception:

A Care Ethics Lens for Christian Business Education

Christian business leaders often understand their work as an expression of faith and moral responsibility. In a 2025 survey commissioned by Houston Christian University's Center for Christianity in Business, 86% of Christian business leaders surveyed viewed business leadership as service and upholding moral and ethical values (Liang & Smith, 2026). But what about their approach to innovation? Today's business environment is shaped by technological acceleration and global interdependence, and innovation is essential to organizational growth and long-term viability. However, innovation can also change how people use products, access services, or depend on existing business practices. Some impacts on people may become apparent only after innovations are developed, adopted, and scaled (Rogers, 2003). As a result, real-world ethical questions are not limited to evaluating outcomes after the fact. Instead, they are embedded in how leaders frame problems, define opportunities, and make decisions amid ambiguity. Therefore, Christian business leaders must not only respond to change but also generate it in ways that support business outcomes and their faith, including when making decisions about innovation.

Contemporary business ethics education provides Christian business students with important tools for approaching ethical challenges. Established philosophical theories such as utilitarianism, deontology, and justice-based approaches are commonly introduced as decision frameworks that emphasize consequences, duties, and fairness, respectively (Dierksmeier, 2024; Rawls, 1999). Further theories, such as stakeholder theory, broaden attention beyond shareholders to the interests of other constituencies affected by business decisions (Donaldson & Preston, 1995; Harrison et al., 2015). These approaches provide students with valuable resources for understanding ethical reasoning. However, when taught primarily as tools for evaluating clearly defined ethical

problems, these approaches may provide fewer opportunities for students to practice recognizing a situation's moral significance to affected people before concerns are clearly articulated.

Early recognition of ethical concerns is particularly important when innovation changes familiar relationships and practices. Leaders may not recognize morally relevant relationships early in the process, and under these conditions, ethical failures can result from a lack of perception rather than deliberate wrongdoing. For example, the introduction of electric vehicles (EVs) offered notable environmental benefits, but their quieter operation also raised safety concerns for blind and partially sighted pedestrians who rely on the sound of conventional vehicles to assess approaching traffic, prompting advocacy for acoustic warning systems (European Blind Union, n.d.). In a hypothetical situation, a business owner who was considering transitioning their fleet to EVs during their early adoption may have focused on the economic and environmental benefits, but inadvertently overlooked pedestrians' dependence on vehicle noise for safety and independence. Recognizing this dependence early on would give the owner an opportunity to seek the perspectives of affected pedestrians and consider appropriate safeguards before implementing the transition. The challenge, therefore, is not simply to evaluate whether EVs are economically beneficial for a company or environmentally responsible for the world, but to recognize whose safety and independence may be affected within their immediate community and what responsibilities arise from that relationship.

This example illustrates the importance of recognizing dependencies that may otherwise be overlooked. It underscores why developing ethical innovators must begin with an education that teaches them to recognize morally relevant relationships early in the business process. If ethical analysis is mainly presented through completed cases with clearly identified concerns, students may have limited opportunities to practice recognizing ethical significance during the innovation process. Specifically, Werhane and Freeman (1999) suggested that the historic separation between business and moral reasoning affects how problems are framed and taught. More recently, Shantz et al. (2023)

discussed how separating economic and moral concerns can limit management education, emphasizing the need for students to practice moral self-awareness when addressing complex business problems. This concern is especially relevant for Christian business education. Business is part of God's created order, oriented toward human flourishing and relational responsibility (Cafferky, 2015; Van Duzer, 2010), and Christian educational approaches emphasize integrating faith and business practice. If ethics is mainly presented as a framework for completed cases, students may learn to separate moral conviction from business practice. When innovation changes the conditions in which people live and work, these commitments require attention to emerging dependencies and vulnerabilities. Students therefore need opportunities to practice recognizing relationships and responsibilities, alongside analyzing consequences, duties, and fairness. By doing so, Christian business students can develop into leaders who perceive and address moral challenges before they become visible through harm.

To support this integration of moral perception and ethical analysis, I argue that adding care ethics, also referred to as an ethics of care, to business ethics pedagogy provides a relational lens for future Christian business innovators. I also offer a potential model for grounding ethical innovation in a care ethics approach. Drawing on Gilligan (1982), Noddings (1984), Tronto (1993), and Held (2006), care ethics, an approach that emphasizes the interdependent and contextual nature of morality, does not replace the traditional frameworks taught; instead, it complements them. Care ethics shapes how we see ethical situations before formal analysis begins by foregrounding relationships, attentiveness, and responsibility. It strengthens ethical judgment where clarity is limited, and consequences keep evolving.

From this foundation, I pursue three aims. First, I examine the limits of teaching established business ethics frameworks primarily through clearly defined ethical problems in the context of innovation. Second, I position care ethics as a lens that emphasizes relational awareness and ethical

perception. Third, I propose a care-ethics-grounded conceptual model of ethical innovation. This model is intended to help future Christian business leaders become ethical innovators. Together, these points suggest that ethical innovation is not just about making better decisions but about cultivating leaders who can see, discern, and act with responsible care.

The Limits of Contemporary Business Ethics Frameworks in Innovation Contexts

Contemporary business ethics education commonly draws on several well-established philosophical theories, including utilitarianism, deontology, and justice-based approaches (Dierksmeier, 2024). Utilitarian approaches prioritize overall happiness or consequences, deontological ones emphasize adherence to duties or rules, and justice-based approaches focus on fairness in social arrangements (Dierksmeier, 2024; Rawls, 1999). These traditional concepts then provide evaluative frameworks for ethical decision-making by emphasizing outcomes such as consequences, duties, and fairness. Building on these foundations, more modern constructs, including corporate responsibility, shareholder theory, stakeholder theory, and corporate agency, have emerged (Donaldson & Preston, 1995; Harrison et al., 2015; Werhane & Freeman, 1999). Collectively, these frameworks form the backbone of an evolving discipline that equips students to assess right and wrong in organizational contexts.

When applied to innovation, however, these business ethics foundations demonstrate certain limitations. Though it is often associated with technological advancements, business innovation is broader in scope; it is collectively understood as "a product, service, business model, or strategy that's both novel and useful" (Boyles, 2022, para. 6). Innovation often involves considerable uncertainty, complexity, and unknown relational consequences throughout the entire process, from ideation to adoption (Rogers, 2003). Further, novelty and usefulness, hallmarks of innovation, do not necessarily equate to moral goodness. Innovation can reshape dependent relationships, redistribute risks and benefits, and produce uneven consequences across stakeholder groups (Frigo

et al., 2023; Rogers, 2003). While uncertainty accompanies many business decisions, innovation's novelty makes its moral impact particularly difficult to anticipate during ideation. When taught as analytical tools, standard frameworks help decision-makers determine whether actions or behaviors violate a principle, duty, or societal norm.

While they provide tools for evaluating business decisions, their application alone does not ensure moral perception in the early stages of innovation. Here, moral perception refers to recognizing ethically significant needs, relationships, and potential effects. Recent pedagogical scholarship emphasizes the need to cultivate ethical sensitivity alongside theoretical understanding (Weiler & Grant-Smith, 2024). As a result, ethical failure in innovation contexts may stem not from intentional wrongdoing but from failing to recognize morally relevant impacts early in the process. Innovation's ambiguity means moral perception is as necessary as ethical analysis. Recognizing ethical concerns is itself part of ethical decision-making. Moral attentiveness, the ongoing tendency to perceive and consider the moral aspects of experience, helps explain the disposition underlying this recognition (Reynolds, 2008). For example, justice-based frameworks require a fair distribution of benefits and burdens (Rawls, 1999), but fully anticipating that distribution before implementation can be difficult. Stakeholder theory also emphasizes that organizations have responsibilities to, and relationships with, multiple constituencies, not just shareholders (Donaldson & Preston, 1995; Harrison et al., 2015). However, applying this approach can become morally questionable if organizations treat stakeholder relationships primarily as an economic strategy. Corporate social responsibility can be viewed similarly: corporate actions intended to address social concerns can still have negative effects when justified primarily in economic terms (Kaplan, 2020).

This instructional emphasis on analysis over perception is not a flaw in business ethics; it is part of the field's evolution. Recent critiques continue to question the separation of ethical considerations from business purposes and practices in conventional business education

(Dierksmeier, 2024; Zsolnai, 2024). In business, ethics, such as Christian moral considerations, can be secondary to economic drivers. The two are not incompatible, but they may be treated as distinct understandings. This separation can impede a fully integrated approach.

Even when this aptly named "separation thesis" (Freeman, 1994) is dismissed in theory, recent critiques suggest that it can persist through how business problems are framed and taught. Dierksmeier (2024) questioned conventional instruction that introduces ethical theories without adequately preparing students to apply them, while Zsolnai (2024) called for education that supports moral growth and a more integrated understanding of business and ethics. Leadership scholarship reinforces the importance of ethical conduct but does not fully resolve this challenge. Brown et al. (2005) defined ethical leadership as demonstrating and promoting normatively appropriate behavior, and Brown and Treviño (2006) emphasized leaders' dual role as both moral persons and moral managers. These contributions highlight the importance of character and influence within organizations. Still, they do not fully address how leaders develop the capacity to recognize ethical issues before organizational systems formalize them. Thus, while existing business ethics frameworks are relevant, their teaching and application need to connect ethical reasoning with the lived realities of those affected by their choices, particularly in the context of innovation (Weiler & Grant-Smith, 2024).

For Christian business education, these limitations are particularly consequential. If ethics is presented as an external constraint rather than an integrated moral orientation, students may implicitly learn to separate their moral commitments from their business practices. Biblical perspectives on business emphasize integration rather than separation. Van Duzer (2010) argued that business activity should be understood as part of God's created order and support community flourishing. Other scholars emphasized that ethical business practice requires alignment between belief, character, and action, recognizing that certain innovations can have lasting impacts (Cafferky,

2015; Martinez & O'Brien, 2023). From this perspective, the challenge is not simply to apply ethical frameworks to business decisions but to develop leaders who recognize business itself as a moral endeavor.

Together, these dynamics suggest that prevalent business ethics frameworks provide necessary evaluative tools for clarifying obligations, assessing consequences, and identifying violations. However, they must be accompanied by the deliberate cultivation of moral perception, particularly in recognizing ethical questions that require attention and in guiding ethical innovation. Teaching these frameworks should therefore include deliberate attention to recognizing those questions, especially in contexts where affected stakeholders and relationships are not fully visible and consequences are still unfolding (Weiler & Grant-Smith, 2024). An emphasis on analysis alone risks producing leaders who are technically proficient in ethical reasoning but underdeveloped in moral attentiveness. What is required, therefore, is an additive ethical perspective that centers on attentiveness, relational awareness, and responsibility as primary, rather than secondary, features of moral reasoning. Care ethics can serve as a complementary lens for dominant business ethics frameworks.

Care Ethics: A Relational Moral Lens for Business Ethics

Care ethics emerged in the 1980s as a response to moral theories that emphasized abstraction, universality, and impartiality as the primary features of ethical reasoning. As a framework, care ethics shifts attention from the abstract application of general principles toward relational, contextual, and perceptual dimensions of moral judgment. Gilligan (1982) argued that dominant models of moral development privileged justice-oriented reasoning while overlooking relational modes of moral understanding. Noddings (1984) extended this insight by conceptualizing ethics as grounded in caring relationships, in which moral action begins with attending to and responding to the needs of others. Tronto (1993) further developed care ethics into a broader moral

and political framework, identifying attentiveness, responsibility, competence, and responsiveness as key elements of ethical practice. These elements involve recognizing needs, accepting responsibility for responding, providing care competently, and considering how those receiving care experience the response. Held (2006) synthesized these contributions, arguing that care should be understood as a foundational moral value that informs both personal and institutional life.

Collectively, this body of work on care reframes ethics as fundamentally relational. Rather than beginning with generalizable principles or aggregate outcomes, care ethics begins with attention to others and their needs in specific contexts (Hamington, 2019). This orientation does not negate the importance of principles, rights, or consequences; instead, it situates them within a broader moral process by beginning with perspective and addressing their limitations. For example, when discussing the concepts of justice and utility, Held (2006) argued: "We can decide to treat such persons as individuals, to be the bearers of individual rights. . . . But we should not forget the reality and the morality this view obscures. Persons are relational and interdependent" (p. 72). That is to say, abstract ethical frameworks risk obscuring the lived experiences of those affected by organizational decisions.

Care ethics addresses the need for explicit attention to moral perception by grounding ethical analysis in a relational context. For example, stakeholder theory has long emphasized that organizations have responsibilities to multiple constituencies, yet when stakeholder analysis focuses on identifying and categorizing generic groups, it can overlook the relationships involved (Donaldson & Preston, 1995; Harrison et al., 2015). Care critiques of stakeholder theory argue that ethical responsibility should be understood in terms of interdependence and care, not merely contractual obligation, as "the messy concerns of morality" (Held, 2006, p. 73) highlight the limitations of an exclusively procedural approach (Burton & Dunn, 1996; Wicks et al., 1994). In this

sense, care ethics deepens stakeholder theory by shifting attention from who counts to how relationships matter.

Similarly, ethical leadership research emphasizes both the leader's character and the systems that reinforce ethical behavior (Brown & Treviño, 2006; Brown et al., 2005). Leaders cannot ideate or respond ethically to situations they do not perceive as morally significant. Care ethics therefore complement this work by highlighting the importance of attentiveness as a precursor to ethical action. Within innovation, this attentiveness connects care ethics with design thinking through a shared emphasis on empathy, inquiry, and responsiveness (Hamington, 2019). In technology, contemporary scholarship sees care ethics as a relational approach that attends to context, vulnerability, and concrete relationships in technological design and innovation (Frigo et al., 2023). Ultimately, by cultivating attentiveness, care ethics strengthens the foundation upon which ethical leadership is enacted.

Implications for Christian Business Education

For Christian business education, the care ethics lens aligns closely with a theological vision of integrated moral life. Biblical ethics emphasizes relational responsibility, such as love of neighbor, stewardship of resources, and humility in leadership (Cafferky, 2015; Martinez & O'Brien, 2023; Van Duzer, 2010). These commitments resonate with the core insights of care ethics, particularly their emphasis on attentiveness and responsiveness within relationships. Cafferky (2015) noted that biblical themes that align with business ethics are numerous and therefore require interpretation from many different faith-based business perspectives. And though Freeman (1994) challenged the separation of business decisions and moral considerations as distinct from a secular point of view, it is a critique consistent with the integrated moral life emphasized in biblical teachings. Therefore, the integration of relational and communal commitments makes care ethics a compatible lens for Christian business education.

Additionally, care ethics naturally bridges Christian principles with other ethical traditions. Iluzada and Seward (2021) pointed out that Kantianism values humanity, though it is approached from a different angle: "Christianity would come to this conclusion not by rationality but by the knowledge that all people are made in God's image and by the second greatest commandment in the Bible: to love others" (p. 130). Christian ethics has long engaged questions of justice, duty, and moral law; however, it does so through relationships grounded in faith. Similarly, care ethics does not displace these concerns but enriches their application by directing attention to the realities of human relationships – their particular needs, dependencies, and the experiences of those affected by a decision (Held, 2006).

For Christian business leaders, ethical business practice requires integrating belief, character, and action to promote human flourishing within God's created order (Cafferky, 2015; Van Duzer, 2010). Recent survey results indicated that most Christian business leaders believe their businesses should reflect God's character through creativity, excellence, and love (Liang & Smith, 2026). For innovation ideation, care ethics offers a practical way to operationalize these commitments in a Christian context by identifying overlooked needs and incorporating the perspectives of those affected while ideas are still forming (Hamington, 2019).

Conceptual Model for Grounding Ethical Innovation in Care Ethics

Because responsible innovation scholarship emphasizes anticipating potential impacts, reflecting on underlying assumptions, including affected stakeholders, and responding as concerns emerge, it follows that it should be integrated into the formative education of future business leaders (Wei et al., 2026). These practices support the importance of preparing future business leaders to recognize and address moral responsibilities throughout innovation. Teaching care ethics as a lens for viewing business ethics and ethical innovation is intended to cultivate relational perception from the outset.

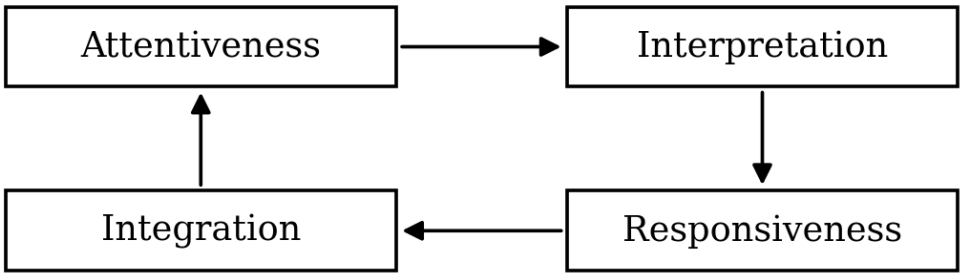
To support that effort, I propose a conceptual model for teaching the components of ethical innovation, grounded in care ethics, to foster the formation of future Christian business leaders. In this model, care ethics is not about rejecting profits or taking a softer approach to business. Instead, it rests on the central claim that ethical innovation requires not only sound ethical reasoning but also cultivated moral perception expressed through recognized relational responsibility over time. Further, the proposed model does not diminish the importance of rules, consequences, duties, rights, or fairness; it places those tools within a broader moral process and uses care ethics to make relational attentiveness explicit in forming future Christian business leaders (Held, 2006).

Core Components of the Model

Drawing on these theoretical foundations, the proposed model consists of four interrelated components: attentiveness, interpretation, responsiveness, and integration (see Figure 1). These components draw on Tronto's (1993) moral elements of care – attentiveness, responsibility, competence, and responsiveness – while organizing their application around recognizing moral significance, interpreting responsibility, responding to needs, and embedding care in business innovation practices. This model aims to equip future Christian business leaders with a conceptual tool for considering the far-reaching impacts of business innovation and to help these faith-based innovators integrate business innovation needs with relational theological commitments, such as love for others, stewardship, and responsibility for community thriving.

Figure 1

A Care Ethics Model for Ethical Innovation



Note. The components are interrelated and recurring; feedback from affected stakeholders informs renewed attentiveness throughout innovation.

Attentiveness: Identifying Moral Significance

Attentiveness refers to the capacity to notice a situation's moral significance before harm is obvious or formally documented. Tronto (1993) identified attentiveness as a core moral element of care because one cannot reasonably respond to the relevant needs of others if not aware of the impacts. Therefore, attentiveness functions as the entry point into ethical innovation. Without it, ethical reasoning is constrained by what is already visible or strategically prioritized.

For future Christian business leaders, attentiveness is not sentimental leadership, nor does it negate the need for hard decisions. Instead, it is disciplined, faith-focused moral awareness. It means asking more than just whether an innovation works or can succeed in the market. It means asking who may become more vulnerable because of this innovation, whose voice is missing, and whether this serves others according to biblical principles. Christian leaders have an obligation to bring order amid disruption rather than simply accelerating change for its own sake (Martinez & O'Brien, 2023). In a world shaped by rapid technological and entrepreneurial disruption, the Christian leader's first task in ethical innovation is attentiveness.

Interpretation: Constructing Moral Responsibility

Once leaders recognize morally significant relationships, they must interpret the responsibilities that arise from them. This is where care ethics best complements current business ethics frameworks. Utilitarian reasoning can still help leaders assess consequences, deontological reasoning can clarify duties, and justice-based reasoning can evaluate fairness and distribution (Dierksmeier, 2024; Rawls, 1999). Stakeholder theory can help identify constituencies affected by organizational action (Donaldson & Preston, 1995; Harrison et al., 2015). Yet care ethics deepens these approaches by asking how relationships themselves generate responsibility. From a care perspective, stakeholder theory is reimagined to emphasize interdependence, care, and relational obligation rather than treating stakeholders solely as strategic or contractual categories (Burton & Dunn, 1996; Wicks et al., 1994).

Interpretation also requires moral courage. For Christian business leaders, interpretation may reveal responsibilities that are inconvenient, costly, or not legally required. For example, a leader may discover that technological innovation is profitable and practical yet damaging to employee well-being and corrosive to community trust. Interpreting these business problems through a care ethics lens does not automatically resolve this tension. It does, however, direct conscious attention to these tensions and provides Christian business leaders with a way to interpret market boundaries in terms of moral responsibility. As Held (2006) asserted, "with the ethics of care and an understanding of its intertwined values, such as those of sensitivity, empathy, responsiveness, and taking responsibility, we could perhaps more adequately judge where the boundaries of the market should be" (p. 119).

For Christian business students, this insight is a critical tool for understanding not only how to compete in markets but also how to recognize less visible relationships and consequences, and where biblical principles and responsibility before God should challenge market logic.

Responsiveness: Acting Within Relational Constraints

In this model, responsiveness involves acting competently on perceived needs, attending to how those affected experience the response, and revising action accordingly. Noddings (1984) emphasized that care is not merely a feeling or attitude; it is expressed in response to the needs of the cared-for. Tronto (1993) emphasized that attending to the responses of those receiving care is essential to assessing its adequacy. Contemporary care-based design scholarship likewise proposes recurring caring practices throughout project management and technological design (Frigo et al., 2023). In innovation contexts, responsiveness may require leaders to redesign a product, slow implementation, invite affected communities into the process, change success metrics, or reject an opportunity that cannot be pursued responsibly. It may also require difficult decisions, including trade-offs that cannot entirely eliminate harm. Care ethics does not make leadership easy; it makes avoidance harder.

Responsiveness also connects to ethical leadership scholarship. Brown et al. (2005) defined ethical leadership as both demonstrating normatively appropriate conduct and promoting such conduct through communication, reinforcement, and decision-making. Brown and Treviño (2006) conceptualized ethical leaders as functioning as both moral persons and moral managers. A care ethics model extends this by emphasizing that ethical leadership begins before formal decisions are made. The leader's visible conduct matters, but so does the leader's capacity to notice morally significant relationships early enough to respond faithfully. Kaptein's (2019) concept of the moral entrepreneur is also relevant here because future Christian business leaders may need to initiate ethical change rather than simply comply with existing norms. In fast-moving innovation contexts, the ethically responsible leader may have to create practices, language, or safeguards that the organization has not yet imagined.

Integration: Embedding Ethical Innovation in Organizational Practice

Ethical innovation cannot depend solely on individual leaders' conscience. Research on ethical leadership and organizational climate underscores the importance of organizational support for ethical practice (Sreejesh & Roy, 2025). Within the proposed model, ethical innovation is sustained by embedding care into organizational practices, cultures, and systems. Rogers (2003) described innovation as a process involving stages of development, adoption, and implementation; integration adds that ethical perception must accompany each stage. Ethical integration from a care perspective requires building attentiveness, interpretation, and responsiveness into how innovation is developed, funded, designed, measured, and scaled. It means forming teams that can recognize relational impact across functions, disciplines, and stakeholder groups.

This care-based ethical integration is essential for future Christian business leaders because they will likely lead in environments that treat speed, growth, and disruption as unquestioned goods. Without ethical integration as a core behavior, care remains episodic and vulnerable to pressure. With integration, care becomes part of how innovation is practiced. Feedback from affected stakeholders and interdependencies renews attentiveness, allowing leaders to revisit their interpretations and responses as an innovation develops. Over time, this cycle is intended to deepen an organization's capacity for ethical perception.

Model Implications for Empowering Ethical Innovation

The model operates as a recurring process in which attentiveness reveals moral concerns, interpretation clarifies responsibility, responsiveness shapes and revises action, and integration embeds these insights into ongoing innovation practices. Returning to the hypothetical example of a business owner considering a transition to EVs, attentiveness would involve recognizing pedestrians' dependence on vehicle noise for safety and independence. Interpretation would require the owner to consider the responsibilities arising from operating the fleet within that community alongside the

economic and environmental benefits of the transition. Responsiveness could involve seeking affected pedestrians' perspectives and using their feedback to inform vehicle selection, driver training, and appropriate safeguards. Integration would embed these considerations into purchasing practices, operating procedures, and ongoing safety reviews. Feedback from the community would then renew attentiveness as conditions change, illustrating how care becomes a recurring practice throughout innovation.

Within this Christian educational application, the model asks leaders to consider commercial realities and consequences alongside biblical principles, without moral detachment from relational responsibilities, and without treating the market as morally self-justifying. Integration can support accountability by assigning responsibility for monitoring relational impacts, recording the reasons for consequential choices, and creating opportunities for affected stakeholders to question those choices and inform revisions. Profit may be a legitimate outcome, but it does not provide sufficient moral authority.

This understanding is especially important for empowering Christian business leaders to innovate ethically. These decision-makers are not called to participate in change passively, but to shape it in ways that promote human flourishing and relational integrity. A care ethics lens is intended to help them evaluate innovation not only by its efficiency or market success, but by its contribution to rightly ordered relationships. In this sense, ethical innovation becomes a practice of faithful responsibility. Attentiveness forms leaders to see, interpretation to discern, responsiveness to act, and integration to sustain care within organizational life. Together, these movements enable leaders to engage existing ethical frameworks through a relational lens grounded in care.

Potential Pedagogical Applications for Teaching Care Ethics

This proposed model also offers practical applications for teaching care ethics in Christian business education. Rather than presenting care ethics as a separate theory to memorize, instructors

can use the model to help students practice ethical perception in innovation contexts (Hamington, 2019). In this approach, attentiveness, interpretation, responsiveness, and integration become both conceptual categories and pedagogical movements.

First, students can learn attentiveness through relationally oriented case analysis. Students can identify not only primary stakeholders but also overlooked groups, hidden dependencies, and communities indirectly affected by innovation. This gives students practice examining who or what relationships are absent from a case as carefully as those present.

Second, interpretation can be developed through guided comparison with traditional frameworks. After identifying affected relationships, students can assess responsibilities using care ethics alongside utilitarian, deontological, justice-based, and stakeholder approaches. This reinforces the argument that care ethics functions as a lens that deepens ethical reasoning rather than replacing established frameworks. Students can then explain how they would weigh competing responsibilities and justify their proposed course of action.

Third, action-oriented assignments can teach responsiveness. Students might revise an innovation plan, propose safeguards, redesign implementation, or explain when to delay or decline an opportunity. Students can then revisit their proposals using stakeholder feedback or additional case information regarding relational interdependencies, reassessing perceived needs, competing responsibilities, and whether the proposed response addresses the concern or creates additional harms. This moves care ethics beyond empathy and into responsible leadership practice. When paired with biblical principles and faith-based discussions, students can identify and prepare for business problems that require moral courage.

Finally, students can learn integration through organizational design exercises in which they build care-based practices into innovation systems, including stakeholder review processes, revised success metrics, feedback processes that inform revisions, and post-implementation impact reviews.

In Christian business education, these potential pedagogical applications are intended to help students connect ethical theory to spiritual and professional formation. Students are not merely learning to describe care ethics; the model is intended to empower future Christian leaders to integrate faith, ethical reasoning, and business judgment so that innovation is evaluated not only by market success but by its contribution to human flourishing, relational responsibility, and love of neighbor.

Conclusion

To empower ethical innovation, future Christian business leaders need both the ability to reason ethically and the capacity to perceive moral responsibility as it emerges. I propose care ethics as a complementary lens that directs attention to relationships, dependencies, and needs that may otherwise remain overlooked. The proposed model connects attentiveness, interpretation, responsiveness, and integration to help leaders recognize moral concerns, discern responsibility, act on what they learn, and embed care into ongoing innovation practices. Its contribution is to make relational attentiveness explicit within ethical reasoning and the formation of future Christian business leaders.

For Christian business education, this approach connects ethical judgment with faith, stewardship, and love of neighbor. The proposed pedagogical applications give students opportunities to identify overlooked relationships, weigh competing responsibilities, and revise innovation proposals in response to those affected. The aim is to prepare leaders who can pursue business goals while remaining accountable for the direct relational consequences of their choices. Ethical innovation therefore requires responsibility amid uncertainty and trade-offs, with human flourishing informing how opportunities are understood and pursued.

The model remains conceptual and requires empirical evaluation. Future research could examine its use in Christian business courses by assessing students' identification of overlooked

relationships, justification of competing responsibilities, and revision of proposals in response to feedback. Subsequent research could investigate whether these practices transfer to organizational decision-making. Ultimately, care ethics offers one pathway for preparing Christian business leaders to perceive ethical significance early and shape innovation with faithful responsibility toward the people and communities their decisions affect.

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From Information to Formation:

A Value Theory for Christian Higher Education in the AI Era

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Abstract

For the first time in nearly a millennium, the university has lost its monopoly on access to knowledge. Fewer than four years after the public release of generative artificial intelligence, the academy's traditional value proposition, grounded historically in the transmission and certification of knowledge, has been irreversibly destabilized. Knowledge is no longer scarce, technical skills are no longer the exclusive product of degree programs, and competent academic output is no longer the achievement higher education has historically certified it to be. This paper proposes a solution by advancing a value theory for Christian higher education in the AI era which argues for an emphasis on individual *formation* over content *information*. It asserts that the institutional response of higher education to artificial intelligence has already moved through three phases: integration, workforce preparation, and ethical governance, and is now navigating a fourth phase of value justification in which the academy must articulate what irreducible value remains when knowledge and skill production are no longer scarce. The paper argues that the irreducible value of higher education lies not in the transmission of information but in human formation: the cultivation of moral judgment, relational competence, vocational clarity, embodied relationships, and participating with others in faith. Drawing on a biblical understanding of humankind, including the doctrine of the *Imago Dei* and a theology of work as worship, stewardship, and mission, the paper argues that Christian higher education is uniquely positioned to contribute to the next phase of student development.

Keywords: artificial intelligence, Christian higher education, theological anthropology, formation, *Imago Dei*

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For the first time in nearly a millennium, the university has lost its monopoly on knowledge. A first-year undergraduate writing a paper in October 2026 can, in less time than it takes to read this sentence, generate a competent draft of an essay her professor would once have considered the hard-won product of a semester's work. Fewer than four years after the public release of generative artificial intelligence, institutions of higher education find themselves confronting a question they had not previously thought necessary: what is the value of learning when access to knowledge is no longer scarce? As Fall 2026 begins, generative AI has become almost ubiquitous within the academy. Within a remarkably short period of time, the term *artificial intelligence* has moved from a conceptual novelty to near-saturated usage, the result of which is that references to AI are on the verge of becoming background noise within higher education discourse. Consequently, institutions risk normalizing the language of artificial intelligence without fully considering the deeper implications it poses for the future of knowledge, work, and the value of an educational experience. At the same time, a growing body of evidence points to a widening AI skills gap, in which a small percentage of highly engaged users are rapidly advancing their ability to leverage AI tools while a broader population remains limited to surface-level use, creating new forms of disparity in educational and professional contexts (KPMG International & University of Melbourne, 2025; Microsoft Corporation, 2025).

The scale of student adoption underscores both the breadth and the urgency of this shift. Recent surveys indicate that a substantial majority of university students now use generative AI tools regularly for academic purposes, with one large-scale study reporting that 92% of students use AI in their assessments (Adams, 2025), and broader industry data placing daily and weekly usage among students at comparable levels (Cengage Group, 2025; Digital Education Council, 2024). Adoption is

not confined to traditional-age undergraduates; adult learners, in particular, are embracing AI at rates exceeding those in other demographic groups (Stanford Institute for Human-Centered Artificial Intelligence, 2025). Nor is such use limited to basic tasks such as editing or summarization. Students increasingly rely on AI tools for substantive content creation, problem-solving, and the production of analytical work, the very forms of intellectual labor that the academy has historically been entrusted to develop and to certify.

Much has been written in the four years since the public release of generative AI about the disruptions it has caused in the learning process. Yet colleges and universities must now move beyond short-term reactionary measures toward a longer-range reflection as to what artificial intelligence means for higher education and for the value of the college degree itself. The question is no longer how to respond to artificial intelligence in the present moment, but whether the academy, as it enters the AI-era, can articulate a coherent apologetic for the value of its educational programs, including the purpose of collegiate education itself.

From Integration to Value Justification: The Institutional Response to Artificial Intelligence in Higher Education

The response of higher education to generative AI since November 2022 can, broadly speaking, be categorized into three overlapping phases: integrating AI into teaching and learning; preparing students for an AI-enabled workforce; and finally, ethical guidance and governance (An et al., 2025; Chan, 2023). These phases are not strictly sequential, and many institutions exhibit elements of more than one simultaneously. Nevertheless, each represents a different posture, and each also carries a limitation that has driven the academy toward the next.

The initial response was characterized by rapid efforts toward integrating AI into the classroom. In the weeks and months following the public release of ChatGPT in late 2022, faculty and administrators sought to understand the emerging tools and to begin incorporating them into

teaching and learning environments. This phase was marked not by strategic clarity but, just like the COVID-19 pandemic, by urgency and improvisation (EDUCAUSE, 2024; Mollick, 2024). Faculty, many of whom had little prior exposure to generative AI, were required to simultaneously learn what these tools were, how they functioned, and what their implications might be for their disciplines. Instructors faced a dual burden: acquiring working knowledge of generative AI while determining how, and to what extent, such tools should be embedded into their courses. This included redesigning learning outcomes, reconsidering assessment strategies, and integrating AI tools into learning management systems and classroom practices (Jones, 2023). These efforts often occurred in real time, with little institutional guidance, established best practices, or clarity about long-term implications. Faculty experimentation varied widely in quality and intent, ranging from enthusiastic adoption to cautious exploration, and in some cases reluctant compliance. While this period demonstrated a measure of institutional agility and creativity, it also revealed the extent to which higher education was responding to AI as a disruptive force without yet possessing a coherent framework for its overall pedagogical or philosophical integration.

A second, more deliberate stage focused on preparing students for entry into an AI-saturated workforce. As faculty and administrators developed a working understanding of generative AI tools, attention shifted toward implications for student learning and employability. Artificial intelligence emerged as not merely a pedagogical tool but a defining feature of the professional landscape (McKinsey & Company, 2025; Microsoft Corporation, 2025). Employers quickly began signaling that future hires would be expected to operate competently within workplace environments that were quickly embracing AI, requiring both technical familiarity and the ability to critically evaluate, manage, and ethically deploy such tools (Deloitte Insights, 2023; KPMG International & University of Melbourne, 2025). Institutions responded with heightened emphasis on upskilling students in digital literacy and AI fluency, and with substantive curricular innovation including new courses

focused on artificial intelligence and even entire academic programs centered on AI and its applications. Undergraduate degrees in Artificial Intelligence emerged across a range of institutions, reflecting a consensus that AI fluency should be treated as a core component of contemporary higher education. Yet while this phase represented a more strategic posture than the period of rapid integration, it remained focused on equipping students to operate effectively within an AI-driven economy. It continued to address the perception of what students might need to know and be able to do in light of the AI-era but did not yet engage the deeper question of what higher education itself was ultimately for in such a context.

A third phase, focused on ethical guidance and governance, remains a stage in which most academic institutions are still actively engaged. Having sought first to understand generative AI tools and then to equip students with AI fluency, institutions have begun to wrestle with the question of responsible use. This phase reflects a growing recognition that widespread AI adoption requires not only technical proficiency but also clear ethical boundaries (Miao & Holmes, 2023; Selwyn, 2019). Institutional attention shifted towards ethics, policy, and best practices intended to ensure that AI use within academic contexts is appropriate and ethically sound (Jones, 2026a). Questions surrounding authorship, academic integrity, and the extent to which AI-generated content constitutes original work have become central to institutional policy discussions (Ilieva et al., 2025; Zhao et al., 2024). Yet while this phase represents a vitally important component, it still remains largely reactive. It addresses how artificial intelligence should be used within *existing* educational structures and still does not engage the more fundamental question of whether those structures themselves remain adequate in today's AI context.

Beyond questions of integration, workforce preparation, and ethical governance, the availability, adoption rates and capabilities of generative AI demand a reexamination of the fundamental purpose and value of higher education (Blackie & Luckett, 2025). This paper proposes

value justification as a necessary fourth dimension of the institutional response to artificial intelligence and argues that universities now need to articulate the enduring value they provide beyond simply awarding a diploma. If the academy is to remain relevant and competitive in today's marketplace, it must move beyond immediate questions of adoption and responsible use toward a more comprehensive and forward-looking perspective. This includes not only adapting academic programs and investing in faculty development but also rearticulating an apologetic for the inherent value of a traditional four-year college degree to key stakeholders, including students, parents, employers, and institutional investors.

The urgency of this task is underscored by the widespread availability of generative AI tools, which have significantly increased student access to knowledge and the capacity to generate competent, and in many cases technical, output. Tasks that once required years of formal training can now be performed within seconds by AI tools available without cost. The traditional value proposition of higher education, grounded historically in the transmission and certification of knowledge, has therefore become structurally unstable. This is not a temporary disruption but a permanent shift in the nature of knowledge, work, and human capability (Mollick, 2024; Song, 2021). The assumptions that have historically sustained higher education's value proposition have been fundamentally altered in ways that now require not merely *adaptation* but *reconstruction*.

The Historical Aims of Higher Education and the Logic of Assessment

In order to look forward to the task ahead, it is first necessary to briefly look back and understand some of the underlying pillars on which the academy has stood to this juncture. Higher education has historically served two interrelated functions: the education of students and the certification to stakeholders that such education has taken place (Hutchings et al., 2015). Universities have long operated as institutions responsible not only for the preservation and transmission of knowledge, but also for the cultivation of intellectual virtue and the preparation of individuals for

professional and civic life (Newman, 1852/1996). Early models of higher education, particularly within classical and medieval traditions, emphasized the formation of the whole person, an emphasis that has been recovered and theologically articulated within the Christian intellectual tradition (Holmes, 1987). Over time, however, modern higher education increasingly shifted toward a more utilitarian and credential-oriented framework in which knowledge became both the primary commodity and the primary measure of educational success (Delbanco, 2012).

Within this modern paradigm, institutions structured curricula around the delivery of disciplinary content, and assessment mechanisms were designed to evaluate a student's ability to comprehend, retain, and reproduce that knowledge. Written examinations, essays, and research projects functioned as the primary means through which institutions demonstrated student learning to society (Bok, 2013). These forms of assessment operated as proxies for intellectual competence, while degrees served as signals to employers of a graduate's preparedness for professional work. This model was sustained by an underlying presupposition: the relative scarcity of knowledge and the difficulty of accessing, synthesizing, and applying it. Higher education institutions functioned as gatekeepers of information, and faculty served as both curators and evaluators of that knowledge. In such a context, traditional forms of assessment were reliable and appropriate. To test what a student knew was to test what a student had learned, and to credential that knowledge was to certify a form of intellectual labor that could not easily be replicated outside the academy.

However, the widespread emergence of generative AI has significantly destabilized this model. Artificial intelligence is now capable of producing work that closely resembles human output and is, in many cases, virtually indistinguishable from authentic student submissions (Herbold et al., 2023). This development undermines the long-standing assumption that traditional assessments reliably certify student understanding or mastery (Newton & Essex, 2024). The issue is not merely one of academic dishonesty, but of the erosion of assessment validity itself. When AI systems can

generate essays, solve complex problems, and produce sophisticated analyses in real time, the relationship between knowledge acquisition and assessment becomes increasingly tenuous. Many assessment practices exist not because they are pedagogically appropriate, but because they are rooted in historical tradition (Zhao et al., 2024). The rise of generative AI exposes the extent to which the academy has relied on inherited models of evaluation designed for a fundamentally different informational environment.

Institutional responses have varied widely. Some institutions have attempted to prohibit AI use entirely, framing such tools as threats to academic integrity, while others have adopted permissive approaches that offer minimal guidance (An et al., 2025). Both strategies have proven inadequate. Prohibition-based approaches are difficult to enforce and often drive AI usage underground, whereas permissive approaches risk normalizing uncritical and irresponsible dependence (Adair, 2025). The central challenge is not whether students will use artificial intelligence, but whether educational institutions will meaningfully adapt to a context in which such use is ubiquitous (Adams, 2025). More fundamentally, the emergence of generative AI calls into question the entire model of higher education built upon knowledge scarcity. If knowledge can now be accessed, generated, and applied with minimal intellectual friction, then the value of higher education can no longer rest primarily upon the transmission or certification of that knowledge. Institutions must reconsider their purpose at a more foundational level, moving beyond questions of assessment and toward a rearticulation of educational value itself.

A Crisis of Educational Purpose

The destabilization of traditional assessment and credentialing reveals a broader crisis of purpose within higher education. Without an appropriate response, institutions are in danger of becoming unable to articulate their value to students and key stakeholders. Emerging evidence already suggests that developments in AI are prompting some students and parents to reconsider the

value of a four-year degree and its role in preparation for work (Bryant, 2023; Penn Foster Group, 2026). This raises a further question for higher education: as AI tools increase opportunities for independent learning and generating quality output with ease, can the academy continue to justify the time and expense of a traditional degree? Public confidence in the value of a college education has already been declining in recent years, with cost-versus-benefit concerns identified as the principal driver of skepticism (Gallup & Lumina Foundation, 2024). The concern extends beyond tuition itself to whether the educational experience yields the reward and credentials that justify its investment in an economy increasingly saturated by artificial intelligence. At the same time, employers are also beginning to question what distinctive qualifications college graduates bring to the workplace (Microsoft Corporation, 2025). Yet many academic programs continue to be structured around the development of precisely the kinds of competencies that AI now performs quickly and at low cost. Institutions themselves face mounting pressure to justify the value of traditional degree programs as technological change reshapes workforce needs and alternative pathways to learning proliferate (Wingard, 2022). Generative AI sharpens this challenge by calling into question assumptions about knowledge, learning, and the purposes of higher education (Blackie & Luckett, 2025). The critique that the modern university has lost a clear account of its own purpose is not new (Kronman, 2007), but the rise of generative artificial intelligence has accelerated and intensified it.

To this point, much of the discussion has been institutional and educational. Yet at their core, the challenges of the AI era to the academy are not simply educational or technological. They are also anthropological and, for Christian higher education, deeply theological. The rise of artificial intelligence demands renewed consideration of what it means to be human in relation to increasingly capable machines (Graves, 2024). It raises questions about the nature of work, the grounds of human dignity, and the cultivation of moral agency and virtue in a world where tasks once entrusted

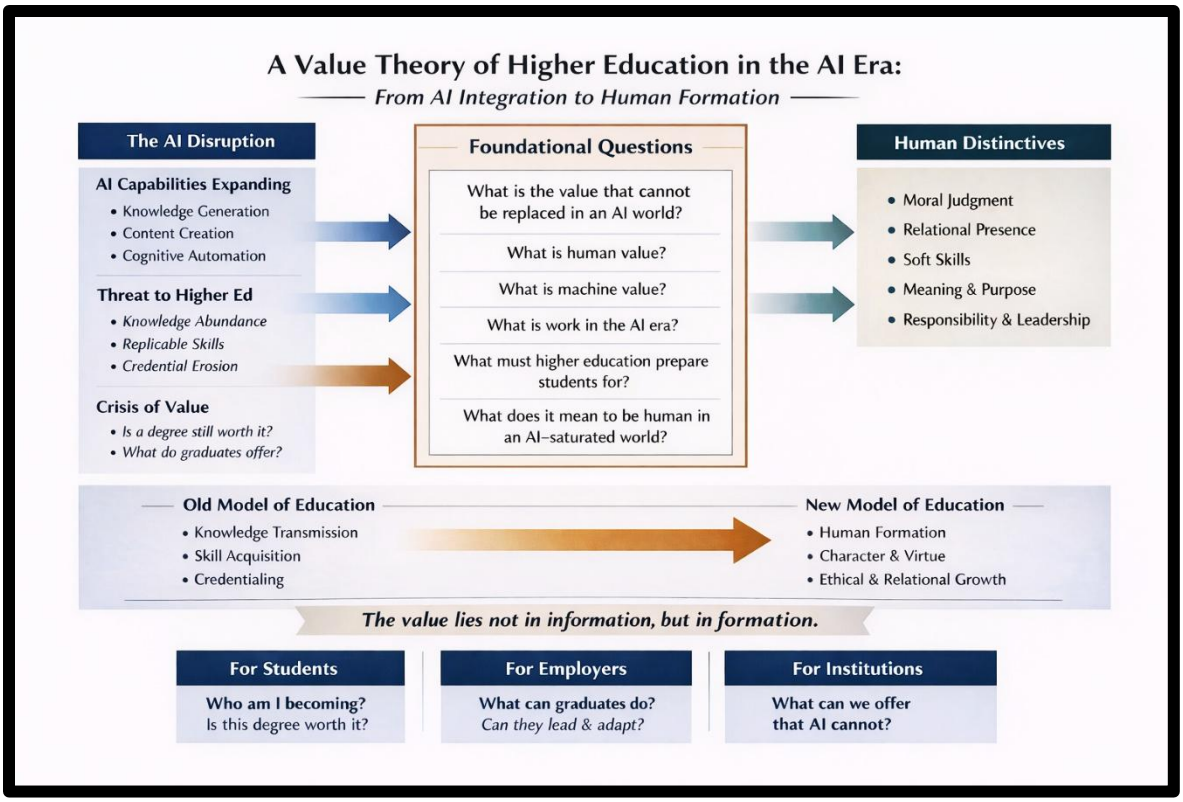
to people can increasingly be automated (Scherz, 2026). Higher education currently lacks a coherent framework for addressing these issues. What is missing is not innovation in the technological sense, but a clearly articulated value theory capable of explaining why higher education still matters, and what irreducibly human formation requires, in an AI-saturated world. The remainder of this paper takes up that task, beginning with the foundational questions that any such value theory must answer, however it is only the start of research to address this issue.

Toward a Value Theory: Foundational Questions for the AI Era

The development of a value theory of higher education in the AI era requires the clarification of a set of foundational questions, summarized in Figure 1. These questions are not only educational, nor are they merely methodological. They are also inherently philosophical and theological.

Figure 1

A Value Theory of Higher Education in the AI Era



The first set of questions concerns the nature of value itself in an AI-saturated world. If artificial intelligence is now capable of producing knowledge, generating content, and performing increasingly complex cognitive tasks (Microsoft Corporation, 2025; Mollick, 2024), then traditional markers of value require reexamination. *What value, then, does an individual bring to a task that cannot be replaced by AI? What now constitutes human value, and in what ways does it differ from what AI is capable of producing? What is machine value, and how should it be understood within the broader economy of work and productivity?* These are not merely economic questions. They are questions about what makes a human worth the time, expense, and intentionality of developing.

The second set of questions concerns the nature and future of work. As artificial intelligence continues to automate a widening range of tasks, the boundaries of human labor are being redrawn (McKinsey & Company, 2025). It is unlikely that any category of work will remain entirely untouched by AI, and the academy can no longer assume that any of its degrees are immune. In short, it is not possible to AI-proof a job, profession or academic program. *What is it, then, that humans will always need to do? What elements of work will continue to be inherently human? What should remain a distinctively human task? How can the academy continue to develop human skills such as moral judgment and relational engagement?* As capable as AI systems are, they are still unable to replicate necessary interpersonal connections that are foundational to much of professional life: greeting and reading other people, presiding over meetings, conducting face-to-face interviews, navigating confrontations, and responding to a distressed colleague or client. These are the human-to-human abilities that artificial systems cannot replicate because they cannot inhabit human social space. *What is work itself in the AI era? Is it primarily task-oriented, or must it be understood in terms of meaning, vocation, and contribution? Do employers care more about what graduates can do, what they know, or who they are?*

The third set of questions follows directly for higher education. If the nature of work is changing, the aims of education must change with it. *What is it that colleges and universities will always*

need to prepare students for? If knowledge acquisition and technical skills are no longer sufficient as defining educational goals, what forms of preparation remain essential? The question is not only what students should be able to do upon graduation, but whom they should be becoming during their education, and what institutions are accountable for in that becoming.

Defining Human Value in an AI-Mediated World

Artificial intelligence systems demonstrate increasing proficiency in tasks traditionally associated with human cognition. They retrieve and synthesize information, generate written, visual, and audio content, and are capable of analysis that closely mimics human reasoning (Mollick, 2024). Some are already arguing that any human capability is, in principle, replicable given sufficient coding and parameters (Kurzweil, 2005). However, the Christian theological tradition grounds the distinctive value of humanity in the doctrine of the *Imago Dei* (Hoekema, 1986). Scripture affirms that humans alone among created beings are made in the image and likeness of God (English Standard Version, 2011/2001, Genesis 1:26-27). This affirms the human being as a creature whose distinctive value lies in mind, body, moral agency, and relational personhood, all oriented toward the worship and service of God (Grudem, 1994).

Humans were created to thrive in relation to one another. The divine pronouncement that *it is not good that the man should be alone* (Genesis 2:18) is the clearest of reminders that humans were created to exist in relation to others. Evangelical theology has long argued that the social and relational character of the triune God is reflected in the social and relational character of human persons (Grenz, 2001; Wright, 2004). This relational element is how humanity learns to know itself, to develop moral character, and to interact with others, and God. Artificial intelligence can only *simulate* certain features of this relational nature, however (Jones & Schonewille, 2026). It can respond with appropriate tone, sustain conversations across multiple interactions, and produce outputs that sound as though they were personally addressing the user. What they cannot do,

however, is *be present* with another person. They cannot occupy the social space in which two image-bearers meet, recognize each other, and engage in the embodied complexity of a human encounter. Much of human life exists in the person-to-person relational connections that artificial systems cannot replicate because they cannot inhabit the embodied social space in which such encounters take place.

Humans are an embodied part of creation. God formed Adam from the dust of the ground and breathed into him the breath of life (Genesis 2:7). Every human is from the beginning a distinct creation by divine intent with a body and spirit, not a disembodied mind temporarily housed in a body. The Christian tradition has consistently resisted accounts of human personhood that detach the self from its embodiment, including in its rejection of Gnostic and Platonic dualisms that treated the body as a vessel or as a prison (Wright, 2008). Instead, it has consistently argued that formation occurs through the physical activities humans participate in, not through the transmission of information alone (Smith, 2009). This claim is significant for the question of artificial intelligence because it has no physical way to engage the world, nor any ability to understand what it feels like to be human. AI can occupy no place, inhabit no body, develop no habits in the embodied sense, and have no relation to the physical environment in which humans live. The limitation is not engineering. It is metaphysical. To the extent that human cognition, moral judgment, and relational competence are formed through presence with other humans in particular places and over time, they are not capacities that a disembodied technology can develop, regardless of how sophisticated its information processing becomes.

Humans are also moral creatures, called to exercise judgment and to give account to God for the lives they lead (Deuteronomy 30:19; Micah 6:8; Romans 14:12). Much of this moral life is lived out through work. The Christian tradition has long understood work as having three dimensions. It is worship, in which the worker offers labor to God. It is stewardship, in which the worker manages

God's creation on his behalf. And it is mission, in which the worker participates in God's redemptive purposes for the world (Jones, 2024). None of these can be performed by an artificial system. AI tools may generate content and increase efficiency, but they cannot offer output to God as a form of worship, nor steward the resources they produce, or use them in mission. Those belong to the Christian alone, who stands before God in a way no machine can.

The deepest dimension of human distinctiveness is therefore *participatory* rather than *informational*. Humans are oriented toward God not merely through cognitive ability but also through communion with other believers. The Christian faith is not merely a body of doctrine that can be transmitted as information. It is a life of worship, repentance, faith, and witness that can only be inhabited by an embodied, accountable, relational creature called by God into covenant relationship. Artificial intelligence systems may produce coherent theological output. They may generate prayers that read fluently, sermons that develop a text competently, and answers to doctrinal questions that draw accurately on centuries of Christian scholarship. However, they cannot believe. They cannot worship. They cannot repent. They cannot love God or be loved by Him. These intrinsic aspects of the Christian faith are reserved for humanity alone in relation to God through Christ (Herzfeld, 2023). Scripture itself distinguishes the uniqueness of the human knowledge of God. Paul prays in Ephesians 3:19 that the Ephesians may *know the love of Christ that surpasses knowledge*, a paradox that is resolved only when one sees that this *knowing* is participatory rather than informational. To *know* the love of Christ demands human existence. The demons *know* of God and shudder (James 2:19), yet this knowledge is formationally incomplete and salvifically empty. This distinction identifies what it means to be human in a way that artificial intelligence most fundamentally cannot replicate, and therefore, the importance of formation for which Christian higher education is uniquely accountable.

Implications for Stakeholders

The rearticulation of educational value as *formation* rather than *information* has direct implications for the future of the academy, especially Christian higher education. Students and the families that support them are asking whether a college degree justifies its cost. The answer cannot rest on access to information alone, because information is now widely accessible at virtually no cost. The answer, therefore, and with it the apologetic of value for the university, is that the value of a degree lies in who a student *becomes* through it. A Christian college education shapes moral judgment, develops relational maturity, clarifies vocation, and cultivates the kind of character and wisdom that artificial intelligence cannot supply.

Employers are beginning to realize this too. They are already signaling that the skills most needed in an AI-saturated workplace are not only the informational competencies that artificial intelligence performs competently. The abilities of graduates they report as most valuable include judgment, communication, ethical reasoning, adaptability, teamwork, and interpersonal skills (Microsoft Corporation, 2025). Higher education must demonstrate that it is able to continue to develop these abilities alongside AI literacy today.

The Distinct Contribution of Christian Higher Education

Christian higher education is uniquely positioned to articulate the value theory this paper has developed. The reason is that the theological and intellectual resources required are already embedded in the Christian higher education tradition. The doctrine of the *Imago Dei*, the account of work as worship, stewardship, and mission, the conviction that human formation is the integration of mind, body, character, and faith, and the recognition that participation in the life of God exceeds informational engagement, are not propositions Christian institutions need to acquire. They are commitments Christian institutions have historically held, even where their practical implementation has varied or weakened (Holmes, 1987). The task before Christian higher education is therefore not

to *invent* a new value proposition but to *recover and deepen* the existing value proposition the tradition has carried since its inception. Unfortunately, some Christian institutions have, over recent decades, drifted toward the same knowledge-transmission and credentialing model that has defined the broader academy. Others have allowed the theological and formational dimensions of their mission to become decorative rather than load bearing.

The value proposition in this paper will be realized only by Christian institutions that intentionally recover their missional purpose, restructure their curricular and co-curricular practices to support that purpose, and accept the spiritual and institutional work that genuine formation requires. The opportunity that artificial intelligence creates for Christian higher education is therefore also a challenge to it. The institutions that respond by recovering their formative identity will have something distinctive to offer in a marketplace where many will struggle to articulate why they exist at all. Those that do not will face the same value-justification crisis as the rest of the academy, without the theological resources they were founded to deploy. In short, academic institutions most likely to thrive in the coming decade will be those that can articulate, demonstrate, and defend the formative dimensions of their educational work. For Christian institutions, this is not a marketing exercise. It is a recovery of the formative purpose that animated the founding of most Christian colleges and that remains embedded, though sometimes obscured, in their mission statements.

An Ongoing Research Agenda for the AI Era

The value theory advanced in this paper opens rather than closes the work that lies ahead. It begins to identify those elements of humanity that artificial intelligence tools cannot replicate and argues that the formation of students is central to the future value of higher education. What is now required is ongoing research that will expand the understanding of *value* in several ways. For example, how ought the academy to measure and certify formation outcomes such as moral

judgment, vocational clarity, relational competence, character development, and faith? In addition, there must be urgent development of Christian theological frameworks for the use and evaluation of artificial intelligence tools (Jones, 2026b). The doctrine of the *Imago Dei* and a theology of work for AI require continued work to address what relational image-bearing implies for institutional practice and what Christian anthropology has to say to the developing fields of human-AI collaboration and human enhancement. Some of this work has begun (Herzfeld, 2023), but the field is young and the questions are accelerating faster than the scholarship can address them.

Another line of research concerns ongoing curriculum and assessment design. Traditional assessment, structured around the measurement of information acquisition and skill demonstration, is poorly suited to measuring the integrated development of character, judgment, vocation, and faith. New assessment frameworks are needed, including portfolio-based evaluation, longitudinal mentor assessment, capstone integration projects, and outcome measurement that follow graduates into their vocational lives. Curriculum design must likewise be reexamined, with attention to how disciplinary courses and co-curricular practices, including residential life, mentorship, chapel, and service learning, are structurally integrated. Each of these lines of inquiry will require collaboration across faculty, student development professionals, institutional researchers, and senior administrators, working across institutions to build the empirical and theological foundations the value theory requires.

Conclusion

This paper has advanced a value theory for Christian higher education in the AI era. The argument is that the academy's traditional value proposition, grounded in the transmission and certification of knowledge, has been structurally undermined by generative artificial intelligence, and that the irreducible value of higher education lies not in information but in formation: the cultivation of moral judgment, relational competence, vocational clarity, embodied relationships, and

participating with others in faith. Christian higher education is positioned to articulate this value with a depth that secular institutions cannot match on the same grounds, because the theological anthropology required for the articulation is already constitutive of the Christian intellectual tradition. The framework offered here is a beginning rather than a conclusion. If artificial intelligence has forced the academy to reconsider what machines can do, it has simultaneously forced the academy to reconsider what humans are for. Christian higher education has theological resources to answer that question with clarity and conviction. The task now is to undertake the empirical, theological, and institutional research that the answer requires.

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Starbucks Korea Tank Day: An Ethics Case Study

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Abstract

In May 2026, Starbucks Korea ignited an ethical and political firestorm with its "Tank Day" marketing campaign—a promotion suggested by artificial intelligence—coinciding with the anniversary of government troops firing on pro-democracy protesters on May 18, 1980. This paper presents an ethics case study based on this marketing campaign, complete with teaching notes. This case study is meant to empower future Christian business leaders to drive ethical innovation by making them consider appropriate use of artificial intelligence, the necessity of following internal controls, the importance of political, cultural, and historical factors in marketing and strategy, and the need to make ethical decisions that reflect God's holiness, justice, and love.

Keywords: business ethics, marketing ethics, international business, biblical principles, culture, case study

Starbucks Korea Tank Day: An Ethics Case Study

In 2024, Starbucks Korea was healthy and growing (Starbuck's success strategy, 2024). But in May 2026, the company ignited a firestorm with its "Tank Day" promotion (Kim & Jett, 2026). This case study discusses the performance of Starbucks Korea prior to the promotion and its response to the outrage over the promotion. The promotion, which was driven by the desire for increased sales, used artificial intelligence to generate a promotional slogan which became problematic. The company failed to completely follow its own internal review standards, and in doing so unleashed an ethical and political firestorm (Yang & Kim, 2026). The case study is presented first, followed by teaching notes, which include a case synopsis, intended courses, learning objectives, theoretical linkages, suggested teaching approaches, student assignment/discussion questions, and suggested responses to the discussion questions. This assignment is meant to empower future Christian business leaders to drive ethical innovation by making them consider appropriate use of artificial intelligence, the necessity of following internal controls, the importance of political, cultural, and historical factors in marketing and strategy, and the need to make ethical decisions that reflect God's holiness, justice, and love.

Case Study

In 2024, Starbucks Korea became the first coffee chain to pass the 3 trillion won mark ($2.06 billion) in annual sales (Kyung-Min, 2025). Starbucks opened its first Korean store in 1999 and grew to be the largest coffee chain in Korea. Its closest competitor—A Twosome Place—had only a fraction of Starbucks Korea's revenues, with 480 billion won in sales in 2024 (Kyung-Min, 2025). As of February 2026, South Korea represented Starbucks' third-largest market globally in terms of number of stores (2,115), behind the United States (16,911 stores) and China (8,011 stores) ("Starbucks Korea," 2026). In the South Korean market, Starbucks had more stores per capita than in either the United States or China ("How Starbucks Enjoys," 2025). Starbucks Korea opened over

100 new stores each year for four years straight and planned to open another 100-plus stores in 2026 ("Starbucks Korea," 2026). This is despite 2025 operating margins being down 9.3% from 2024, largely due to rising coffee bean costs, increasing labor and rental expenses, and depreciation of the won (Kyung-Min, 2025). To spearhead growth, the company enhanced its mobile application and rolled out new perks, including increasing the free drinks available through its rewards program and adding a "monthly subscription that offers afternoon discounts and free delivery" (Kyung-Min, 2025, "What's next" section, para. 2). Starbucks Korea's store expansion plans included new store formats that strengthen engagement with customers—such as historical buildings in scenic destinations—and operational additions, such as pagers that notify customers when their purchases are ready to pick up ("Starbuck's Success Strategy," 2024). New flavors available only in Korea were growing in popularity, such as the "Cherry Blossom Latte" and "Daegu's Strawberry Yogurt Frappuccino" (Starbuck's Success Strategy, 2024). Starbucks gives back to local charities and has implemented environmentally friendly initiatives ("Starbuck's Success Strategy," 2024). Its respect for local culture has contributed to its growth. The brand's success appears to have come from the interaction of brand image, strategic accessibility, and marketing initiatives ("How Starbucks Enjoys," 2025).

While successful, Starbucks Korea recognized challenges to its market leadership. Its 2023 operating profit margin, at 4.8%, was far behind competitors Compose Coffee (41.3%) and Mega Coffee (18.8%) ("How Starbucks Enjoys," 2025). This led Starbucks to increase prices in January 2025.

In May 2026, to increase sales, Starbucks Korea's e-commerce team released a large volume of weekly promotions. These promotions were approved by team leaders and executives. Staff members, however, approved the campaigns without thorough review or legal scrutiny (Yang &

Kim, 2026); those who approved the campaign failed to open the email attachments of the marketing material (Rashid, 2026).

On May 18, Starbucks Korea launched a marketing campaign featuring its new "Tank" coffee tumbler, a large-capacity container providing spacious volume for bigger coffees, and declared May 18 "Tank Day" (Rashid, 2026). The promotion used the slogan, "Put it on the table with a sound of 'Tak,'" a slogan recommended by an artificial intelligence program (Dong-hwan, 2026; Rashid, 2026).

The phrase "Tank Day" conjured up images of the tanks and other military vehicles used against protesters in Gwangju in May 1980 by then President Chun Doo-hwan. Citizens had protested Doo-hwan's military regime, demanding the cessation of martial law and the establishment of a democratic government (Dong-hwan, 2026). In Gwangju, hundreds of pro-democracy protestors were injured or killed by the military using tanks and helicopters (Kim & Jett, 2026; Ng & Kwon, 2026). Since 1988, May 18 has been commemorated each year as a sacred day of democracy in South Korea (Ng & Kwon, 2026).

The slogan, "Put it on the table with a sound of 'Tak'" brought forth memories of the controversy surrounding the infamous police explanation for the torture and death of student activist Park Jong-chul in 1987, an incident that became a significant catalyst for South Korea's democracy movement (Dong-hwan, 2026). Police claimed that Park died after detectives hit a desk with a "tak" sound, prompting his collapse (Dong-hwan, 2026), but it was later shown that Park died by torture; his death became a symbol of the military dictatorship's brutality (Kim & Jett, 2026; Yong, 2026). These historically important phrases prompted substantial backlash and criticism that "the promotion abused public sentiment surrounding the 1980 Gwangju uprising and the death of Park" (Dong-hwan, 2026, para. 8).

Public reaction was immediate and brutal (Young & Jiyoun, 2026). Customers smashed Starbucks mugs and tumblers. Loyal Starbucks Korea customers cashed out prepaid card balances and deleted loyalty apps ("How a Starbucks Marketing," 2026; Rashid, 2026). Customers posted photos and videos on social media showing the Starbucks app being deleted from their phones (Yoon, 2026). Boycotts were initiated and supported by government officials; the Interior Minister declared that his ministry would cease offering vouchers from companies that make light of South Korean history (Kim & Jett, 2026). South Korean President Lee Jae Myung posted on X that he was "outraged by this inhumane and disgraceful behavior by profiteers who deny the values of the South Korean community, fundamental human rights, and democracy" (Kim & Jett, 2026, para. 9). He further claimed that the ad campaign "mocked the bloody struggle of citizens" and was inhumane (Yoon, 2026, para. 4)

Chung Yong-jin, the chairman of the Shinsegae Group—Starbucks Korea's parent company—apologized multiple times for the marketing campaign (Kim & Jett, 2026). "All members of the Shinsegae Group, including myself, will remember the history and sacrifices of our society and strive to deeply understand and respect the feelings of our people," Chung said in his second apology (Kim & Jett, 2026, para. 5). He also asked consumers not to take out their anger on employees of Starbucks Korea. More than 2,800 social media users reacted to Chung's apology, most of them negatively ("Starbucks Korea Head Fired, 2026).

Marketing employees denied having any harmful intent, and the parent company said there was no evidence that employees were purposefully denigrating the pro-democracy movement. Three marketing employees, however, refused to turn over their mobile phones pursuant to the investigation (Kim & Jett, 2026).

Starbucks Korea quickly halted the promotional event and fired its CEO, Sohn Jeong-hyun, for "inappropriate marketing" ("Starbucks Korea Head Fired", 2026, para. 2; Yonhap, 2026; Yoon,

2026). Starbucks Global also apologized, indicating that any offense was unintentional. "We recognize the deep pain and offense this has caused, particularly to those who honor the victims, their families, and all who contributed to Korea's democratization," the company declared (Yoon, 2026, para. 14). The Shinsegae Group promised to investigate the approval processes behind the marketing campaign and examine the marketing content review process for all its affiliates (Ng & Kwon, 2026).

Kim You Kyung, professor of media and communication at Hankuk University of Foreign Studies in Seoul, observed that "Starbucks is one of the most loved coffee brands in South Korea. This is why people are very disappointed and upset at Starbucks" (Kim & Jett, 2026, para. 12). Kim suggested that the incident is an enlightening example of the sensitivities that American brands operating abroad can easily overlook (Kim & Jett, 2026). Cho Youngho, a professor of political science at Sogang University, said public reaction signaled more than just a marketing failure. "Companies today are expected to respect human dignity and social norms," he said, and added that the controversy was not likely to soon pass away (Rashid, 2026, paras. 27-28). Baek Seung-jong, professor of history at Sogang University, indicated that the controversy could weaken the moral awareness of historical tragedies for the younger generation. "Mocking a historical fact that forms the basis of Korea's constitutional spirit and is recognized as a national commemorative day reignites wasteful ideologic conflict and poses a serious risk of damaging social consensus on democratic values and the sense of community," Baek said (""Tank Day' Tumbler Promo," 2026, "Boycott gains traction" section, paras. 8-9).

Financially, the marketing incident led to Starbucks gift card payments plunging 26% in a week. Customers initiated refunds from an estimated 400 billion won ($260 million) in prepaid card balances (Rashid, 2026). Government agencies quit distributing Starbucks gift cards, and the Ministry of Defense ended their partnership with Starbucks Korea (Rashid, 2026). Four weeks after

the marketing debacle, the company was still doing damage control (Jackson, 2026). The failed campaign has turned into a political firestorm, with anti-democracy supporters posting memes defending Starbucks Korea (Seung-ku, 2026; "'Tank Day' Tumbler Promotion, 2026).

Teaching Note

Case Synopsis

Going into 2026, Starbucks Korea was thriving and growing ("How Starbucks Enjoys," 2025). To increase sales, marketing personnel developed a series of marketing campaigns, one of which featured high-capacity tumblers that were given the name "tanks." The marketing campaign for these tumblers was released on May 18, 2026, the anniversary of "Tank Day," which commemorates the use of tanks against protestors in the city of Gwangju in May 1980 by then-President Chun Doo-hwan. Hundreds of pro-democracy protestors were injured or killed (Kim & Jett, 2026). Since 1988, May 18 has been commemorated each year as a sacred day of democracy in South Korea (Ng & Kwon, 2026). The case covers the performance of Starbucks Korea leading up to "Tank Day" and the political firestorm that followed.

Intended Courses

This case has been specifically developed for use in a Business Ethics course at a Christian university. The assignment requires students to apply Alexander Hill's (2018) holiness-justice-love framework. The case would also be appropriate for an international business course, as it deals with cross-cultural concerns, or for an international marketing course.

Learning Objectives

By the completion of this case study, students will have:

1. Analyzed the ethical breakdown in Starbucks Korea's "Tank Day" campaign by identifying failures in decision-making, review processes, and use of artificial intelligence in marketing.

2. Applied Hill's (2018) holiness-justice-love framework to evaluate the moral responsibilities of business leaders and assess the adequacy of Starbuck Korea's response to the "Tank Day" campaign
3. Evaluated the risks and responsibilities associated with AI-generated content in business contexts, including issues of accountability, bias, and oversight.
4. Analyzed how political, cultural, and historical factors in South Korea affect marketing decisions.
5. Developed a strategic response plan that integrates ethical leadership, stakeholder management, internal controls, and crisis communication to restore trust and prevent similar incidents in the future.

Theoretical Linkages

The theoretical linkages in this case relate primarily to two aspects of the analysis: ethical leadership and marketing in international contexts. Ethical decision-making in multicultural contexts is influenced by local norms and leadership expectations. The "Tank Day" campaign shows how a global brand can overlook local history and political memory, leading to reputational damage (de Mooij & Hofstede, 2010; Homburg et al., 2015). Students are tasked with analyzing this case using Alexander Hill's (2018) biblical approach to ethical decision making in organizations. Hill proposes that a decision is ethical when it simultaneously reflects three characteristics of God's character: his holiness, justice, and love. The holiness standard looks at ethical purity, moral separation, accountability, and humility (Hill, 2018). Justice considers the balance of rights and duties, including procedural rights (due process and equal protection), substantive rights (universal rights and societal rights), merit, and contractual justice (Hill, 2018). Love entails empathy, mercy, and the willingness to sacrifice rights for the good of another person (Hill, 2018).

Marketing campaigns in international settings require sensitivity to the host country's historical and cultural factors (de Mooij & Hofstede, 2010). For example, Sung and Tinkham (2005) found two South Korean culture-specific factors related to brand personality: "passive likeableness" (funny, small-town, family-oriented, playful, sentimental, and warm) and "ascendancy" (intelligent, big, daring, and strict). Sung and Tinkham (2005) posited that these two factors are derived from Confucianism, which has strongly influenced Korean culture.

Ellestad and Winton (2023), using Trevino's (1986) person-situation interactionist model as a foundation, proposed a culture-influenced virtual specific model that specifically includes the role that national culture plays within ethical decision making. In this model, the virtues of integrity and honesty play key roles. Ellestad and Winton (2023) recognized that management within multinational organizations must navigate the cultural waters for each country in which they operate. A lack of understanding of these factors may lead to ethically problematic decisions, as happened in the "Tank Day" debacle.

Suggested Teaching Approaches

Ideally, this case would be placed relatively late in a business ethics course in conjunction with the discussion of global issues in business ethics. For example, I use two textbooks in my business ethics course: a secular textbook (Fugate, 2026) and Hill's (2018) *Just Business* book. I cover Fugate's (2026) chapter entitled "A Global Perspective of Business Ethics" and Hill's (2018) chapter "International Business" on the same class day. My plan is to assign this case to be due the next class day, after the textbook chapters have been presented and discussed in class.

In an international business course, this case could be placed relatively early in the course in conjunction with a chapter such as "The Impact of Culture on Business" (Dunung & Carpenter, 2023) or in conjunction with a chapter on global strategy (Peng, 2027).

This case would work well as a written case followed by in-class discussion, or for an in-class case with the discussion questions split out among groups in the class, followed by in-class discussion. While the body of the case is not lengthy, the discussion questions are relatively complex, which argues in favor of a written assignment. If used as an in-class discussion, the instructor should guide the discussion to ensure that the discussion questions are covered in depth.

The case itself does not address the long-term responses of Starbucks Korea and the Shinsegae Group to this situation. Students who research the follow-up by the companies will discover that Starbuck Korea chose to close all South Korean stores at 3:00 pm on June 22, 2026 for employees to watch two training videos designed to improve social sensitivity and cultural awareness (Jung, S., 2026). Shinsegae's chairman and other senior executives also took part in the training program. For purposes of analyzing the case, the fact that the companies adopted this approach does not necessarily mean that the response was either appropriate or adequate; that is part of what the student analysis should consider.

Student Assignment and Discussion Questions

The students will be given the following parameters for this assignment:

- All sources must be appropriately cited and referenced using correct APA format. This includes the case, your textbooks, and scripture used, along with any outside sources.
- Your paper should be consistent with APA format. You should include a cover page and a references page. An abstract is not required.
- Your paper should be written in the 3rd person.
- Suggested length is 4-6 pages, not including the cover page and references page.
- The Case Analysis Rubric (see Appendix) will be used to assess your analysis.

In your analysis, fully address each of the following:

1. What are the ethical breakdowns in Starbuck Korea's "Tank Day" campaign? Identify and discuss failures in decision-making and review processes.
2. How did the use of artificial intelligence contribute to the ethical breakdowns in this situation? Evaluate the risks and responsibilities associated with AI-generated content in business contexts, including issues of accountability, bias, and oversight.
3. In this situation, what are the moral responsibilities of the leaders of Starbucks Korea and its parent company, the Shinsegae Group? Use Hill's (2018) holiness-justice-love framework to evaluate the moral responsibilities of the business leaders of Starbucks Korea and its parent company, the Shinsegae Group. Assess and discuss the adequacy of their response to the "Tank Day" campaign. In doing so, **be sure to include relevant scripture**.
4. How do political, cultural, and historical factors in South Korea affect marketing decisions?
5. How can Starbucks Korea restore trust and reduce the likelihood of future negative incidents? Provide an action plan—a strategic response plan—that integrates ethical leadership, stakeholder management, internal controls, and crisis communication to restore trust and prevent similar incidents in the future.

Suggested Responses for Student Assignment

Student responses to the assignment will vary. The following provides suggested responses that can be used to evaluate student analyses and lead class discussion.

1. *What are the ethical breakdowns in Starbuck Korea's "Tank Day" campaign? Identify and discuss failures in decision-making and review processes.*

Starbucks Korea's focus on increasing revenues prompted the development of a series of marketing campaigns deployed in a rapid fashion (Yang & Kim, 2026). While financial performance is important to a company, having an intense focus on increasing revenues can lead to a lack of corporate balance. The campaign ignored potential harm to customers, the families of victims of the Gwangju protest, and the public (Rashid, 2026). In this situation, while the company's review process was technically followed, apparently executives in the review process failed to even open the email attachments containing campaign information (Rashid, 2026). Executives signed off on the campaign without knowing the details or approving the substance of the promotion (Yang & Kim, 2026). The negatives of the campaign should have been flagged earlier in the review process (Cho & Park, 2026). This demonstrates a serious failure of internal controls.

Leaders of Starbucks Korea demonstrated an insensitivity to Korean history and public memory. They showed a lack of awareness that using "Tank Day" and "tak" language would incite memories of the Gwangju crackdown and the death of activist Park Jorg-chul (Cho & Park, 2026).

Another ethical breakdown relates to use of artificial intelligence without appropriate guidelines or oversight. This breakdown is covered in the next discussion question.

2. *How did the use of artificial intelligence contribute to the ethical breakdowns in this situation? Evaluate the risks and responsibilities associated with AI-generated content in business contexts, including issues of accountability, bias, and oversight.*

The campaign used the slogan, "Put it on the table with a sound of 'Tak,'" a slogan recommended by an artificial intelligence program (Dong-hwan, 2026; Rashid, 2026). One of the challenges of artificial intelligence is that it uses large-language models to generate answers. Artificial intelligence is not actually intelligent, and its results can easily be inappropriate for the situation. In this situation, while the slogan was consistent with the "Tank Day" promotion, the entire promotion failed to recognize the political, cultural, and historical factors at play.

Artificial intelligence can be a helpful tool, but it requires human judgment. It may accelerate brainstorming, but it often fails to understand cultural and historical factors such as local history and political symbolism unless intelligent human beings supply relevant context and review the output (Chow et al., 2026).

Artificial intelligence relies on machine learning, which means it is dependent on the data used to build its models. If the data is biased, then so are the results (Ferrara, 2024). Biases can also arise due to algorithmic design and user interactions (Ferrara, 2024). These biases can be mitigated through dataset augmentation, developing algorithms that are aware of biases, and implementing user-feedback mechanisms (Ferrara, 2024). In Starbucks Korea's situation, it appears likely that the program used was not aware of the historical and cultural factors that made the use of the slogan, "Put it on the table with a sound of 'Tak'" offensive and problematic.

In culturally sensitive markets—and especially when promotional campaigns deal with national identity, public memory, or historical trauma—ideas generated by artificial intelligence require human judgment, review, and oversight. Artificial intelligence may be quick and easy to use, but it cannot provide wisdom.

3. *In this situation, what are the moral responsibilities of the leaders of Starbucks Korea and its parent company, the Shinsegae Group? Use Hill's (2018) holiness-justice-love framework to evaluate the moral responsibilities of the business leaders of Starbucks Korea and its parent company, the Shinsegae Group. Assess and discuss the adequacy of their response to the "Tank Day" campaign. In doing so,* ***be sure to include relevant scripture****.*

According to the Hill (2018) framework, a decision is ethical when it simultaneously reflects three characteristics of God's character: his holiness, justice, and love. Leaders and employees of Starbucks Korea and the Shinsegae Group failed to reflect God's holiness, justice, and love in this situation. The holiness standard looks at ethical purity, moral separation, accountability, and humility

(Hill, 2018). In terms of ethical purity, it appears that the motivation for the marketing campaign was largely driven by competitive factors rather than considering the best way to serve the company's customers, indicating a lack of purity of purpose. Their drive for competitive success can be interpreted as greed, which is morally suspect (New Living Translation, 2015/1996, Ephesians 5:5). The failure of internal controls led to issues with accountability. Leaders who were responsible for protecting the company and its customers signed off on the campaign without exercising due diligence; they did not even open email attachments containing the details of the marketing campaign (Rashid, 2026). Holiness requires integrity, which is lacking when leaders sign approvals without appropriate reviews.

Justice was also violated in this situation due to failures in due process and equal protection. As mentioned above, there was a lack of due process in this situation. Because of the large number of campaigns, individual campaigns were not thoroughly vetted. This particular campaign appeared to follow the approval processes, but leaders did not read the attachments. In addition, the legal department was not included in the approval process. Galatians 3:28 declares that "there is no longer Jew or Gentile, slave or free, male and female. For you are all one in Christ Jesus," indicating that Christ has torn down the walls of separation among people, making equal protection essential. In this situation, however, the rights and legacies of those who fought—and in some cases died—for South Korean democracy were overlooked.

There was also a failure of love in this situation. Love entails empathy, mercy, and the willingness to sacrifice rights for the good of another person (Hill, 2018). There appeared to be little consideration of how pro-democracy South Koreans would feel about the "Tank Day" promotion, demonstrating a lack of empathy. Romans 12:15 commands believers to "Be happy with those who are happy, and weep with those who weep." Love empathizes with others; it celebrates their successes and feels their failures. May 18 was a national day of remembrance for those killed or

injured in the Gwangju protests; it was a day to weep with those who weep. Rather than sharing the burdens of others and showing mercy (Galatians 6:2), the "Tank Day" promotion opened old wounds.

4. *How do political, cultural, and historical factors in South Korea affect marketing decisions?*

The "Tank Day" campaign tapped into serious political, cultural, and historic factors. South Korea's history is replete with conflict between pro-democracy supporters (labeled by the press as "liberals") and more authoritarian supporters (labeled as "conservatives"). The event known as "Tank Day" (not the marketing campaign, but the actual event) took place in Gwangju in 1980 when troops under the authority of Chun Doo-hwan fired on pro-democracy protesters (Jung, D., 2026). The marketing campaign inevitably and unwisely tapped into memories of this event, with the 'tank' beverage tumbler evoking the "Tank Day" debacle. In addition, given that the "Put it on the table with a sound of 'Tak,'" slogan evoked memories of the death by torture of pro-democracy activist Park Jong-chul (Rashid, 2026), a large public reaction was inevitable.

As could be expected, the "liberal" reaction triggered a "conservative" backlash. Some members of the opposition party—the People Power Party—claimed that the ruling Democratic Party of Korea was using the Starbucks marketing debacle to rally liberal voters ahead of the June elections (Jung, D., 2026).

While these political, cultural, and historic factors are unique to South Korea, the need to carefully consider these factors in developing marketing strategies and campaigns is not. Castro and Sáiz (2020) argue that historical and cultural factors shape branding decisions and that marketing research must be grounded in these factors. Starbucks Korea failed to consider these factors in its 'Tank Day' campaign, leading to a marketing disaster.

5. *How can Starbucks Korea restore trust and reduce the likelihood of future negative incidents? Provide an action plan—a strategic response plan—that integrates ethical leadership, stakeholder management, internal controls, and crisis communication to restore trust and prevent similar incidents in the future.*

Student responses to this last question will vary widely. It is essential, however, that students propose a step-by-step plan to restore trust and prevent similar incidents in the future. It is likely that students will mention that Starbucks Korea closed all of its stores on June 22, 2026, for all staff members—including Shinsegae Group's CEO, Chung Yong-jin—to watch recorded lectures on Korean history and be involved in social sensitivity training (Lee, 2026). Given the societal response to the "Tank Day" promotion, this training was important both for its content and its public relations benefits and could be a significant factor in restoring public trust in the firm. On the other hand, one day of sensitivity training does not necessarily reduce the likelihood of similar events happening in the future.

In terms of ethical leadership, students may mention the removal of Starbucks Korea's CEO, Sohn Jeong-hyun for inappropriate marketing (Ng & Kwon, 2026; Yoon, 2026). Dismissing the CEO for corporate performance issues is common, although research shows that doing so does not necessarily lead to increased performance (Berns et al., 2021; Hilger et al., 2013). In this case, it appears that the CEO "took the fall" for the disastrous marketing campaign; this could be viewed as another aspect of the public relations strategy following the event.

The failure of internal controls in this situation was catastrophic, involving the use of artificial intelligence without oversight (Dong-hwan, 2026; Rashid, 2026), marketing campaign approvals without reading the email attachments (Rashid, 2026), and bypassing the legal department. Students should propose that the company adopt internal controls that ensure that leaders have read accompanying materials before approving proposals and that employees have included reality tests for materials generated using artificial intelligence.

Students should also include a crisis communication plan. Nöhammer et al. (2022) propose that when organizational reputation has been damaged through a self-inflicted crisis (as is true in this situation), a process involving at least five of six strategies improves the likelihood of reputational recovery. These strategies include providing information, expressing regret, making apologies, providing compensation, expressing control, and highlighting good deeds done in the past (Nöhammer et al., 2022). The crisis communication plan should incorporate most, if not all, of these strategies.

Conclusion

This case study recounts Starbucks Korea's disastrous May 2026 "Tank Day" marketing campaign, which set off protests and boycotts of South Korean Starbucks stores. The case study and accompanying teaching materials highlight the appropriate use of artificial intelligence, the necessity of having and following good internal controls, the importance of political, cultural, and historical factors in marketing and strategy, and the need to make ethical decisions that reflect God's holiness, justice, and love. This assignment is designed to empower future business leaders to drive ethical innovation and to become ethical leaders.

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Appendix

Ethics Case Analysis Rubric

	DEFICIENT (0-2 points)	MARGINAL (3 points)	PROFICIENT (4 points)	OUTSTANDING (5 points)	Points Earned
Ethical Dilemma ID	Does not identify the ethical issue(s) or does not clearly identify the business ethical issues Incorrect identification of problems and issues; incorrect analysis of contextual factors or misinterpret	An ethical issue was identified, taking into account obvious contextual factors, but missing those not stated directly in the case.	Identifies/names the ethical issues or choices in the business situation. Clearly describes relevant ethical ambiguities/ dilemmas Specifies the decision-makers and stakeholders	Clearly identifies the inherent ethical choices involved in a business situation. Incorporates the effects of perspective, context, personal views, codes, and laws (if applicable) into discussion. Specifies the decision makers and stakeholders.	

	ation of information.			Integrates clear descriptions of relevant ethical ambiguites/dilemmas into tho overall analysis.	
Scriptural Principles	Fails to apply scripture-based Christian principles correctly	Applies some scripture-based Christian principles correctly, but misapplies some ethical principles	Applies some scripture-based Christian principles correctly	Correctly applies the scripture-based Christian principles that are relevant to the case	
Action Plan	Does not formulate an action plan	Formulates an action plan that is incomplete or unrealistic	Formulates an action plan that delineates the execution of the decision	Formulates an action plan that delineates the execution of the decision and evidences a design that will maximize the	

				benefits and minimize the risks	
Addressing Questions	Not all questions raised by the case were answered	An attempt was made to answer all of the questions raised by the case	Solid answers given for the questions raised by the case	Excellent, comprehensive answers given for the questions raised by the case	Choose an item.
Use of Information	The materials provided were taken at face value; gaps in the information were not identified or were incorrectly identified, resulting in a	The materials provided were used and at least one gap in the information was identified. The sources used were limited, resulting in a correct but shallow analysis.	The materials provided were used and gaps in the information were identified; relevant sources were used to develop a correct analysis.	The materials provided were used thoroughly, information gaps were identified and other relevant sources were used, resulting in a professional quality analysis.	Choose an item.

	poor quality analysis.				
Understanding	The paper provides no evidence of understanding of the relevant concepts.	The paper provides some evidence of understanding of the relevant concepts.	The paper provides significant evidence of understanding the relevant concepts.	The paper provides substantive evidence of a deep understanding of the relevant concepts.	Choose an item.
Analysis	The paper provides little to no correct analysis.	The paper provides evidence of superficial analysis, with minor gaps or mistakes.	The paper provides evidence of coherent analysis.	The paper provides excellent analysis and covers each point well.	Choose an item.
Documentation of Sources	Paper does not list any citations or sources.	Either in-text citations or references are missing, incomplete, or	In-text citations and references are provided but use incomplete or	All sources are cited with in-text citations and references. All citations and references are in	Choose an item.

		not in correct APA format.	incorrect APA format.	correct APA format.	
Writing Mechanics	The writing is unclear and is flawed by several grammatical or spelling errors.	The writing is somewhat clear and somewhat flawed.	The writing is clear and contains few flaws.	The writing is clear and flawless.	Choose an item.
Format	The style and format of the paper departs significantly from APA.	The paper generally follows APA style and format, with several exceptions.	The paper generally follows APA style and format, with a few exceptions.	The paper accurately follows APA style and format, with no exceptions.	Choose an item.
				TOTAL	

Teaching Research by Doing Research:

A Stakeholder-Engaged Capstone Model for Christian Business Education

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Abstract

This paper presents a faith-integrated, stakeholder-engaged capstone model developed during the author's first year teaching a required undergraduate senior business project course at a Christian liberal arts university. Four student teams conducted projects that involved research with human participants for real organizations. The course placed a strong emphasis on Christian values, stewardship, and research integrity as foundational commitments, not supplementary themes. The paper's central finding is structural: all four teams, working independently, followed their evidence beyond the stakeholder's original request. A central case, a student team's alumni engagement study, illustrates how and why this pivot occurred. The paper describes the course design, examines the resulting tension between stakeholder expectations and research independence, and argues that a research-based capstone can build methodological competence while creating opportunities for students to practise integrity and vocational judgment under genuine professional conditions.

Keywords: capstone course, Christian business education, applied research, vocation, research ethics, stakeholder engagement, research independence

Teaching Research by Doing Research:

A Stakeholder-Engaged Capstone Model for Christian Business Education

Senior capstone courses in business education sit at the edge of the undergraduate experience, asking students to integrate what they have learned and demonstrate professional readiness before graduation. Consultancy-style capstones, in which students respond to an organizational brief and develop recommendations, are widely used in business education (Lim, 2021). Consultancy-style projects offer genuine experiential value, but they may not always develop the full range of competencies graduates and employers need, including rigorous inquiry, intellectual independence, and ethical judgment (Duréndez et al., 2021). Though educators have also experimented with more diverse, inquiry-oriented, and stakeholder-engaged alternatives (Downey, 2018; Mazzetti & Reissner, 2019; Payne et al., 2002; Samura, 2018), these models remain less common than the consultancy format and have not incorporated the faith-formation goals distinctive to Christian business education.

For Christian business programmes, this concern carries additional weight. The Council for Christian Colleges and Universities (CCCU, 2024) identifies faith integration as foundational to institutional mission, not supplementary to it, and Wong et al. (2019) argue that this integration is too often reduced to worldview comparison when its deeper purpose is character formation — graduates who bring integrity, vocational identity, and ethical judgment to professional life (Smith & Scales, 2013). This creates a distinctive mandate for the capstone experience: to integrate knowledge and to form students who understand their work as a vocation and exercise responsible judgment when evidence challenges expectations. Pedagogical innovation, in this context, means more than adopting new instructional techniques — it means designing learning experiences that connect professional competence with ethical and biblical responsibility.

This paper describes a pedagogical model developed during the author's first year teaching Senior Business Project, a required capstone course at a Christian liberal arts university. The course was organized around two connected objectives: to develop students' practical capacity for independent, ethically responsible research and to engage theological ideas about vocation, stewardship, integrity, and service as lenses for professional judgment. Unlike a consultancy model in which the client brief largely defines the problem, this course treated the initial brief or research framing as the starting point for independent inquiry, not as a fixed solution or design to be implemented.

Four student teams completed human-participant research projects, working through ethics approval, primary data collection, and evidence-based recommendations for real stakeholders. A central design principle was research independence: stakeholders contributed organizational knowledge, access, and practical context, while students remained responsible for following the evidence wherever it led. This independence was not understood as distance from the stakeholder, but as part of responsible service. Toly (2024) argues that Christian scholarship requires a careful balance between independent judgment and accountability to Christian community and tradition, while Smith and Scales (2013) present stewardship as a biblical model for Christian scholarship. Together, these perspectives supported a course design in which service to stakeholders included honest interpretation rather than delivery of a predetermined answer. The presence of real participants, organizational stakeholders, and genuine consequences created a level of uncertainty and pressure that no classroom exercise can fully replicate (Kolb, 1984).

A central case illustrates the model's pedagogical potential: a student team's alumni engagement study moved beyond an initially proposed donor programme and followed the evidence toward a different recommendation. This pivot was not an isolated event — evidence-driven reframing occurred, in some form, across all four projects.

The paper describes the course design, uses the alumni engagement study to illustrate the tension between stakeholder expectations and research independence, and reflects on what the four projects revealed about methodological judgment, faith integration, and opportunities for student formation. It concludes with lessons for implementing similar stakeholder-engaged research capstones in Christian business programmes.

Course Design

Overview and Context

Senior Business Project is a three-credit capstone course required for graduation from the Bachelor of Commerce programme. It is offered during the Winter semester and meets once each week for a three-hour seminar, with students completing substantial group work outside class.

The 2025–2026 iteration of the course enrolled four student teams, each undertaking a distinct human-participant research project. One team conducted a conceptually oriented study of ethical issues in e-commerce through participant interviews; the other three carried out applied research for live organizational stakeholders: a marketing strategy project for a small enterprise, a business development analysis for a social enterprise, and an alumni engagement study for the university's Development Office, which forms this paper's central case (Fotur et al., 2026). All four teams secured ethics review board approval before beginning primary research and worked through the same scaffolded research arc; the three applied teams also worked directly with an organizational representative throughout the semester.

As a senior capstone, the course drew on students' prior business knowledge and experience analyzing organizational problems. At the same time, the projects required students to integrate a demanding set of research tasks within a single semester: moving from a stakeholder concern to a researchable question, selecting and justifying a method, developing instruments and sampling plans, completing an ethics application, collecting and analyzing primary data, and translating findings into

appropriately qualified recommendations. The capstone therefore required targeted research-methods support even though students entered with substantial disciplinary knowledge.

These two objectives structured the course: developing the practical skills required for independent research while engaging theological ideas about vocation, stewardship, integrity, and service. The second strand was not added alongside the research project; it was built into the learning activities and assessments described next.

Faith Integration as Course Architecture

Instead of treating faith integration as a discrete reflective exercise, the instructor built it into the course's learning activities and assessments. The existing vocational theology readings provided the conceptual framework, which students explored through presentations, in-class discussions, and the online forum. This connection naturally emerged in their research projects, particularly through inquiries related to ethics and integrity.

The reading list, developed by the instructor's predecessors, equipped students with a theological vocabulary for interpreting work and responsibility. Keller and Alsdorf (2012) described work as meaningful participation in God's purposes; Van Sloten (2017) linked vocation to specific professions and forms of service; Brueggemann (2017) critiqued productivity-centred culture; and BHO Group (2009) emphasized values-based organizational integrity. The instructor used these readings to encourage students to view research not just as a technical task, but as a form of stewardship and professional responsibility.

Within this theological framing, research independence became part of the course's understanding of stewardship and integrity. Independence did not mean disregarding organizational expertise or working in isolation from stakeholders. It meant resisting a predetermined conclusion and remaining willing to revise one's understanding when evidence challenged an initial assumption. Toly (2024) describes Christian scholarship as a balancing act that includes independent judgment

alongside accountability to Christian community and tradition. Applied to stakeholder-engaged research, this perspective suggests that faithful service includes honest interpretation, appropriate acknowledgment of limitations, and conclusions proportionate to the evidence.

The instructor assigned each reading to a student team that prepared and delivered a class presentation that went beyond summary to include interpretation, reflection, and application. These reading presentations began early in the semester and ran in parallel with the major research projects — a structure the instructor built intentionally. As teams worked through problem definition, literature review, and research design, they were simultaneously practicing how to present ideas, defend a position, facilitate discussion, and respond to questions. The presentations served two purposes at once — faith integration and low-stakes rehearsal for the final stakeholder presentations.

To extend discussion beyond the weekly seminar, the instructor set up a structured online forum on the course's learning management system, where students posted questions arising from their presentations and responded to their peers, supporting reflection, collaborative learning, and confidence in articulating ideas (Ekahitanond, 2013; Garrison et al., 2000; Mudau & Van den Berg, 2023). This design drew on the instructor's own prior experience using asynchronous online forums to integrate faith into a content-heavy quantitative course (Khramova, 2025). The forum also helped build familiarity and trust among students managing demanding group projects with real organizational consequences.

The Sabbath Project created a deliberate interruption in the course's productivity logic. The instructor invited an external scholar to facilitate a mid-semester, off-campus seminar in which students explored themes from Brueggemann's *Sabbath as Resistance* and reflected on vocation, business practice, and the rhythms of work and rest. The seminar was not intended to constitute Sabbath observance itself. Rather, it created space within an increasingly demanding project semester

to examine Brueggemann's critique of productivity as an overriding measure of value. Its timing — during ethics approval applications and the transition toward primary data collection — invited students to consider whether faithful stewardship of research involved not only completing demanding work well, but also questioning assumptions about productivity, control, and achievement that could shape how that work was approached.

Research Ethics as a Teaching Objective

All four teams were required to obtain approval from the ethics review board before collecting primary data. Governed by the Tri-Council Policy Statement (TCPS 2; Government of Canada, 2022), the process required students to address informed consent, participant anonymity, data storage, potential risks, and the limits of their authority as researchers.

Although students entered the capstone with strong business knowledge, the ethics requirement and human-participant projects demanded additional preparation in research design and responsible conduct. Students needed support in connecting research questions to appropriate methods, developing instruments and recruitment plans, and translating those choices into an ethics application. This demand is consistent with literature showing that research-intensive capstones often require explicit instruction in research ethics and methods (Bates et al., 2019; Lim, 2021). Despite the added workload, the ethics-review process became one of the course's most valuable learning experiences.

Students encountered questions that business courses do not always make visible: What constitutes meaningful consent? What obligations arise when handling participants' personal responses? What should researchers do when the evidence conflicts with a stakeholder's expectations?

In informal end-of-course reflections, students across all four teams identified the ethics review process as one of the semester's most significant learning experiences, and several described

receiving approvals as a particular source of pride. They began to view data not simply as material for analysis, but as information entrusted to them by real people. The students were not directly asked in these reflections to explain the ethics process in theological terms, so it would be premature to treat their responses as evidence that they themselves experienced the process as faith integration. From the instructor's perspective, however, the core principles of research ethics — respect for persons, concern for welfare, and justice — aligned closely with the course's emphasis on stewardship, integrity, and responsibility toward others (Smith & Scales, 2013).

The Scaffolded Research Arc

The main group research project constituted 60% of the final grade and was organized into six progressive stages. What distinguishes this design from a conventional capstone scaffold is that each stage specifies not only what students were expected to do, but also how the instructor supported that stage and — distinctively — what the organizational stakeholder was expected to contribute and refrain from. Table 1 maps all three roles against each stage, alongside the specific faith and research-integrity emphasis the instructor built into that phase of the work.

Table 1

The Six-Stage Research Arc and Its Pedagogical Roles

Stage	Student task	Instructor role	Stakeholder role	Faith and research-integrity emphasis
1. Problem definition	Clarify the organizational problem and formulate a preliminary research question	Guide scope, feasibility, and researchability	Provide organizational context, concerns, and initial expectations	Listening before designing
2. Literature review	Examine and synthesize relevant academic and practitioner evidence	Teach source evaluation, synthesis, and responsible evidence use	Respond to emerging insights and clarify organizational context	Humility before evidence
3. Research design	Develop the method, research instrument, and sampling plan	Support methodological fit and instrument quality	Confirm access, logistics, and organizational constraints	Responsible inquiry

Stage	Student task	Instructor role	Stakeholder role	Faith and research-integrity emphasis
4. Ethics approval	Prepare and submit the ethics review board application	Teach consent, anonymity, risk, recruitment ethics, and data stewardship	Support recruitment logistics without directing participation	Stewardship of participants
5. Data collection and analysis	Collect, clean, analyze, and interpret the data	Coach analysis, interpretation, and recognition of limitations	Receive progress updates without directing the findings	Truthfulness in interpretation
6. Recommendations	Present evidence-based conclusions and practical recommendations	Assess reasoning, evidence use, acknowledgment of limitations, and communication	Receive and respond to the final report and presentation	Service through honest findings

Read across its rows, the table also shows that the stakeholder's role was deliberately bounded at every stage — providing context, access, and feedback, but never directing findings or conclusions — a constraint central to preserving students' research independence throughout the semester.

Each stage built on the previous one. Teams received instructor feedback after every submission and were required to revise their work before advancing. This structure reduced the likelihood that meaningful work would be deferred until the final weeks of the semester. By the time teams prepared their final reports, much of the content had already been developed, reviewed, and refined, consistent with evidence that iterative writing and feedback improve capstone-report quality (Berry et al., 2021).

The staged design also made the research process visible and assessable. Each submission documented how a team's thinking had developed, including changes to the research question, method, interpretation, and recommendations. Students were therefore assessed not only on the final report, but also on the development of their judgment throughout the semester.

Alongside the written stages, each team delivered a brief weekly oral progress update without slides. Students reported recent findings, challenges, and next steps, then responded to questions from the instructor and their peers. The instructor observed these sessions functioning as more than a check-in: peers listened actively and regularly offered concrete suggestions for how a team might handle a difficult stakeholder conversation or a reluctant interview participant, drawing on parallels from their own projects. These exchanges helped identify problems early, strengthened students' ability to explain and defend their work, and built a sense of shared purpose across teams working on otherwise unrelated projects, consistent with research on repeated presentation practice and peer feedback (Villa Larrea et al., 2018).

The Central Case: Following the Evidence Beyond the Original Brief

The Stakeholder Brief and the Emerging Tension

The alumni engagement project, conducted by Fotur et al. (2026), began with a genuine institutional concern. The Development Office had observed a decline in active alumni donors and wanted to understand how the university might rebuild sustained alumni involvement. The initial brief was broad enough to permit investigation of different forms of engagement and support.

At the same time, the Community Relations Manager, who served as the team's primary organizational contact, had already begun developing a more specific possibility: an Alumni Donor Circle built around a minimum annual contribution, member participation in allocating pooled funds, and branded recognition. The concept of such a circle reflected their professional experience and offered the students a plausible model to investigate. The team was not asked simply to endorse it, but the existence of a developed programme concept created a natural pull toward questions about how it should be structured and promoted.

The students therefore encountered a common tension in applied research. Were they being asked to determine how to make the proposed donor circle appealing, or to investigate more fundamentally what might strengthen alumni engagement? This distinction became increasingly important as the project developed.

The turning point came during the secondary literature review. Across the alumni-giving literature, the students found a recurring pattern: financial support tends to grow from an existing sense of connection, participation, and institutional belonging, not from a financial request alone (Drew-Branch, 2011; Harrison et al., 1995; Lertputtarak & Supitchayangkool, 2013). The proposed donor circle, however, began with an annual financial commitment and used recognition as a principal engagement mechanism. The literature did not invalidate the concept, but it raised a more foundational question about whether financial giving should be the programme's entry point.

At this stage, the students made the decision that defines the case: instead of designing research to refine the proposed donor circle, they stepped back and asked what alumni actually valued — relational, professional, spiritual, or financial participation. This new perspective led to the creation of a 27-question anonymous online survey, approved by the university's ethics review board. The instructor served as the faculty principal investigator, and the survey was distributed to 1,991 alumni within the selected age range (Fotur et al., 2026). The students did not abandon the Development Office's concern — they returned to it at a deeper level, asking what conditions might sustain alumni support in the long run.

The Evidence and the Pivot

The survey remained open for two weeks and produced 69 usable responses — somewhat below the roughly 100 responses the Development Office typically receives from comparable email outreach. The students noted that the shorter, two-week collection window within the semester timeline, rather than any weakness in the survey design, likely accounted for the difference. Given the response level and the single-institution context, the findings were exploratory, not representative. Their importance in this paper lies not in establishing general conclusions about alumni behaviour, but in illustrating, through one case, the broader pattern examined later in this paper: students across all four course projects independently revising their approach in response to evidence.

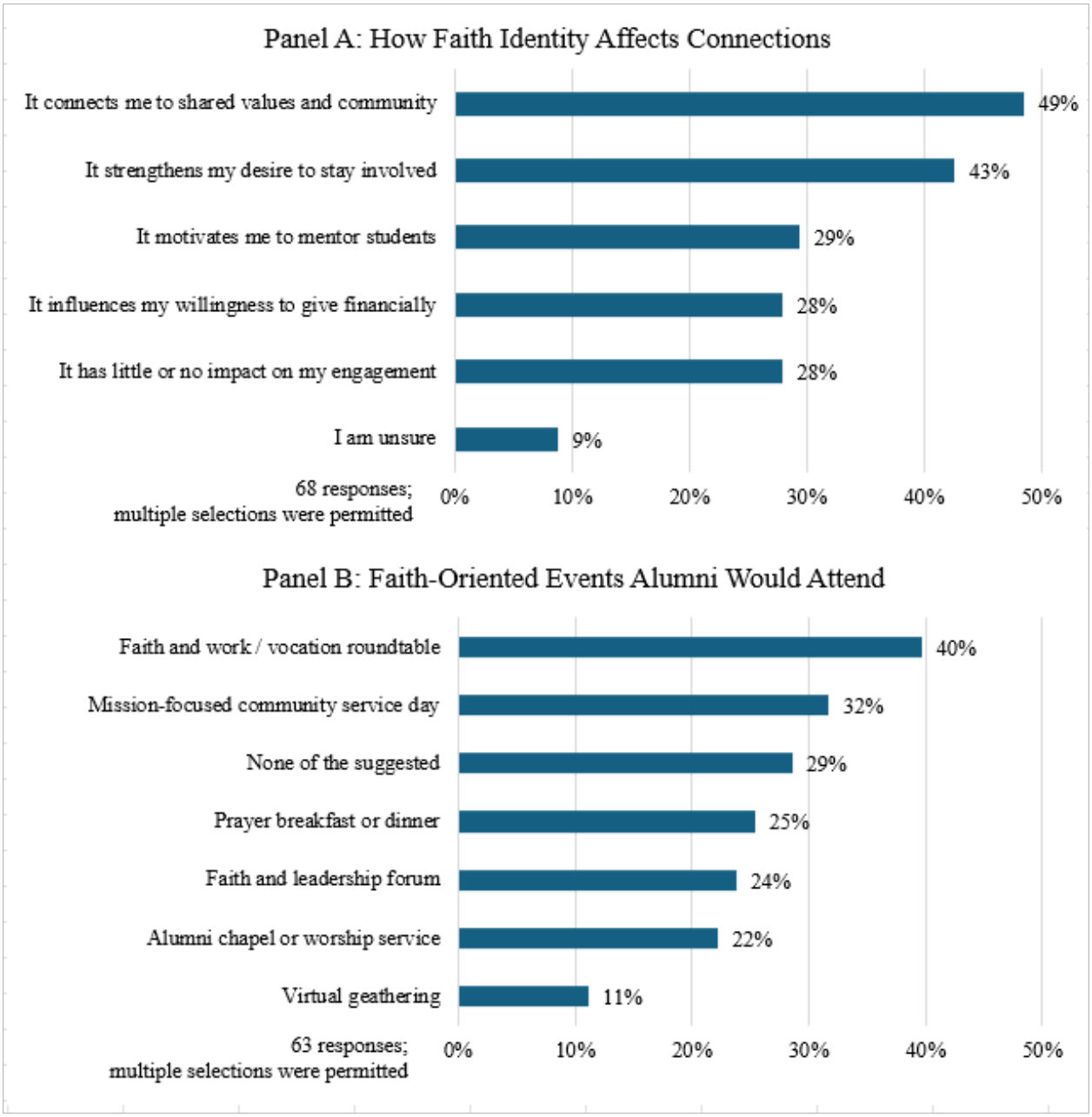
The clearest finding concerned the preferred starting point for alumni engagement. More than half of respondents selected mentorship as a way they would consider contributing, but fewer than one-third selected financial giving. Prayer and spiritual support also ranked ahead of several formal organizational roles (Fotur et al., 2026). In combination with the literature review findings, these results suggested that alumni might respond more positively to opportunities for relationship and service before being invited into a financially defined programme.

The students also identified a more nuanced pattern involving faith identity. Many respondents associated the university's Christian identity with shared values, community, and a desire to remain connected. Yet interest varied considerably when respondents were asked about specific faith-oriented activities. A vocationally framed Faith and Work Roundtable attracted more interest than chapel services, prayer breakfasts, and other conventionally devotional formats, and more than one-quarter of respondents selected none of the listed activities (Fotur et al., 2026).

Figure 1 illustrates this contrast. Panel A shows that faith identity contributed positively to connection and involvement for many respondents. Panel B, however, shows that this connection did not automatically translate into equal interest across all forms of faith-based programming. Within this exploratory sample, faith identity appeared to support belonging and vocational connection more strongly than participation in explicitly devotional alumni events. This pattern encouraged the students to move beyond a simple distinction between professional and faith-based alumni activities and consider how vocational programming might integrate both.

Figure 1

Faith Identity and Alumni Connection: Perceived Effects of Faith Identity and Preferred Faith-Oriented Activities



Note. Data from Fotur et al. (2026).

Based on the combined literature and survey evidence, the team proposed an Alumni Impact Community in place of the original donor circle (Fotur et al., 2026). Their recommendation did not reject the Development Office's goals of sustained engagement and eventual giving. It reordered the

pathway. Alumni would first be invited to participate in mentorship, vocational programming, prayer and spiritual support, and relational contact with current students. A financial invitation could follow after alumni had renewed their connection and seen how their participation contributed to the university community. Because respondents placed relatively little value on formal recognition and indicated a willingness to commit only three to five hours per year, the students also recommended directing limited resources toward programme coordination and meaningful engagement, sized to that modest commitment, not toward branded incentives.

This sequencing extends Drew-Branch's (2011) longitudinal work on the pathway from engagement to giving and reflects a theological commitment running through the course: alumni are not primarily financial assets to be cultivated, but people whose gifts the institution can honour by offering meaningful ways to contribute.

The recommendation was intentionally cautious. The students did not claim to have discovered a definitive alumni engagement model based on 69 responses. They presented the Alumni Impact Community as an evidence-informed direction that the university could pilot, evaluate, and refine. That restraint was itself part of their development as researchers.

Why the Pivot Matters Pedagogically

The significance of this pivot lies less in the particular programme any one team recommended than in the students' shared readiness to let the research question change. In addition to the alumni engagement study discussed above, the other three teams showed the same instinct in their own projects. A team working with a girls' sports nonprofit shifted from a narrow focus on camp enrolment to the importance of parent decision-making and community trust. A market-feasibility team questioned whether the proposed market was ready for the product and changed its data-collection approach when the original plan no longer fit the problem. A fourth team, conducting interview-based research on ethics in e-commerce, identified limitations in its initial

interview structure and recommended expanding the range of participant groups represented in future research. This last pivot was methodological, not organizational, but it reflected the same openness to letting emerging evidence reshape the direction of inquiry.

These choices involved more than methodological competence. In each case, students had to respect the stakeholder's experience and, at the same time, maintain research independence. They treated the original brief, research design, or interview structure as a starting point rather than a fixed constraint and revised their approach when the evidence required it. Research integrity became visible as more than a requirement of the ethics review process — it became a professional and vocational practice, one that showed up in how readily students reconsidered not only stakeholder assumptions but also their own questions and methods.

This distinction is central to the research-based capstone model. For students who had spent the semester engaging vocational theology readings and discussions, serving organizational partners did not mean producing the answer a stakeholder hoped to receive. It meant gathering evidence carefully, interpreting it honestly, acknowledging limitations, and offering conclusions the evidence could support — stewardship and integrity practiced, not just discussed in a seminar.

In a Christian business education context, this pattern is consistent with the kind of formative outcome described by Wong et al. (2019): professional judgment shaped by responsibility, humility, and truthfulness rather than by worldview language alone. The students' willingness to change direction when evidence challenged expectations suggests that the course created opportunities to practise these dispositions under genuine professional conditions. It does not, however, establish that character formation occurred or that theological engagement caused the observed decisions. Demonstrating such formation would require more systematic evidence from students themselves. What can be observed here is that students were accountable to real

participants and stakeholders and repeatedly chose to qualify, revise, or redirect their conclusions when their evidence required it.

Lessons Learned: Reflections from First-Time Teaching

Teaching the course for the first time highlighted four conditions important for future implementation: earlier research-methods preparation, sustainable ethics infrastructure, clearer stakeholder agreements, and a more explicit final reflection on faith integration.

Student Research Preparation

Students entered the course with strong business knowledge but needed more support in integrating researchable question formulation, method selection, instrument design, and the ethics application within a single project. Providing this instruction while four major projects were already underway compressed the latter part of the semester and placed additional pressure on both students and the instructor.

In future iterations, focused research-methods preparation should be concentrated in the first two or three weeks, before teams finalize their questions and begin the ethics review process. Shared examples, instrument templates, and early methodological checkpoints would allow students to enter their stakeholder projects with a stronger foundation and reduce the need for extensive revision later in the semester. More broadly, programmes adopting this model should consider where research-methods and research-ethics preparation are best located across the curriculum so that the capstone can emphasize integration and application rather than introducing too many foundational concepts at once.

Ethics Infrastructure

The ethics review process was one of the course's most valuable learning experiences, but it also required substantial time and supervision. Students had to revise applications, clarify recruitment procedures, address consent and anonymity, and develop appropriate plans for data

storage and participant protection. For the instructor, supervising several applications simultaneously meant balancing methodological guidance, institutional requirements, and project deadlines.

Programmes adopting this model should therefore treat the course as supervised undergraduate research, but not as a conventional consulting project. Early consultation with the ethics review board, shared application templates, realistic approval timelines, and clear procedures for data collection would make the process more sustainable. These structures would preserve the pedagogical value of ethics review and reduce avoidable administrative pressure.

Stakeholder Role Clarity

The applied projects also demonstrated the need to define the stakeholder's role at the beginning of the engagement. Organizational partners brought essential practical knowledge, access, and context, but their initial framing sometimes included assumptions about the problem or its preferred solution. When the evidence challenged those assumptions, students had to balance respect for stakeholder experience with their responsibility to maintain research independence.

This tension is a normal feature of applied research partnerships, not evidence of a failed relationship (Israel et al., 1998; University of Minnesota Clinical and Translational Science Institute, 2026). Future iterations would benefit from a brief written stakeholder agreement identifying the organizational brief as a starting point for inquiry, clarifying that stakeholders will not direct the interpretation of results, and acknowledging that evidence may redirect the original question or proposed solution. Such an agreement would establish shared expectations before disagreements emerge and support more honest collaboration throughout the project.

Making Faith Integration Visible

Faith integration became most visible in students' final presentations and recommendations. Some students framed their findings in terms of service to the communities their stakeholders

served; one team connected its market-feasibility recommendations to a relational ethic informed by Indigenous economics scholarship. These responses were not explicitly required, but they emerged from the course's sustained engagement with vocation, stewardship, Sabbath, and organizational responsibility.

These student responses suggest that the course architecture created opportunities for faith-integrated judgment, but they also reveal both a pedagogical and an evidentiary limitation. Because students were not directly asked to explain how theological commitments shaped their research decisions, some connections remained implicit, and the course did not generate systematic evidence from which claims about student formation could be made. In future iterations, the final report and presentation should therefore include a short, assessable reflection asking students to connect theological language — stewardship, truthfulness, relational responsibility, and service — to decisions about participants, evidence, stakeholder expectations, limitations, and recommendations. Follow-up reflection or focus-group discussion could also provide a stronger basis for examining how students themselves understand the formative dimensions of the experience. Such reflection would extend the mid-semester Sabbath Project and help close the experiential learning cycle Kolb (1984) identifies as necessary for converting experience into durable understanding.

Together, these four adjustments point in the same direction: teaching this model well requires more structure and support, not less. Strengthening these supports would preserve the independence and authenticity of the research experience and make the course more manageable for students and the instructor alike.

Implications and Conclusion

The implementation of a stakeholder-engaged research capstone requires substantial preparation. Instructors must facilitate students' learning of research methods, oversee ethics applications, coordinate multiple projects, and assist students in adapting when evidence challenges

stakeholder expectations. Yet these demands create learning experiences that no classroom exercise can fully reproduce. Students who complete a full research arc with real participants, data, and organizational consequences encounter research integrity as a professional responsibility, not just an abstract principle.

The course represents a form of pedagogical innovation relevant to Christian business education. Its staged research arc clarifies the roles of students, instructors, and stakeholders at each phase while weaving faith and research integrity throughout the research process rather than confining them to a single reflective exercise. The structure also protects students' research independence by design rather than treating it as an exception when stakeholder expectations and evidence diverge. Across the four projects, the observed willingness of students to reconsider questions, methods, or recommendations suggests that the model can create meaningful opportunities to practise professional judgment, humility, and accountability under authentic conditions.

The initial implementation suggests that this model is adaptable in other contexts, provided four key conditions are met: prior preparation in research methods, a sustainable ethics infrastructure, clear stakeholder agreements, and a deliberate focus on faith integration during final reflections.

Teaching research by doing research, therefore, offers more than an alternative capstone structure. It creates a setting in which students — future Christian business professionals — can practise the methodological, ethical, and vocational judgment that responsible research requires under genuine professional conditions. The first implementation does not establish the extent to which such experiences produce lasting formation, but it shows how a capstone can intentionally create opportunities for integrity, stewardship, and faithful service to move from course concepts into professional practice.

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Redeeming Competition: Teaching Christian Business Students to Compete Faithfully

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Abstract

Competition is often viewed with skepticism within Christian communities because of its association with pride, selfish ambition, and the pursuit of personal gain. Scripture certainly warns against sinful motives that can emerge within competitive environments. Yet healthy expressions of competition also appear throughout creation, economic activity, education, and sport. This paper argues that competition, when properly understood, is not inherently opposed to Christian discipleship but can serve as a God-given mechanism for stewardship, discovery, service, and human flourishing. Drawing from biblical theology, business literature, and classroom practice at a Christian liberal arts college, the paper presents a framework for understanding redeemed competition through six dimensions: competition as creation mandate, discovery, sharpening, neighborly love, community, and stewardship. The paper ends with practical teaching applications designed to help Christian business faculty intentionally form students who compete in ways that honor God and serve others.

Keywords: competition, redeeming competition, competition in education, stewardship, creation mandate, teaching application

Redeeming Competition: Teaching Christian Business Students to Compete Faithfully

Competition occupies an uneasy place within many Christian discussions of work and vocation (Higginson, 1997). Part of that uneasiness stems from uncertainty about what competition is. Economist George Stigler (1987) defined competition as "a rivalry between individuals (or groups or nations), and it arises whenever two or more parties strive for something that all cannot obtain" (p. 531). This definition is morally neutral: it describes a structure of striving, not a set of motives. Yet the motives Christians bring to that striving matter a great deal. While competition is often recognized as a driving force behind innovation, productivity, and economic development (Grudem, 2003), it is also associated with pride, envy, selfish ambition, and the pursuit of power (Robinson, 1997). Christian education should therefore cultivate humility alongside achievement, emphasizing accurate self-understanding, appreciation of others, and success within community rather than individual self-promotion (Yonker, n.d.). This paper uses Stigler's definition as a starting point and suggests that competition, when reformed by Christ, can produce benefits that reach beyond the winner.

These tensions are particularly relevant within Christian business education, where educators seek to develop both business competence and Christian character (Smith, 2026). Because many Christian colleges also have strong athletic cultures, business faculty often teach students whose understanding of competition has been formed primarily through sports (Knox, 2023). At my institution, for example, approximately 85% of students participate in intercollegiate athletics. Many arrive on campus with highly developed competitive instincts shaped by years of athletic participation. Rather than suppressing these instincts, Christian educators have an opportunity to help students understand how competition can be redeemed and directed toward God-honoring purposes.

The purpose of this paper is to propose a biblical framework for understanding competition as a legitimate and valuable component of Christian education and business practice. Rather than viewing competition as inherently selfish or contrary to Christian ethics, this paper argues that competition can function as participation in the creation mandate, a means of discovery, a source of sharpening, an expression of neighborly love, a builder of community, and a form of stewardship. The paper proceeds in three parts. First, the literature review examines the tension surrounding competition in Scripture and scholarship, including Johnson and Smith's (2002, as cited in Bretsen, 2011) four Christian views of competition and the role of competition in education. Second, the theological framework develops six facets of redeemed competition grounded in Scripture. Finally, the teaching applications section presents classroom assignments that help Christian business faculty form students who compete faithfully.

Literature Review

Competition takes different forms in economic, social, and spiritual life, and each form answers differently the questions of who we compete against and how we know we have won. In the economic sense, firms compete against rival firms for customers and resources. Success is measured by market outcomes, and such competition can create value for customers rather than only winners and losers (Hayek, 2002; Theology of Work Project, 2017). In the social sense, people compete against classmates, teammates, and opponents for grades, rankings, and recognition, and such competition can lead them to treat others "as merely opponents and obstacles" (Smith et al., 2012, p. 285). Both forms fit Stigler's (1987) definition because they involve rivals striving for outcomes that not all can obtain. Scripture, however, also uses competition as an analogy for the Christian life, urging believers to "run in such a way as to get the prize" (New International Version, 1978/1984, 1 Corinthians 9:24). In this spiritual sense, the struggle is not against fellow believers but against sin and "the spiritual forces of evil" (Ephesians 6:12), and victory is measured by faithfulness: "I have

finished the race, I have kept the faith" (2 Timothy 4:7). Redeemed competition does not remove Christians from economic and social contests; rather, it brings this spiritual measure of success into them. Christians may compete fully and seek to win, but they know they have truly won when they have been faithful with what God has entrusted to them.

Competition Is Contested

An obvious tension exists among Christian writers and scholars about whether competition is truly a good thing. While some scholars, such as Dunlop (1976), argue that competition is itself morally neutral, others contend that all competition is essentially selfish (Howerth, 1912). Nouwen et al. (2006) wrote, "This all-pervasive competition, which reaches into the smallest corners of our relationships, prevents us from entering into full solidarity with each other, and stands in the way of our being compassionate" (p. 17). The tensions of biblical mandates that push against modern business thinking are: serve others vs. get ahead, humility vs. achievement, and love your competitor vs. beat your competitor.

Scripture does not address competition directly, but it speaks clearly to the motives that can corrupt it. James 3:16 warns that "where you have envy and selfish ambition, there you find disorder and every evil practice." James is not describing competition, but envy and selfish ambition are the very temptations that rivalry tends to intensify. Because competition involves striving for something that not all can obtain (Stigler, 1987), competitors can easily want not only their own success but also their rival's failure. Galatians 5:26 comes closer to the competitive setting, as Paul urges believers not to become "conceited, provoking and envying each other."

Philippians 2:3-4 offers a positive pattern for how Christians might compete. Paul instructs believers to "do nothing out of selfish ambition or vain conceit" and to look "not only to [their] own interests, but also to the interests of others." Applied to competition, this passage does not require Christians to stop competing. It asks them to compete in a way that still considers the good

of their rivals. In business, this might mean competing on the quality of one's products and service rather than on deception, honoring commitments even when doing so costs an advantage, and refusing to win by damaging a competitor's reputation. In athletics, it might mean respecting opponents, playing within both the letter and spirit of the rules, and recognizing that a strong opponent makes one better. Competition guided by Philippians 2:4 seeks excellence without treating others merely as obstacles to one's own success.

Unhealthy competitive mindsets and environments can encourage temptations to harm others and prevent them from earning a living, temptations of pride and excessive work with no rest, and distorting life values (Grudem, 2003). For the purposes of this paper, an unhealthy competitive mindset is one in which winning becomes an end, so that a competitor's sense of worth depends on outperforming others and winning at all costs. While the pressure of competition may be constructive, it can also be dangerous because it creates temptations to cut corners, mislead customers, or disrupt the work of others (Theology of Work Project, 2017). These temptations can be summed up as selfishness, envy, and greed as the major temptations created by competition, as seen in the biblical warnings (Keller, 2014).

Four Views on Competition

This theological tension is addressed by Johnson and Smith (2002, as cited in Bretsen, 2011) as they explored the relationship between Christianity and competition. Their model encompasses four views of competition: "Christ resists competition," "Christ and competition in partnership," "Christ and competition in paradox," and "Christ reforms competition" (Johnson & Smith, 2002, as cited in Bretsen, 2011, p. 111). These four views illustrate the ongoing struggle in Christianity of whether to avoid, embrace, cautiously navigate, or transform competition.

Christ Resists Competition

The first view holds that competition is fundamentally at odds with Christian values and should be avoided whenever possible. Beed and Beed (2015) subscribed to the view that Christ resists competition. From their research, they concluded that "scripture does not have a favorable attitude toward competition" (p. 256). Their review of seven Christian contributors who themselves could not agree on a position toward competition formed their conclusion that Jesus rejects competition. Matthew 5:39-41 where Jesus says, "If someone strikes you on the right cheek, turn to him the other also …and if someone forces you to go one mile, go with him two miles" is noted in Beed and Beed's (2015) argument against competition. "Here, Jesus discourages people from striving 'to achieve advantage over another' from trying to defeat others, and from seeking a goal all cannot gain. He is rejecting the process of competition" (Beed & Beed, 2015, p. 265).

Christ and Competition in Partnership

In contrast, Grudem (2003) contends that competition brings many opportunities to glorify God as people use their talents and gifts to serve others, a position that closely resembles the "Christ and competition in partnership" view (Bretsen, 2011, p. 112). Competition also works to better define these talents and gifts through the positive outcomes it can provide. Grudem (2003) identifies three benefits of competition. First, he argues that it "guides society in assigning jobs to those who are best suited to those jobs" (p. 62). Second, he notes that "people keep getting better at making things… which means that over time an economically competitive society will enjoy an increasingly higher standard of living" (p. 63). His third benefit is that it "spurs us on to do better, because we see others doing better and we decide we can do that too" (p. 64).

Free market economists, as Sadler (1996) and the Theology of Work Project (2017) describe, view competition as an antidote to passivity. Scripture often condemns this passivity, also referred to as slothfulness, more harshly than striving, as seen in Proverbs, The Parable of the Talents (Matthew

25:24-30), and 2 Thessalonians 3:10-12. Healthy competition, where winning is pursued as a means of developing and using one's God-given talents rather than as an end, creates movement, urgency, discipline, preparation, and resilience, all virtues Scripture praises.

While Scripture and scholars note the potential for evil and temptation to sin within competition, both also contend that competition within limits brings opportunity to work in partnership with Christ to develop individual talents, encourage people to work harder, and excel more (Wiersma, 1985) while promoting excellence both personally and within the greater community (Smith et al., 2012; Williamson, 2007).

Christ and Competition in Paradox

Scripture does not condemn competition directly, but it does warn against the envy and selfish ambition that competition can provoke (Galatians 5:26; James 3:16). While some authors reject competition's benefits altogether, others contend that it can serve as a neutral, or even a positive, force. Like Dunlop (1976) and Reimer (2010), Smith et al. (2012) concluded that competition is neither moral nor immoral, which aligns with the viewpoint in Johnson and Smith's (2002, as cited in Bretsen, 2011) model of "Christ and competition in paradox." These authors also concluded that the goals of competition matter, as do the motivation and attitudes of competition. These authors would suggest that competition itself is not sinful but can produce either good or evil. Therefore, Christians must evaluate the purposes, attitudes, and behaviors that accompany competition. The question here to be asked is how Christians can participate in competition without becoming corrupted by it.

Christ Reforms Competition

The final view in Johnson and Smith's (2002, as cited in Bretsen, 2011) model, "Christ reforms competition," holds that competition has been distorted by sin but can be redirected toward God-honoring purposes. In I Corinthians 9:24, Paul urged believers to "run in such a way as to get

the prize" redirecting athletic striving toward "a crown that will last forever" (1 Corinthians 9:25). Philippians 2:3-4 then sets the boundaries for that striving: believers may pursue excellence, but not "out of selfish ambition or vain conceit," and never without regard for "the interests of others." If the goals and motives of competition determine its moral character (Smith et al., 2012), then the task of Christian education is not to suppress competitive instincts but to reform them.

Competition in Education

As in other areas of life, competition seems to permeate every aspect of our American system from assessment to scholarship to sport. Social psychologist Elliot Aronson (2008) described competition in the United States when he wrote:

> From the Little League ball player who bursts into tears after his team loses, to the college students in the football stadium chanting, "We're number one!"; …. to the third grader who despises his classmate for a superior performance on an arithmetic test; we manifest a staggering cultural obsession with victory (p. 280).

While Aronson (2008) noted the possible negative outcomes of competition such as hostility and excessive concern with winning, he also contended that the presence of competition often increases effort and performance, citing Triplett's (1898, as cited in Aronson, 2008) research on the positive effect of competition on performance. Although social and educational psychologists emphasize the motivational benefits of competition, Christian educators have expressed concern that competitive environments may foster pride, self-promotion, and discouragement (Robinson, 1997). Robinson's (1997) analysis leans toward the perspective Johnson and Smith (2002, as cited in Bretsen, 2011) later noted in their model that "Christ resists competition" and contends that competitive educational practices may conflict with biblical mandates. As educational systems have often used merit-based ranking, Robinson (1997) notes this as a possible contradiction in Scripture by referencing that the last shall be first (Matthew 20:16) and Jesus' rejection of the disciples'

competition for greatness (Luke 9:46-48). This reference demonstrates that God's values often overturn human systems of ranking and achievement.

Competition is a typical part of the business education curriculum. Instructors often incorporate competition with simulations pitting teams against each other to foster real-life scenarios, as well as role plays where students must defend business strategy decisions. Smith et al. (2012) suggested that Christian educators need to evaluate how competitive pedagogies can both harm and help in the classroom. Rich and Devitis (1992) offer multiple arguments for the positive effects of competition among students. While acknowledging the positive efforts, Smith et al. (2012) pose the negative. Once such contrast of the opposition is "Competition stimulates interest in achievement by providing a competitive target (other competitors) to focus our energies" versus the negative effect that "Competitions lead us to treat others as merely opponents and obstacles - an obsession with triumphing over others lowers our compassion and sympathy toward them" (Smith et al., 2012, p. 285). The tension noted here for Christian educators, especially business educators, is to consider both the negative and positive when designing curriculum and assignments related to competitive marketplaces, entrepreneurial ventures, and leadership positions where competition is inevitable as well as the need to discuss and debrief the pros and cons of competitive experience.

Rooney (2009) argued that Christian education must operate within an increasingly performance-oriented culture while remaining grounded in biblical understandings of human flourishing. Rather than rejecting competition outright, Rooney (2009) suggested that achievement and striving can contribute to the development of a student's full potential when directed toward wisdom, calling, and service to others. Croucher (1990) also argued that competition exists and that it should be for the benefit of others. Rooney (2009) noted that the pursuit of goals in competition can come at the expense of others, which emphasizes the challenge for Christian schools to assist

students in achieving spiritual transformation in this context using Matthew 10:16 as a guide (Rooney, 2009).

These collective perspectives reveal an important tension within Christian education. Christian educators remain concerned about competition's potential to foster pride, rivalry, and misguided measures of success. Rooney's (2009) position provides a middle-ground perspective by suggesting that competition itself is not the primary concern. Rather, the challenge is ensuring that achievement and performance remain directed toward human flourishing, love, and service to others.

Many scholars have examined the ethics, theology, and educational implications of competition, but little attention has been given to how Christian business educators can intentionally teach students to practice competition as a form of stewardship, service, and discipleship and develop a distinctly biblical understanding of competition in the classroom. While some Christian scholars view competition as something to resist and others view it as a morally neutral reality to be carefully navigated, this paper adopts the "Christ reforms competition" perspective (Johnson & Smith, 2002, as cited in Bretsen, 2011). Reforming competition, however, does not remove what makes it competition. As defined earlier, competition arises whenever two or more parties strive for something that not all of them can obtain (Stigler, 1987). Redeemed competition still produces winners and losers: firms still pursue the same customers, athletes still contend for the same championship, and students still seek the same limited awards. What Christ reforms is not the structure of competition but the motives and purposes behind it. When competitors pursue excellence with integrity, treat rivals as people whose interests also matter (Philippians 2:4), and strive for ends larger than personal glory, competition can produce benefits that reach beyond the winner. In this sense, competition can be redeemed and intentionally directed toward stewardship, service, community formation, and human flourishing without ceasing to be competition.

Theological Framework for Biblical Competition

Scholarly views of competition range widely, from the claim that Jesus rejects competition (Beed & Beed, 2015) to the argument that it can be a positive force in society (Grudem, 2003). Scripture warns against the selfishness, envy, and greed that competition can provoke, yet it regulates competition rather than prohibiting it (Theology of Work Project, 2017). When competition serves customers, society, and even competitors, it can encourage excellence, value creation, and accountability (Theology of Work Project, 2017). The central issue is not whether competition exists or whether it is good or bad, but rather how Christians use it. This understanding requires a biblical foundation that creates a framework for redeemed competition. Paul's writings in the New Testament help frame a way to redeem competition with athletic metaphors that suggest striving, discipline, and pursuit of excellence to live a more Christ-centered life.

When viewed through the lens of Scripture, competition can serve as a means of cultivating creation, discovering potential, sharpening character, serving neighbors, building community, and stewarding God-given gifts. The following theological framework develops six facets of biblical competition that provide both a theological foundation and a practical model for Christian business education. This framework is designed to form faithful stewards who honor God through excellence, service, and responsible use of their talents.

Competition as Participation in the Creation Mandate

Genesis 1:26-27 states that God made humans in His image, and many read this passage as including a call to imitate God as Creator. This chapter opens with God creating the heavens and earth. Scripture lays out a week of creation and innovation that God designed and gave life to. Humans are designed to be creators and innovators.

Because humans bear God's image, they are called to create, innovate, cultivate, build, improve, and solve problems. Competition often becomes one of the mechanisms through which image bearers exercise these God-given capacities.

Genesis 1:28 says, "Be **fruitful** and **increase** in number; **fill** the earth and **subdue** it. **Rule** over the fish of the sea and the birds of the air…" *Subdue* in this context carries the idea of bringing creation under responsible stewardship and development. It's more of a positive command than one that means to exploit or conquer (Williams, 2019). Theologians such as Albert Wolters refer to this as the creation mandate (Wolters, 2005).

To consider how competition reflects the image of God, we must look at the action words in this passage. God commanded humans to be fruitful, to fill the earth, and to rule over it as His stewards, and Genesis 2:15 adds that Adam was placed in the garden "to work it and take care of it." Faithful stewardship of this kind requires productivity, problem-solving, and excellence. As people innovate, they exercise their God-given talents, and in the process, new approaches and solutions emerge. Because people seem to compete "in just about everything [they] do" (Reich, 2002, p. 1), Christians must ask whether competition is a product of the Fall or part of God's original design for human beings. Reich (2002) posed this question directly, asking whether competitiveness is "simply one more outworking of our sinful flesh" or whether the Dominion Mandate of Genesis 1:28 "is the seed that breeds the competitiveness in each one of us" (p. 1). Athletes compete for championships, businesses compete for customers, and ideas compete in the marketplace. If competition is rooted in the creation mandate, then the task for Christians is not to avoid it but to practice it in ways that honor God.

The creation account also suggests that the conditions for competition were present before the Fall. Genesis 2:10-14 describes a river flowing out of Eden and dividing into four headwaters: the Pishon, Gihon, Tigris, and Euphrates. Only the land of Havilah, along the Pishon, is described

as having gold, aromatic resin, and onyx (Genesis 2:11-12). The detail suggests that God did not distribute the earth's resources evenly. Some regions held resources that others lacked. Such variation creates opportunity for trade and cooperation, but it also means that people will strive for resources that not all can obtain, which is the very condition Stigler (1987) identified as competition.

Competition as a Means of Discovery

Economics can define competition as a discovery process that helps to discover better products wanted in the market and encourage both product and process innovation (Smith et al., 2012). Examples are medical breakthroughs, business innovation, and technical advancement where innovation supports the common good. Without competition, potential and discovery remain hidden (Hayek, 2002). God uses competition as a tool for uncovering possibilities embedded within creation (Williamson, 2007). History and previous inventors provide extensive examples of discovery, including the Wright Brothers with advancements in aviation, Thomas Edison in the development of light bulbs and the phonograph, Steve Jobs in the advancement of personal computing, and many other notable entrepreneurs.

An additional benefit of discovery is the revealing of a person's own potential. These are abilities that might have otherwise remained hidden had it not been for the competition. Competition compels us to do more than we could have otherwise by disciplining ourselves as Paul describes in 1 Corinthians 9:25-27. For example, a runner never knows how fast they can run until someone challenges them, and a business never discovers its best product until competitors force innovation. Paul's athletic imagery does not reject competition but rather draws on the competitive race (1 Corinthians 9:24) to model self-discipline and submission to rigorous training. Such development is not inherently competitive, since a person can grow in skill and discipline without a rival. Yet competition often accelerates that growth by supplying the challenge, standard, and urgency that pushes people beyond what they would attempt alone.

Competition forces people to ask, "Can this be done better?" Genesis 1:28 does not mention competition, but this question connects naturally to the mandate the verse gives. The verbs *fill*, *subdue*, and *rule* suggest more than preserving creation as it was. They point to an active, ongoing responsibility to cultivate what God has made. Read this way, competition can be understood as one means of encouraging that faithful cultivation because it helps uncover what is possible (Theology of Work Project, 2017). Without this challenge, potential often remains dormant. Competition is one means of supporting the pursuit of excellence, but it is not the only way to pursue excellence as a virtue.

Competition as a Source of Sharpening

A familiar passage in Proverbs 27:17 states, "As iron sharpens iron…" Most Christians apply this to friendship, but it can also be applied to competition. Sharpening requires the friction of two hard things pressed against each other with force, producing heat. Neither iron blade is diminished by the sharpening, but both become more fully what they were made to be through the resistance. If Kellogg's, for example, delivers more value to customers, that will force General Mills to improve and vice versa. This competition inspires both companies to be unique in the way they create value rather than seeking to deliver the same product as the other. Like sharpening, competition produces something new and different, allowing each business to uniquely deliver value in such a way that meets customer demand (Theology of Work Project, 2017).

Athletes understand the opponent is not the enemy, but a catalyst for growth, new records, and excellence. A blade sharpened against soft material doesn't sharpen; it requires an opponent of equal or greater hardness. Human excellence often grows through resistance from a worthy opponent. Competition also sharpens the athlete at a personal level by dispelling apathy and passivity. It pushes the athlete to higher standards of excellence and self-discipline (Sadler, 1996).

Viewed through the lens of Proverbs 27:17, withholding effort may deprive competitors of the challenge necessary for mutual growth and development. Competitors who hold back deny their opponents the gift of a real contest. Real competition says, "I take you seriously enough to bring everything I have."

This view of full effort as a gift to one's opponent reframes competition as a form of service, respect, and love. Competitors honor their opponents by competing fully (Daren, 2025). In academic competition, business, and athletics, mediocrity isn't humility but rather a refusal of relationship. This perspective also reframes the competitor. Rather than seeing competitors as obstacles, Christians can view them as instruments God uses to motivate you to levels of preparation and excellence you would never reach alone.

An opposite view of sharpening would be showing up to a competition unprepared, holding back to be nice, avoiding hard contests, or refusing to challenge others. Such behavior deprives others of the sharpening they need. It is reflected by the coach who doesn't push athletes, the business that doesn't compete hard, and the advisor who lets students skate by. They have, by the logic of Proverbs 27:17, failed to be iron for their neighbor and are not expressions of love. From this perspective, competitors are gifts from God to cultivate excellence and growth.

Competition as Neighborly Love

In the Great Commandment, Jesus instructs His followers to "love your neighbor as yourself" (Matthew 22:39), and in Luke 10:25-37, He answers the question "And who is my neighbor?" (v. 29) with the parable of the Good Samaritan. A neighbor is anyone we interact with regardless of their relationship with us, which includes business competitors and customers.

While they are neighbors, businesses often improve because competition forces them to. Customers may make suggestions, but improvement really comes because competitors exist. If a

customer finds a better value, price, or solution, they may simply find a different product. Competition often benefits our neighbor with better products, lower prices, and better service.

As these benefits arise, competition then can become an act of service. Winning often means creating more value for more people (Mackenzie & Kirkland, n.d.). In this sense, competition is not merely about beating a rival; it is about serving neighbors with better alternatives, which aligns with loving one's neighbor (Williamson, 2007). Theology of Work Project (2017) stated that "our diversity of needs, preferences and circumstances creates opportunities for mutual love through economic exchange" ("Competition as Cooperation Is the Solution" section, para. 3).

Loving our neighbor and earning a living are not at odds. In a competitive market, financial gain often comes from serving others well. For example, one student at my institution sells coffee grown on his family's farm in Honduras and uses the proceeds to pay his tuition. He competes with campus coffee shops and national brands for the same customers, and he earns their business only by offering coffee they value. His financial gain therefore depends on serving his neighbors well. The income he earns is the result of providing something good, not of beating others.

This common-good mindset would better serve society if all people were committed to this type of service rather than only their own interests. "Competition is in fact oriented toward the public good when people and organizations identify serving customers and making the world a better place as their goal" (Theology of Work Project, 2017, "Serves Society" section, para. 4).

From this perspective, competition may represent one way in which individuals and organizations serve their neighbors through innovation, value creation, and improved service.

Competition as Community

Considering competition as a way to build community is counterintuitive, as it is typically considered a means of division (Neubert, 2017). But examine what competition produces: teams, leagues, social networks, all of which are communities built entirely around shared pursuit of

excellence, a common challenge, and social trust and cooperation (Neubert, 2017). Collegiate athletics, for example, understands this concept of community and forms bonds based on this shared identity. Former competitors often share deep respect and lifelong relationships because they understand the sacrifices, discipline, and commitment required to compete. Many athletes remain connected to teammates and competitors long after their playing days are over.

The same can be said of business professionals, entrepreneurs, academics, musicians, and countless other fields. Student academic competitions create networks and friendships among students from different schools. Entrepreneurs gather in startup communities. Professionals join industry associations. Ironically, the very act of striving against one another often creates bonds that would never otherwise exist.

In business, competition can create entire ecosystems of innovation. Competing firms often learn from one another, elevate industry standards, and collectively improve products and services that benefit customers (Grudem, 2003). The result is not isolation, but a broader community committed to solving problems and creating value.

From a biblical perspective, competition does not have to be viewed as the opposite of community. Properly understood, competition can be one of the ways God forms community. It brings people together around shared goals, mutual growth, and collective pursuit of excellence. Competition, when properly ordered, can become one mechanism through which communities are formed, strengthened, and sharpened (Andersen, 1999). Genesis 2:18 shows God created humans for community as part of his original design.

Competition as Stewardship

The Parable of the Talents (Matthew 25:14-30) is usually read as a stewardship story, and it is, but it can also be understood as a competition story. The master does not say, "I'm glad you tried your best." He compares results and evaluates faithfulness. The servant who buries his talent is not

condemned for causing harm. He determined in effect to simply play it safe and is condemned for not deploying the resources he was entrusted with.

The buried talent is the Christian who, out of false humility or fear, refuses to use their gifts. God does not ask, "Did you beat everyone else?" God does ask, "What did you do with what I entrusted to you?"

Another excellent example is the Proverbs 31 woman. In Proverbs 31:10-27 the woman competes for the betterment of her household. She considers a field and buys it (v. 16), she trades and turns a profit (v. 18), she produces more than her household needs and sells the surplus (v. 24), not for personal glory, but because the people under her care depend on her excellence. Her family is clothed in scarlet (v. 21). She watches over the affairs of her household (v. 27).

Her competition is inseparable from her stewardship. She does not compete to accumulate; she competes because the gifts God placed in her hands were never hers alone to hoard. To compete poorly would be to underinvest, to hold back, to settle for less than her best, and would be a failure of faithfulness. The business student who half-prepares, the business owner who stops innovating, the athlete who coasts and misses workouts all make the same mistake as the servant who buried his talent in the ground. The Proverbs 31 woman understood that stewardship is not cautious preservation. It is aggressive, excellent deployment of everything God has entrusted to her, and the marketplace is where that faithfulness gets tested.

Finally, Paul provides an excellent example of stewarding your gifts where the outcome is not the measuring factor, but rather your faithfulness regardless of the outcome. Paul writes in 2 Timothy 4:7, "I have fought the good fight, I have finished the race, I have kept the faith." Paul measured success by stewarding all the gifts he was entrusted with rather than competing against others.

Table 1 summarizes the framework by contrasting competition shaped by the Fall with competition reformed by Christ. The table does not suggest that competition redeems itself. As Christ works in the competitor, the motives they bring to competition change.

Table 1

Redeeming Competition Framework

Competition Shaped by the Fall	**Competition Reformed by Christ**
Winning at all costs	Faithfulness regardless of outcome
Seeing rivals as enemies	Seeing rivals as sharpeners
Isolation	Community
Exploit competitors	Serve neighbors
Burying talents	Stewardship
Pride, self-exaltation	Humility, God's glory

Teaching Applications

For Christian educators, theological reflection is most valuable when it informs educational practice. If Christian business faculty accept that competition can be redeemed and directed toward God's purposes, then they must intentionally design learning experiences that help students develop those habits and perspectives. Business graduates will enter competitive workplaces where they must navigate tensions between achievement and service, excellence and humility, personal success and neighborly love. The following teaching applications describe classroom activities that help business students practice strategies to better navigate those tensions.

Competitive Innovation Challenge

The theme of this assignment is that competition is a discovery process that reveals innovation, potential, and better solutions. After being divided into teams, students are presented

with a common product or service (e.g., a coffee shop, lawn care company, gym, or restaurant). Each team must create a differentiated version that better serves a target customer segment. They must identify a customer problem, create a unique value proposition, and explain why customers would choose their solution over competitors. Teams present their final products to a panel of judges.

To introduce the assignment, the instructor could show earlier versions of products before innovations were made and then ask students to identify the list of assignment requirements that have been addressed with today's current innovations. The products with current innovations would then be displayed and students asked what they might have missed. This sets the stage for introduction into the assignment. Table 2 provides examples.

Table 2

Examples of Innovation Through Competition

Product	**What It Used to Be Like**	**Innovations**
Suitcase	Heavy trunks, difficult to carry	Wheels, telescoping handles, lightweight materials, GPS tracking
Cell phone	Large, limited functionality; in a bag	Smartphones with cameras, GPS, apps
Toothbrush	Basic bristles with little design	Ergonomic handles, electric brushes, timers, pressure sensors

The debrief discussion focuses on, "How did competition uncover ideas that would not have emerged otherwise?" This assignment could be used in Marketing, Small Business Management or Intro to Entrepreneurship.

Personal Best Competition Journal

The theme of this assignment is competition as stewardship and faithfully deploying your talents rather than focusing on beating others. Students are asked to use SMART goals to set a measurable personal performance goal for the semester. Examples of student goals might include increasing their exam average, improving public speaking scores, or improving Distributive Education Clubs of America (DECA) performance. Students will submit their initial goals, weekly progress reflections, and a final stewardship reflection. The debrief discussion focuses on, "Did you maximize the gifts and opportunities God entrusted to you?" This assignment is applicable in any class.

This assignment was used in a leadership course where students planned a 3-day event for the business students that included daily speakers, games and prizes, and food as well as fundraising for the event. Each student selected tasks and worked together as a team to plan the event. Weekly goals were set both for the team and individually. Students used the journal to write weekly reflections on time management, teamwork, and problem-solving, then to reflect on the achievement of their goals for the event.

Iron Sharpens Iron Peer Review Competition

The theme of this assignment is competition as sharpening and pursuing excellence. It is a practical application of Proverbs 27:17 and the argument that competitors are often catalysts for growth. For the assignment, students submit a project draft or give a presentation. Instead of a standard peer review, each reviewer must identify three strengths and three ways the project could be improved. Students then revise and resubmit based on the feedback. Reviewers are given points for the quality of feedback, and students are awarded points for the improvements demonstrated. The debrief discussion focuses on "How did someone else's challenge make your work better?" This assignment is applicable in any class.

This assignment is used often in DECA class and for the DECA Prepared Presentation event. Students share their written paper with another team or give their presentation to team members who evaluate the paper and/or presentation. Students use rubrics from the DECA, Inc. website (DECA, Inc., n.d.). Based on the feedback from team members, students revise and resubmit their paper or presentation.

Cooperative Competition ("Compete as Community")

The theme of this assignment is competition as a builder of community. It challenges the idea that competition and community are opposites and shows instead that competition can strengthen community The assignment involves running a semester-long competition between teams. Examples could include an entrepreneurship pitch competition, consulting project competition, or DECA-style case competition. The twist to the assignment is that each team must help another team improve. Points are awarded for team performance, evidence of helping another team succeed, and professional conduct. The debrief discussion focuses on "How did competition strengthen relationships rather than weaken them?" This assignment is applicable in any class.

Business simulations from any company, such as Interpretive Simulations, are used in Human Resource Management and Small Business Management. Students are put into teams where they compete throughout the semester by making weekly decisions to win the simulation. The twist is that twice during the semester each team must share a strategy that worked well or advanced them in the simulation. Professional conduct is determined by the validity of the strategy and if it truly was beneficial to other teams.

Conclusion

Competition is an unavoidable reality in business, education, and everyday life. Christian educators therefore face an important choice. We can either treat competition as something to minimize because of its potential dangers or intentionally teach students how to participate in it

faithfully. While Scripture clearly warns against competition motivated by pride, envy, selfish ambition, and personal glory, it also presents a vision of work, stewardship, service, and excellence that provides a foundation for redeeming competition. The issue is not whether Christians should compete, but how and for what purpose they compete.

Christian business faculty are uniquely positioned to shape how future business leaders understand competition before they enter increasingly competitive organizations. By intentionally integrating biblical principles into classroom discussions, assignments, and experiential learning opportunities, educators can help students develop habits of excellence without pride, ambition without selfishness, and achievement without losing sight of their calling to love God and love their neighbors. In doing so, Christian business education fulfills more than its responsibility to prepare competent professionals; it equips graduates to enter the marketplace as faithful stewards who compete not for self-glory, but for the flourishing of others and the glory of God.

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Created for Holiness: Developing a Conceptual Framework of Holiness through the Lens of Financial Accounting

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Abstract

This paper explores the relationship between financial accounting and holiness by using the Conceptual Framework for Financial Reporting as a lens for developing a conceptual framework of holiness. Drawing from financial accounting concepts and Wesleyan holiness theology, the paper examines why one pursues holiness, what characterizes it, and how it is lived out. Concepts of accountability, internal controls, and responsibility illuminate humanity's dependence on God's grace, the transforming work of the Holy Spirit, and the pursuit of becoming more like Christ through perfect love.

Keywords: holiness; conceptual framework; financial accounting; stewardship; grace

Created for Holiness: Developing a Conceptual Framework of Holiness through the Lens of Financial Accounting

John 1:1 says that "In the beginning was the Word, and the Word was with God, and the Word was God" (New International Version, 2011). 2 Timothy 3:16 states that "All Scripture is God-breathed." This means that to know God's story, who God is, requires an exploration and understanding of the Scriptures. As a Christian educator, challenging and encouraging students to know God through one's academic studies should be at the heart of the learning, regardless of the discipline.

The biblical connections between the Scriptures and Accounting are evident from the very beginning of Genesis. In Genesis 1, God created man in His image, holy, but committing sin separated man from God just as self-focused decisions like fraud and deception separate man from man and organizations from investors and donors. In Genesis 6–9, God sent the floods to eliminate the human race, with the exception of Noah and His family, because of the widespread corruption. Following the flood, God established the importance of accountability when He formed His covenant with Noah to never flood the earth again. In Genesis 41, while Joseph prepared the country for seven years of plenty and seven years of famine, the stored grain was so abundant that they stopped counting, which means that they were keeping inventory records. And "all the world came to Egypt to buy grain from Joseph" (Genesis 41:57). There is little doubt that Pharoah would have required some type of accounting for these transactions.

Within these three examples, one can start to see that the discipline of Accounting has biblical roots. Accounting permeates life as one knows it today because every organization has an accountant and all people have or are impacted by personal accounting. Thus, it is highly important to evaluate Accounting from a biblical perspective. This paper focuses on financial accounting, the process of recording and reporting a relevant and faithfully represented financial story. It begins

with a discussion of financial accounting, then presents an understanding of holiness (perfect love) informed by the Wesleyan-Holiness tradition and concludes with an exploration of the relationship between holiness and financial accounting, including a proposed conceptual framework of holiness (perfect love).

Financial Accounting (Accountability, Internal Controls and Responsibility)

U.S. organizations provide financial reporting in compliance with the Generally Accepted Accounting Principles (GAAP) established by the Financial Accounting Standards Board (FASB). According to the conceptual framework for financial reporting (Figure 1), the objective is to provide useful financial information to external parties for decision-making. The framework emphasizes the fundamental qualities of relevance, faithful representation and enhancing qualities, defines the elements of financial reporting, and provides the operational foundation for applying the underlying assumptions, accounting principles and constraints. As such, it provides a consistent foundation for exercising professional judgment and faithfully representing an organization's financial position and performance. This section reviews financial accounting within the areas of financial accountability, internal controls and financial responsibility.

Financial Accountability

Financial accountability requires communicating how money is used, a process that has evolved significantly with advances in technology and globalization. As early as 8000 BC, farmers and merchants used clay tokens to track inventory. As commerce expanded, the token system evolved into the use of *bollae* and eventually written records on clay tablets. Professor of accounting and history Jacob Soll (2014) notes that "single-entry accounting existed in ancient Mesopotamia, Israel, Egypt, China, Greece, and Rome" (p. 2).

By 1300 AD, the fully established writing and numeric systems of medieval Italy provided the foundation for the development of double-entry bookkeeping, which enabled the calculation of

profit (Soll, 2014, p. 11). Nearly 200 years later, Luca Pacioli, considered the father of accounting, published the double-entry accounting system in his 1494 *Treatise on Arithmetic, Geometry, and Proportion*, establishing the foundation of modern financial accounting. As commerce expanded and the stock exchange began in the Netherlands, the need for more complete and transparent financial reporting increased. Johannes Hudde incorporated liabilities into accounting reports, and Charles Sprague later formalized the accounting equation, strengthening the foundation of financial reporting (Soll, 2014, pp. 83, 174). The Industrial Revolution, particularly the growth of railroads and joint stock companies, transformed double-entry bookkeeping into "a brand-new profession: accounting" (Gleeson-White, 2011, p. 133).

By the nineteenth century, accountants increasingly served as investigators who promoted honesty and detected fraud, described in *The Bookkeeper* (1896) as "the foe of deceit and the champion of honesty" (as cited in Soll, 2014, p. 165). Despite the benefits of reliable recordkeeping for decision-making and accountability, accounting records are maintained by fallible people. In ancient Athens, accounting was connected to political accountability, yet "corruption was rife" (Soll, 2014, pp. 3–4). Similarly, although financial records in the 1300s were "designed for internal accountability," fraud in financial statements remained a continuing problem (Soll, 2014, p. 13). The growth of railroads brought not only industrial innovation but also "new and quicker avenues of financial complexity and corruption" (Soll, 2014, p. 168). Consequently, auditing and the examination of financial records have existed since ancient times.

"By 1926, more than 90 percent of industrial companies listed on the New York Exchange were audited," but financial reporting and auditing lacked consistency thus contributing to the stock market crash in 1929 (Zeff, 2003, p. 191). In response, the Securities Act of 1933 required publicly traded companies to provide complete and accurate financial information, the Securities and Exchange Commission (SEC) was established in 1934, and generally accepted auditing standards and

CPA licensure further strengthened the profession. Although public confidence in accounting grew after World War II, financial scandals during the 1960s raised concerns about auditor independence. In 1973, the FASB and IASB (International Accounting Standards Board) were established to develop accounting standards, and the FASB later issued its conceptual framework to guide financial reporting. The updated converged framework published in 2010 continues to provide the conceptual foundation for financial reporting (see Figure 1).

During the 1980s, the expansion of non-audit services created conflicts of interest and weakened auditor independence (Zeff, 2003, pp. 269–271). The collapse of Enron at the end of 2001 followed by Worldcom and several other accounting scandals exposed the underbelly of accountants and auditors leading to the enactment of the Sarbanes-Oxley Act of 2002 (SOX). The act "introduced major changes to the regulation of financial practice and corporate governance, as well as a public company accounting oversight board to oversee the auditors of public companies" (Gleeson-White, 2011, p. 212). While regulatory reforms such as SOX help address failures in financial reporting, these events demonstrate that financial accountability requires more than established reporting standards and external oversight; it also requires internal processes that promote accurate reporting, safeguard resources, and reduce the risk of error and fraud.

Internal Controls

"Financial accountability functioned better when accounting was seen not simply as part of a financial transaction but also as part of a moral and cultural framework" (Soll, 2014, p. xvi). This is because when moral and cultural framework is part of an organization's internal control structure it is not limited to policies and procedures, reporting structure, staffing and training, setting objectives and performance measures, planning, and budgeting. It also includes shared goals, values and norms, and consequences. Internal controls protect assets from fraud and unintentional error, enhance the

accuracy and reliability of financial information, and promote operational efficiency and compliance with organizational policies.

The concept of internal control as it relates to financial reporting was formalized in 1949 by the American Institute of Certified Public Accountants. Bower and Schlosser (1965) recognized the influence of human nature, observing that "Internal control duties are necessary because of the mental, moral, and physical weaknesses inherent in people" (p. 339) and are intended to protect organizations from "inadvertent or willful lapses" (p. 339). As of 2013, the Committee of Sponsoring Organizations of the Treadway Commission (COSO) defines internal control as "A process, effected by an entity's board of directors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives relating to operations, reporting, and compliance." The framework consists of five integrated components of internal control—control environment, risk assessment, control activities, information and communication, and monitoring activities—further defined by 17 principles emphasizing integrity, ethical behavior, accountability, prudent risk assessment, transparent communication, and continual evaluation (p. 6).

Over time, the definition of internal control has shifted from the notion of policing and adherence to management policy to this grander purpose of contributing to the well-being of the organization. It also includes social controls which rely on cultural expectations that influence others' behavior through the form of shared goals, values, and norms (Das & Teng, 1998) and consequences for violating the culture (Bijlsma-Frankema & Costa, 2005). Ultimately, internal controls help ensure that what is expected to happen is actually occurring and provide a means of detecting when it is not.

Financial Responsibility

Internal controls provide a framework for protecting both the organization and the users of its financial information from errors and fraud, helping to ensure that financial information is

faithfully represented. Financial responsibility then requires that resources be managed wisely and ethically, reflecting the stewardship role of accounting. As McCuddy and Pirie (2007) observed, “Accounting initially emphasized the stewardship objective. Over time, however, the stewardship objective has been increasingly de-emphasized, and the decision-making objective has been increasingly emphasized” (p. 963). Stewardship centers on the faithful and responsible management of entrusted resources, whereas the decision-making objective focuses on providing information to support economic decisions.

In 1975, Rosita Chen, Associate Professor of Accounting at the University of Calgary, Canada, published a model of the stewardship concept and external reporting that depicts social responsibility as the primary stewardship responsibility and financial responsibility as the secondary stewardship responsibility (p. 541). Chen (1975) argued that accountants should adopt this stewardship perspective "to define the objectives of financial reporting, to analyze transactions, and to provide financial statements pertinent to the evaluation of management's performance as a steward" (p. 542). In contrast, agency theory assumes that people are primarily self-serving. Jensen and Meckling (1976) describe the individual as "a rational actor who seeks to maximize his or her individual utility" (as cited in Davis et al., 1997, p. 22). Under this theory, owners become principals and management become agents, with the expectation that incentives and controls are necessary to align managers' actions with the objectives of the organization (McCuddy & Pirie, 2007, p. 965).

Beyond the economic perspective, stewardship theory incorporates psychological and situational factors and is based on Maslow’s concept of a self-actualizing individual. Rather than viewing managers as agents, they are viewed as stewards. As Davis et al. (1997) explained, “A steward protects and maximizes shareholders’ wealth through firm performance, because, by so doing, the steward’s utility functions are maximized… The steward realizes the trade-off between

personal needs and organizational objectives and believes that by working toward organizational, collective ends, personal needs are met" (p. 25).

Stewardship is built on trust and the belief that individuals achieve self-actualization by aligning their personal goals with the long-term interests of the organization and ultimately its investors. Organizations are required to faithfully report financial information and are expected to use their resources responsibly. Ideally, an organization would operate in an environment of complete trust, where all actions are taken in the best interest of stakeholders and financial information is free from error. However, because breaches in faithful financial reporting occur, laws have been enacted and control structures implemented to protect users of the financial information. Finding the appropriate balance between trust and control can cultivate a financially responsible organization that serves the needs of employees, investors and other users of financial reports.

Although the conceptual framework has received criticism over the years, it provides one enduring benefit: consistency. By establishing a conceptual basis for financial reporting, it helps accountants exercise professional judgment and faithfully represent an organization's financial position and performance. The concepts of financial accountability, internal controls and financial responsibility suggest that financial accounting is concerned with more than technical competence; they also point to a deeper connection with the biblical concept of holiness.

Holiness (Perfect Love)

To understand holiness (perfect love), one must have a clear picture of personhood, the human problem, and God's restoration plan.

Personhood (The Imago Dei)

Genesis 1:27 says that "God created mankind in his own image." Biblical scholar, Dr. Dennis Kinlaw (2005) states that "the purpose of creation was for God to have persons with whom he could fellowship in love" (p. 41). So, what is God's image, and how does one fellowship with

God in love? Kinlaw explains that we understand the nature of God through Jesus Christ, God's Son. In Colossians 1:15, Paul declares that "the Son [Christ] is the image of the invisible God." In *A Theology of Love*, Wynkoop (2015) asserts that "Christ displayed the precise attributes of God because He was God. He was the personification, not merely the representative, of God" (p. 131).

So, what characteristics does Jesus reveal about God? He is familial (Revelation 21:7), self-giving love (1 John 4:8, 16), dialogical (John 1:1, 2 Timothy 3:16), free (John 10:18), triune (Colossians 1:15, John 14:16), and holy (Leviticus 19:2) (Kinlaw, 2005, pp. 24 – 41). He is Yahweh, the self-existent One. How then does this translate to human personhood? Humans are created as relational, self-giving, free, moral, and accountable beings fully capable of perfect love.

Relational

As Kinlaw (2005) points out, "To be human is to have parents and family relationships from which we get our name and our nature" (p. 65). God uses the most intimate relationships to reveal the Triune relationship of Father, Son and Holy Spirit. It also confirms that just as the Son required the Father and the Holy Spirit, so do all humans. Humans are not designed to exist alone (Genesis 2:18, John 3:5-6, Romans 8:26).

Self-Giving

No human is self-originating, self-sustaining or self-explanatory; then "why should it come as a shock to us that we are not self-fulfilling, that we are by definition made for a love that gives itself in trust" (Kinlaw, 2005, p. 101). In 1 Corinthians 13:4 – 8, Paul describes love as selfless, patient, kind, humble, and faithful. It always seeks truth, protects, trusts, hopes and perseveres. Love never fails.

People are created to be other-oriented. "The nature of love is other-oriented, self-giving, and sacrificial. It is born in our spirits by God himself, who is love" (Kinlaw, 2005, p. 135). Bounds et al. (2009) claims that "the deepest longing of the human heart is to be fully God's" (p. 9).

Ephesians 5:1-2 provides the ultimate objective for self-giving humans that can only be accomplished with Him, "Be imitators of God, therefore, as dearly loved children and live a life of love, just as Christ loved us and gave himself up for us as a fragrant offering and sacrifice to God."

Free

Wynkoop (2015) claims that "to be free is to be responsible" (p. 208). Kinlaw (2005) states that "love is possible only where freedom rules" (p. 32). In other words, humans are free to choose, but with that choice comes responsibility and consequence. In John 10:18, Jesus says "No one takes it [His life] from me, but I lay it down of my own accord… This command I received from my Father." He freely chose to follow the Father's will to be the good shepherd, protect His flock and demonstrate the ultimate human act of self-giving love. Kinlaw (2005) asserts that true freedom is only found in the Father's love and that it "means free to give, not just to receive" (pp. 84, 87).

Moral

Kinlaw (2005) asserts that moral consciousness is "the possibility to recognize moral choice and to respond to the call of a holy God" (p. 89). Wynkoop (2015) further evaluates morality in relation to holiness, explaining that it is personal (involving will and responsibility), has the capacity to discern right and wrong, is relational (expressed through fellowship and obedience), is structured by love (demonstrating true integrity and commitment), consists of choice and action, and moves toward redemption with God (pp. 180–189).

In other words, the moral person has the capacity to become holy but also the freedom to choose a path contrary to holiness. As Kinlaw (2005) explains, "Only persons are moral beings and have the freedom to make moral choices. This freedom makes righteousness possible but at the same time enables humans to sin" (p. 93).

Accountable

God designed persons with a conscience, or an inner awareness of right and wrong, which Kinlaw (2005) states "is the key factor in human accountability" (p. 95). In Genesis 9, God established the importance of accountability when He formed His covenant with Noah. Genesis 9:5 states, "…And from each man, too, I will demand accounting for the life of his fellow man." God created people for holiness and to live in communion with Him. Ultimately, each person will stand before his Creator to give an account for his life (Revelation 20:12).

This is a picture of personhood. God created humans as relational beings who are others-oriented and possess the freedom to choose self-giving love and moral integrity in pursuit of holiness through Him. Unfortunately, the human condition has been distorted when the moral compass is no longer directed toward becoming more like Christ, resulting in the human problem of sin.

The Human Problem (Sin)

Kinlaw (2005) explains that "it is possible for us to participate in other-oriented, self-giving love, which is the inner life of God himself. When he created us, he made us for companionship with deity" (p. 45). So, what happened? The answer is simple: Adam and Eve sinned (Genesis 3). John Wesley stated that "every voluntary breach of the law of love is sin" (as cited in Wynkoop, 2015, p. 159). Sin resulted in separation from God, who is holiness itself (Isaiah 59:2), and distorted the characteristics of personhood from relational, self-giving, free, moral, and accountable beings into beings who are mistrusting, self-centered, scapegoating, corrupt, and unprincipled.

Humans were created to love as God loves, but this love also became distorted. Rather than self-giving, perfect agape love with God as the center, human love became focused on self. Wynkoop (2015) describes this as "a love gone astray" because "sin is love locked into a false center, the self" (p. 165). Kinlaw (2005) reminds us that "our human personhood is the image of divine

personhood no matter how disfigured through sin we have become through our 'being-for-ourselves'" (p. 84). This provides hope because the *Imago Dei* remains, even though sin has created a separation from God that humanity cannot overcome on its own. Only God can provide the solution. As Wynkoop (2015) states, "Sin is a rupture of fellowship with God. Holiness is the healing of the religious malady. Fellowship can be restored on God's terms, only" (p. 163). So, what are His terms?

God's Restoration Plan (Sanctification)

Remember that God created humans "to have persons with whom He could fellowship in love," to be Immanuel, God with us (Kinlaw, 2005, p. 41). However, Adam and Eve chose to "be like God, knowing good and evil" (Genesis 3:5), disobeying God and introducing sin into creation. Kinlaw (2005) explains, "God found himself with a lawbreaker, a prodigal son, and an adulterous spouse on his hands… And God was now replaced by ourselves in our affection" (p. 128). Yet God continued to love His creation and desired to restore fellowship because He created humanity for eternal compatibility with Him (Kinlaw, 2005, p. 44).

Eternal compatibility requires a covering for sin through an atoning sacrifice. An atoning sacrifice requires a clean, sinless substitute to pay the debt caused by sin. In the Old Testament, God provided a means of atonement through the sacrifice of clean animals so that His people could remain in fellowship with the Creator. God also provided the moral law through the Ten Commandments (Exodus 20) to communicate what is required to love God and one's neighbor righteously, faithfully and obediently. The relationship between God and His people was characterized by "awe, reverence, proper fear, gratitude, adoration, and worship" (Kinlaw, 2005, p. 39), but God desired something more—eternal fellowship with His people.

God wanted to be one with His people for eternity. So, He became human. He sent His incarnate Son, Jesus Christ, to be the final atoning sacrifice for sin, to die on the cross and be raised

from the dead. "For God so loved the world that he gave his one and only Son, that whoever believes in him shall not perish but have eternal life. For God did not send his Son into the world to condemn the world, but to save the world through him" (John 3:16–17). He also gave the Holy Spirit so that He could dwell within His people (Acts 2). "The Spirit's work is designed to restore the full image of God in us making us like Christ" (Bounds et al., 2009, p. 10).

The resounding question then becomes: how does one become one of God's people and experience reconciliation and restoration to the *Imago Dei*, perfect love? The familiar VBS answer is to ask for forgiveness, repent of one's sins, and ask Jesus to be one's Savior. While this answer is true, it does not fully capture the restoration process, the way to and fulfillment of salvation, perfect love. It is a journey of grace: prevenient, justifying and sanctifying.

Prevenient

The journey of restoration begins with God making undeserved, unmerited grace available to all people to save them from eternal separation from Him (John 3:16). Wynkoop (2015) reminds that "what freedom man has is a benefit purchased by Christ's death for us – prevenient grace must never be forgotten" (p. 104). "The sacrifice of Christ was to restore the human heart the glory, the agape love, the divine presence that we lost in the fall" (Kinlaw, 2005, p. 150).

Prevenient grace is self-giving, sacrificial love that provides a means by which humanity can be restored to the Imago Dei and renewed in fellowship with God. It is the giving of the Son from the Father for the world so that all may truly live (2 Corinthians 5:15). All people have access to God's grace, but it must be received to be saved. Prominent speaker, teacher and evangelist in the 20th century Holiness Movement, Oswald Chambers (1992) states, "Salvation means that we are brought to the place where we are able to receive something from God on the authority of Jesus Christ, namely, forgiveness of sins" (January 10).

Justification

All will stand before their Creator to answer for their lives (Revelation 20:12), but the good news is that God provided a substitute for human sin. 2 Corinthians 5:21 states, "God made Him who had no sin [Jesus] to be sin for us, so that in Him we might become the righteousness of God." Jesus is the substitute. Chambers (1992) states that "as a result of the supernatural miracle of God's grace I stand justified, not because I am sorry for my sin, or because I have repented, but because of what Jesus has done" (October 28). There is nothing a person can do to earn justifying grace or forgiveness of sin. It is freely given through Christ with the purpose of restoring humanity to fellowship with God and the divine personhood for which humanity was created.

Sanctification

Now that one has accepted God's gift of saving grace and been justified, one becomes a new creation, born again, and sanctified by the Holy Spirit. What does it mean to be sanctified? According to Wesley, sanctification is "to be renewed in the image of God, in righteousness and true holiness" (as cited in Wynkoop, 2015, p. 116). Bounds et al. (2009) states, "The Holy Spirit is transforming our lives from the moment we are born again [sanctified] until we receive glorification in death. The Spirit's work is designed to restore the full image of God in us, making us like Christ" (p. 10).

Sanctification is rebirth, the restoration of the *Imago Dei* and the renewal of fellowship with God. It is holiness and perfect love. It is important to understand that, just as life begins in a moment but requires a process of development and growth, sanctification also begins at a moment in time and continues throughout one's life. In life, one learns to walk, talk, and mature over time. Likewise, one who has been reborn by the Holy Spirit learns to walk, talk, and become more like Christ.

Recall that humans are created as relational, self-giving, free, moral, and accountable beings fully capable of perfect love (holiness). 1 Peter 1:13 – 15 states:

> Therefore, with minds that are alert and fully sober, set your hope on the grace to be brought to you when Jesus Christ is revealed at his coming. As obedient children, do not conform to the evil desires you had when you live in ignorance. But just as he who called you is holy, so be holy in all you do.

1 Thessalonians 4:3 says, "It is God's will that you should be sanctified." God calls His people to be holy just as He is holy, and because He calls them to holiness, He provides the way to accomplish it. So, what does that mean exactly? In short, it means loving as God loves. Bounds et al. (2009) explains that "The ultimate purpose of entire sanctification is not freedom from sin but perfect love – loving God with your heart, soul, mind, and strength and loving you neighbor as yourself" (Matthew 22:37) (p. 17). It is self-giving love and an undivided heart.

Holiness is not perfect knowledge nor free of ignorance, free from mistakes, free from infirmities, wholly free from temptation, nor free from the need for further growth (Watson, 2021, pp. 67 – 74). It requires grace, knowing God, unwavering faith in and devoted faithfulness to God, redemption, being set apart, dependence on and complete trusting surrender to God's will, joyful obedience, a grateful servant's heart, integrity, accountability and transformed love (parts taken from Bounds et al., 2015, pp. 16 – 20; Kinlaw, 2005, pp. 84 – 99; Watson, 2021, pp. 83 – 92). It is choosing and pursuing God while allowing Him to work from the inside out so that one becomes more like Him each day.

Watson (2021) proclaims that "Entire sanctification is not a sign that one is an elite or super-spiritual Christian. Rather, it comes as a response to awareness of great need for God to do in us what we cannot do in ourselves" (p. 42). Philippians 4:13 states "I can do all things through Christ

who strengthens me." Kinlaw (2005) reminds believers that "We must believe God enough to entrust ourselves entirely to his tender care" (Proverbs 3:5 – 6) (p. 150).

Fortunately, He can be completely trusted. In the words of John Wesley, "Love is the highest gift of God; humble, gentle, patient love… Settle it then in your hear, that from the moment God has saved you from all sin, you are to aim at nothing more, but more of that love described in the thirteenth of the Corinthians [perfect love]" (as cited in Kinlaw, 2005, p. 153). He is perfect love. Perfection does not seem so unattainable when one remembers that it is just becoming more like Christ each day through God's strength. Humans make errors and mistakes. That is not a breach of perfection, but a reminder of one's dependence upon the grace of Christ that is required to walk in holiness (Bounds et al., 2009, p. 20).

Holiness and Financial Accounting

The conceptual framework for financial reporting sets the objective for financial accounting: to provide the financial story of the organization as faithfully as possible for external users to evaluate for decision-making. Figure 2 provides a proposed conceptual framework of holiness (perfect love) with the objective: to be more like Christ each day (Ephesians 5:1–2) by loving God with all your heart, soul and mind, and loving your neighbor as yourself. (Matthew 22:37–40). The framework of holiness (perfect love) evaluates why one pursues holiness, what characterizes it and how it is lived out.

The framework emphasizes the fundamental qualities of personhood—relational, self-giving, free, moral and accountable—with enhancing qualities that are required for holiness—knowing God, unwavering faith in and devoted faithfulness to God, being set apart, dependence on and complete trusting surrender to God's will, joyful obedience, a grateful servant's heart, integrity and transformed love. The fruit of the Spirit—love, joy, peace, patience, kindness, goodness, faithfulness, gentleness, and self-control—are the elements cultivated by the Holy Spirit. The "How"

of holiness resides in the assumptions (*Imago Dei*, fall of man, inerrant Word of God and perfect love), the principles (prevenient, justifying and sanctifying grace, and redemptive witness) and the constraint (sin).

Disclosure, understood as redemptive witness, functions as a principle in the framework just as full disclosure does in the financial reporting framework. Psalm 107:2 – 3 says "Let the redeemed of the Lord tell their story – those he redeemed from the hand of the foe, those he gathered from the lands from east and west, from north and south." While sin remains a constraint because it separates humanity from God, this framework recognizes that God has already provided the means for redemption through Jesus Christ and His grace. Sin nevertheless remains a constraint because grace must be freely received. Just as financial accounting depends on accountability, internal controls and responsibility, so too does the pursuit of holiness.

Accountability

Accountability is the process of communicating how resources have been used. In accounting, it is categorized by the elements of the financial statements (assets, liabilities, equity, revenues and expenses) which present a financial story within the assumptions, principles and constraints of the financial reporting framework. In the holiness framework, accountability is communicated through the work of the Holy Spirit in a believer's life. When someone is set apart in holiness, the fruit of the Spirit become visible as evidence of God's transforming work. This transformation is necessary because of the fall of man and made possible through the foundational truths of the *Imago Dei*, the inerrant Word of God and perfect love, and God's grace that reconciles people to Himself.

Internal Controls

Risk assessment is a key component of internal control because it requires identifying what could go wrong, whether intentionally or unintentionally, and what could prevent an organization or

individual from achieving its objective. Watson (2021) states that "Strength comes through admitting weakness" (2 Corinthians 12:9 – 10) (p. 52). In financial accounting, identified risks are mitigated through internal controls designed to protect assets from fraud or unintentional error, enhance the accuracy and reliability of financial information, and promote operational efficiency and compliance with organizational policies.

Accordingly, internal controls within the holiness framework are intended to protect one's fellowship with God from sin and unintentional error, cultivate a faithful and authentic witness, promote spiritual growth through the means of grace, and encourage obedience to God's Word and conformity to His perfect love. Internal control activities for holiness include the means of grace: prayer, studying the Scriptures, the Sacraments, fasting and "Christian conferencing" (i.e. church involvement and accountability groups) (Watson, 2021, p. 109). Watson (2021) emphasizes that the means of grace are "practice for expertise" (p. 110). Within this framework, that practice is the sanctification process that enables believers to achieve the objective of becoming more like Christ in character and love.

Responsibility

Responsibility concerns how resources are managed. When individuals manage their own resources, decisions naturally tend to align with their own interests. However, when managing the resources of another, the question becomes whether the manager acts as an agent or a steward. Agency theory assumes that people are self-serving and will act in their own best interest. This perspective is consistent with the distorted personhood—mistrusting, self-centered, scapegoating, corrupt and unprincipled—and therefore relies on incentives and controls to align the principal and agent. As a result, decisions are often driven by short-term outcomes.

Stewardship theory, on the other hand, stresses collectivism and self-actualization. It suggests that stewardship exists when a person's goals are aligned with the organization's goals and

that trust, rather than control, primarily manages risk. Stewardship inspires a long-term perspective for decision-making and planning. Historically, stewardship was the recommended perspective for accountants and managers because it encourages decisions that consider the financial and social implications of organizational actions. However, because of assumptions underlying the concept of *Economic Man* and the prevalence of fraud, agency theory has become the dominant model of the principal-manager relationship in financial accounting.

Holiness aligns more closely with stewardship than agency. God desires a relationship with His people that is characterized by complete trust (Proverbs 3:5 – 6), surrender to His will (Luke 22:42), and alignment with His plan (Jeremiah 29:11). Within His will true peace and holiness are found. One important distinction remains, however. Stewardship theory ultimately centers on self-actualizing individual and reliance on self. In contrast, holiness recognizes that true transformation is accomplished not through self-actualization but through God's sanctifying work. The truly actualized person is one made holy by God.

Conclusion

For the pragmatic accounting mind, comprehending the concept of holiness (perfect love) may present a challenge. This author has found, however, that the greater personal challenge is not the concept of holiness itself, but the notion of faith—the willingness to trust in a reality that may initially seem abstract or idealistic. Yet every person places faith in something; therefore, the question is not whether one has faith, but rather where that faith is placed. This author recommends putting one's faith in God's grace—prevenient, justifying and sanctifying—a journey well worth taking.

Whatever God asks one to do, learn and teach it should be rooted in who He is. If the objective is ultimately to be more like Christ each day, then one must be wholly devoted to that pursuit in all areas of life. Whether teaching, working in industry or serving in any other capacity,

"work at it with all your heart, as working for the Lord, not for man" (Colossians 3:23). Within the holiness framework, perfection does not mean the absence of mistakes or human limitations; rather, mistakes become opportunities to depend more fully on God's sanctifying grace. Just as financial accounting seeks faithful representation and responsible stewardship of resources entrusted to an organization, a holy life seeks to faithfully represent God's transforming work and responsibly steward the life entrusted to each person.

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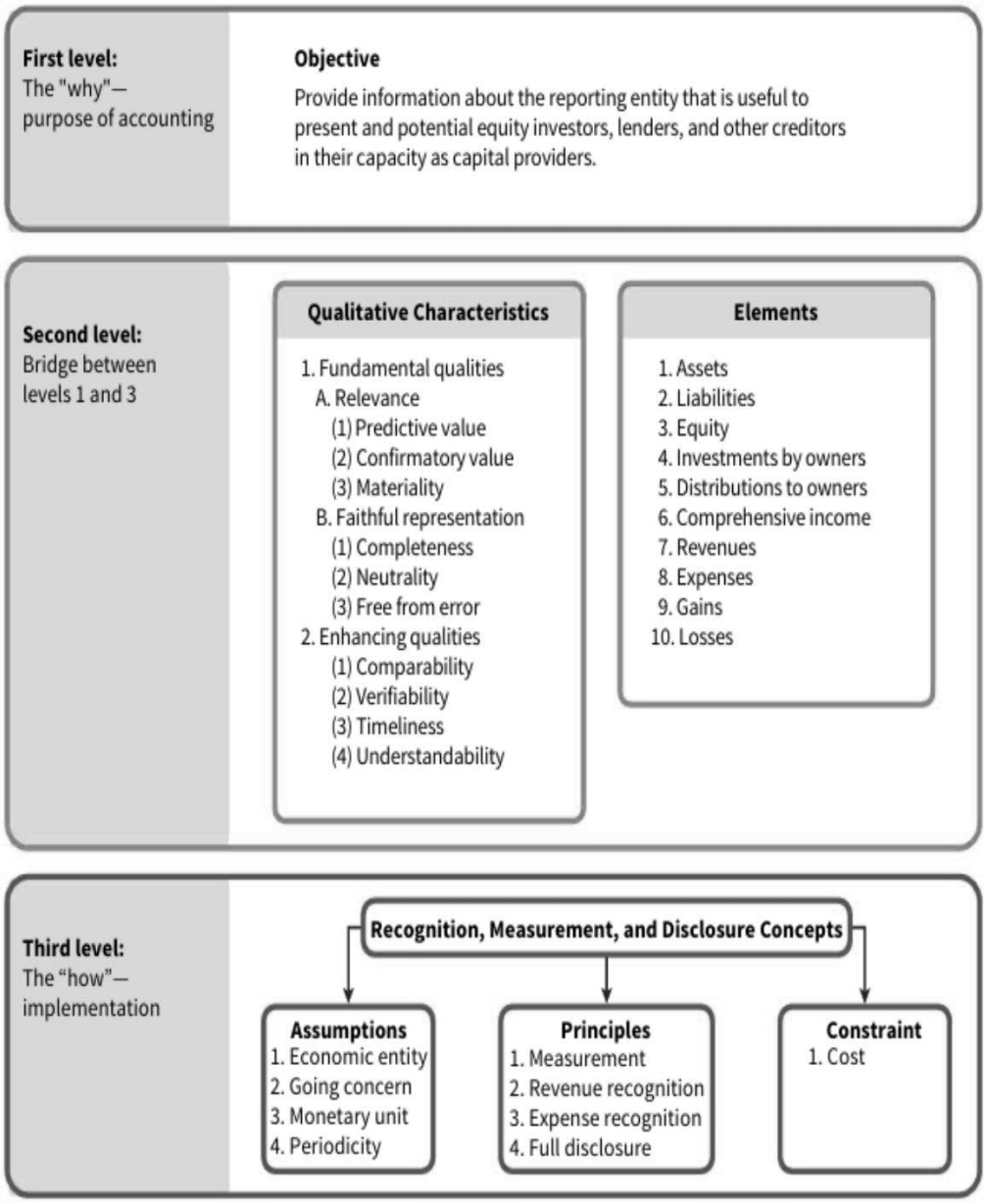
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Figure 1

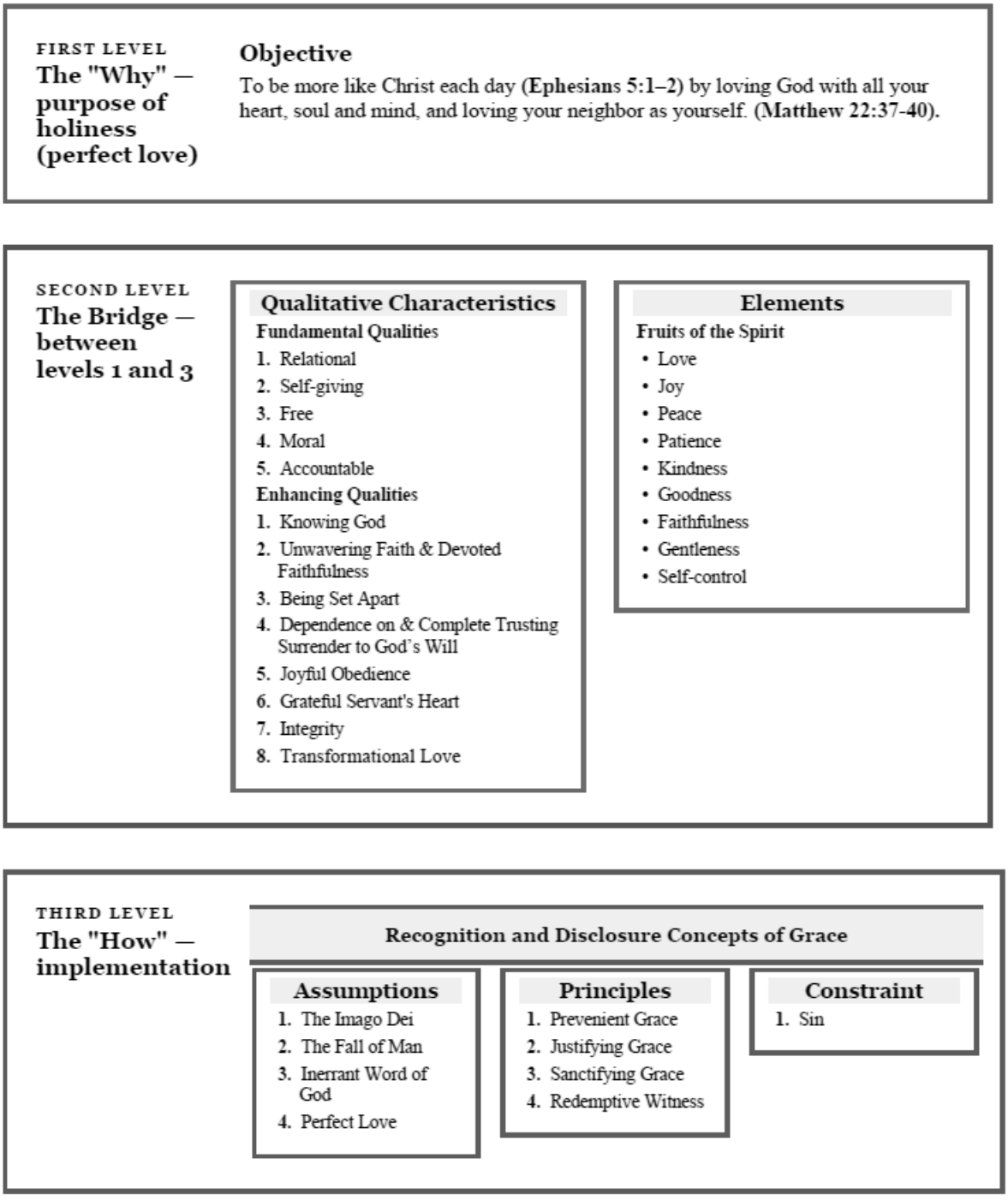
Conceptual Framework for Financial Reporting



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Figure 2

Conceptual Framework of Holiness (Perfect Love)



Cultivating a Flying Fish Mindset

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Abstract

Today's society is like turbulent water, full of changes and challenges. Business organizations navigating through AI transformation can learn valuable lessons from flying fish. Flying fish do not just survive predators, they soar above them. The researchers proposed a flying fish framework, grounded in Biblical principles and servant leadership, cultivating students with a flying fish disruptive mindset. Six key lessons and AI applications are intensively discussed. This theoretical and practical framework provides guidelines and key concepts for preparing future Christian business leaders to create, develop, and deploy ethical and responsible AI systems in various disciplines and organizations.

Keywords: change dimension, strategic efficiency, resilience, technical mastery, ethical vigilance, cross-discipline, correct misunderstanding

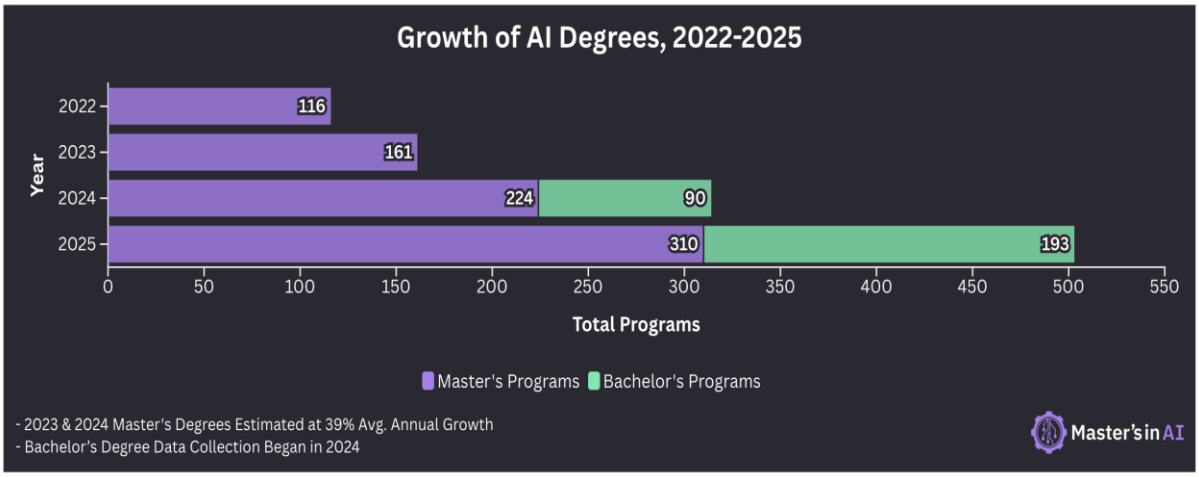
Cultivating a Flying Fish Mindset

Today's society is full of changes and challenges. Preparing and equipping students well with the latest technology and skill sets are emerging hot topics in higher education. Empowering future Christian business leaders with ethical innovative decisions are key for success in Christian business schools. According to Jensen Huang, CEO of NVIDIA, the entire society is experiencing an AI revolution today. During an interview at the 2025 Milken Institute's Global Conference, Huang stated: "Every job will be affected, and immediately. It is unquestionable; You're not going to lose your job to an AI, but you're going to lose your job to someone who uses AI." He emphasized at the conference that "do not be that person who ignores this technology ... Take advantage of AI." Jensen's conference interview holds a lot of truth. It is critical for Christian business schools to train the new generations with AI technology. It is also extremely important for the future Christian leaders to be armored with ethical AI decision making and ethical AI development abilities.

As the authors delve deeper into their research, they notice several key factors. According to a 2026 report by Master's in AI, an educational media company, "304 universities and colleges across the USA now offer AI or AI-related degrees, including programs in machine learning (ML). In 2025, 310 master's programs in AI and 193 bachelor's programs in AI were being offered in the United States" (see Figure 1). The report also noted that "Master's in AI programs have grown 2.7 x between 2022 and 2025-a 167% increase." Business schools have become the hosting hub of AI programs, which experienced a 1260% growth rate as the report indicated (see Figure 2). Furthermore, it revealed that 145 programs have been added at 76 Christian schools since 2022 (Lykins, 2026).

Figure 1

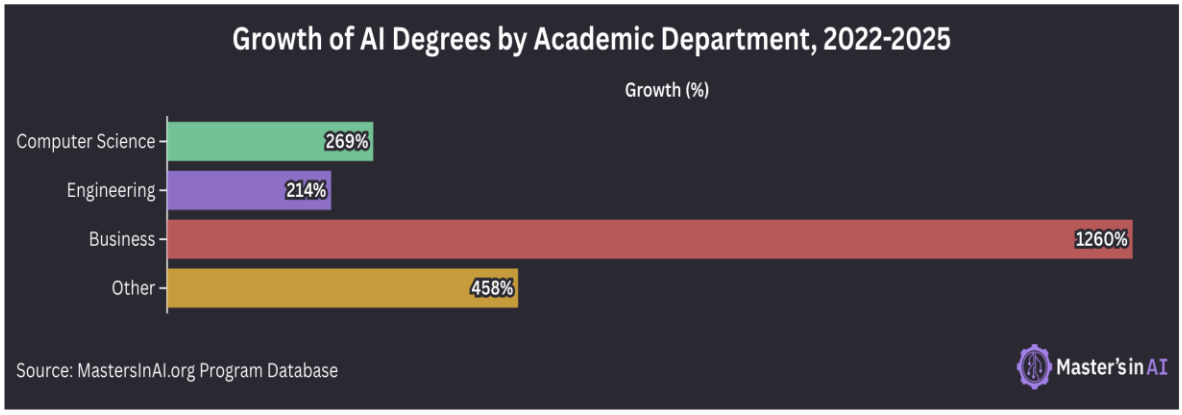
Illustration of AI Program Growth



Note. Growth of AI degrees by Master's in AI.

Figure 2

Illustration of AI Degrees by Department



Note. Growth of AI degrees by department by Master's in AI.

Lykins (2026) states that "Christian university leaders say they need to offer these degree programs to match an evolving job market and teach AI development from a Christian worldview." As Lykins' interview with Joe Faith states:

> "Christian schools need to be willing to offer these degree programs; because if they aren't, they're shirking an important responsibility. As Christians, if we are not willing to jump into this arena, we are not as technologists living up to the calling we claim to have," Faith said. "This is such a pivotal technology that I feel like the world needs people who come from a morally focused background, saying what is the good and the bad of this technology, and how can we help better teach and shine a light on those things?"

Developing AI skills is important, but cultivating the right mindset comes first. The researchers in the manuscript developed the flying fish blueprint to prepare students in their specific school of business and Master of Science in AI program. The framework focuses on leading beyond disruption. First, flying fish concepts are introduced. According to the US National Wildlife Federation (2026), flying fish cannot fly. Instead, "they propel themselves out of the water at speeds of more than 35 miles (56 kilometers) an hour. Once in the air, their rigid "wings" allow them to glide for up to 650 feet (200 meters)." The key ideas that authors try to encourage students to see from flying fish are: Flying fish don't just survive predators, they soar above them. They do not swim harder; they change dimensions entirely. They have evolved one of nature's most remarkable adaptive strategies: gliding up to 650 feet at speeds over 35 mph to escape oceanic threats. This is not just biology. It is a blueprint for AI leadership. As AI transforms the business world, effective leaders need to do more than merely understand this technology; They must recognize emerging and unique opportunities, anticipate and address potential threats and risks, make ethical and responsible decisions, lead organizations through challenges, embrace innovative ideas, and move into a completely new dimension like the flying fish!

Therefore, the authors have conducted extensive research and proposed that the flying fish is not merely a metaphor but a strategic framework for preparing Christ-centered leaders to navigate and lead through AI-driven disruptions. How can Christian business leaders and educators use the

flying fish blueprint to teach students to go beyond disruption and reshape the future? The followings frameworks are proposed:

Lesson 1: Don't Outswim the Predator - Change the Game

Flying fish evolved their gliding ability to escape predators like tuna and swordfish. They didn't try to swim faster in the same domain; they transcended it entirely by breaking through to a new dimension. The key insight for Christian business leaders from this flying fish framework is that AI is disrupting every industry. Organizations that try to "swim faster" using old methods will be overtaken.

The Application in Lesson 1

Christian business leaders, educators, and AI program graduates must learn to rise above disruption by:

1. Changing the competitive landscape: One should not just adopt AI tools, but reimagine business models, workflows, and value creation.

2. Strategic agility: Recognizing when incremental improvement isn't enough, bold transformation is required.

3. Dimensional thinking: Operating across technical, strategic, ethical, and human domains simultaneously.

Flying fish don't compete in the water. Instead, they transcend it. Christian business leaders don't just react to AI disruption. They soar above it.

Lesson 2: Glide with Purpose and Maximize Impact with Strategic Efficiency

Flying fish do not flap their wings. They build momentum underwater, launch with precision, glide with rigidity, and use their extended fins to maximize distance with minimal energy. A single glide can last 45 seconds and cover 650 feet distances, comparable to the Wright brothers' 12 seconds - 120 feet first flight (National Air and Space Museum, 2026).

The Application in Lesson 2

Effective AI leadership isn't about constant, frantic activity. It's about strategic momentum and disciplined execution:

1. Build velocity before launch: Master of Science in Ethical AI & Strategic Decision Sciences (MSAIS) students develop deep technical foundations (AI, machine learning, data analytics) and strategic frameworks before leading transformation. Without a solid technical foundation, no one can lead any technical transformation. Just like the key that opens the doors, students must have the keys ready. Christian business educators shoulder the great responsibility to prepare students to lay down a solid AI technical foundation to lead future development. Christian business educators also need to constantly equip and update their own knowledge and skillsets to help better prepare our students.

2. Extend with purpose: Like rigid pectoral fins, Christian business leaders and AI program graduates deploy AI with intentional structure, governance frameworks, ethical guardrails, and human-centered design. According to UNESCO (2021)'s Recommendation on the Ethics of Artificial Intelligence, "AI must respect human rights and human dignity. It is grounded in key principles such as transparency, fairness, environmental sustainability, and human oversight of AI systems." All the AI systems should work for "the good of humanity, individuals, societies and the environment." Therefore, Christian business leaders and AI program graduates should follow these guidelines and recommendations to develop and deploy AI systems and programs. Furthermore, Christian business leaders and AI program graduates should be the light of the world. Christians need to create, develop, and deploy AI systems and programs to glorify God.

3. Maximize impact with efficiency: Not every problem requires a custom AI solution. Effective AI leaders discern when to build, when to buy, and when to wait.

While the Wright brothers' first flight lasted 12 seconds (National Air and Space Museum, 2026), flying fish regularly exceed that short period of time. MSAIS graduates are built for endurance, not just experimentation. Take Apostle Paul as an example, he endured many hardships yet wrote four books of the New Testament (Ephesians, Philippians, Colossians, and Philemon) while he was in prison (Bible Hub, 2026). His persevering faith, theological commitment, and unshakable trust in Christ set up a great example for MSAIS students. Through faith, patience, endurance, trust, and persistence, MSAIS students will be able to build AI programs that last with significant impacts.

Lesson 3: Tail-Tap for Thrust - Adaptive Resilience in Mid-Flight

When a flying fish starts to lose altitude mid-glide, it dips its elongated lower tail lobe back into the water to gain an extra burst of speed without fully re-entering the water. This allows it to extend its glide and reach safety.

The Application in Lesson 3

AI transformation is rarely smooth. Markets shift. Technologies evolve. Strategies need recalibration. Effective AI leaders are trained in adaptive resilience, reflecting the system optimization expert Sheffi (2005)'s view that business organizations and companies with strong resilience and great flexibility can reduce the likelihood of disruptions and create competitive advantages in the marketplace. AI leaders and MSAIS graduates are encouraged to apply the following:

1. Mid-flight adjustments: When AI initiatives stall, MSAIS graduates don't abandon the mission. They re-engage with data, stakeholders, and strategy to regain momentum.

2. Staying airborne: Like the tail-tap maneuver, MSAIS leaders make course corrections without losing altitude, pivoting strategies while maintaining organizational trust.

3. Hybrid agility: Operating between two worlds (technical AI capabilities + human organizational realities) requires constant recalibration.

Resilience is not about never falling. It is about knowing how to regain thrust before one hits the water. Therefore, Christian business leaders and MSAIS graduates need to embrace endurance and resilience, getting ready to regain balance and control once the AI system is launched or deployed.

Lesson 4: Navigate Threats in Two Domains: Technical Mastery and Ethical Vigilance

Ironically, by escaping marine predators, flying fish often become prey for airborne hunters like gulls and frigatebirds. Rising above one threat exposes them to another. Survival requires awareness of both domains.

The Application in Lesson 4

AI solves problems but it also creates new risks. As Ajami and Karimi (2023) stated, AI transforms the way that people live, work, and interact with each other. It benefits various fields by processing data quicker, optimizing supply chains, and improving quality controls. However, "AI has the potential for misinformation and risks in the social, economic, and political spheres" (p.74). Further AI opportunities and challenges include automation, which may increase efficiency but can displace workers; Predictive algorithms may optimize decisions but can embed bias; Generative AI may accelerate content creation but can erode trust. Banks et al. (2024) suggested that humans take steps to migrate the risk of AI, making sure that decisions are made based on the principles that humans can understand and agree.

Therefore, MSAIS graduates are trained to lead in multiple domains:

1. Technical mastery: Understanding AI capabilities, limitations, and failure modes

2. Ethical vigilance: Anticipating unintended consequences, bias, privacy violations, and societal harm

3. Strategic foresight: Recognizing that every innovation creates new vulnerabilities and preparing for them

In the researchers' universities, students are taught the following MSAIS virtues:

1. Wisdom (King James Version, 2017/1769, Proverbs 2:6): Discerning when AI is the right solution and when it's not.

2. Justice (Micah 6:8): Ensuring AI serves all people, not just the powerful.

3. Courage (Joshua 1:9): Challenging unethical AI practices, even when uncomfortable.

4. Stewardship (1 Peter 4:10): Using AI responsibly for the common good.

Flying fish know that escaping one predator doesn't mean safety, it means vigilance. MSAIS leaders know that deploying AI doesn't mean success, instead it means responsibility. Steering AI towards the right direction and ensuring that it benefits humanity should be the central focus.

Lesson 5: Four Wings = Cross-Disciplinary Advantage

Some flying fish species have enlarged pelvic fins in addition to their pectoral fins, creating a "four-winged" configuration that allows them to travel even further distances.

The Application in Lesson 5

Technical AI skills alone aren't enough. MSAIS students develop four "wings" of capability:

1. Technical AI Mastery: Machine learning, data analytics, AI systems, explainable AI

2. Strategic Decision Sciences: Data-driven strategy, organizational change, innovation leadership

3. Ethical & Responsible AI: Bias mitigation, transparency, accountability, governance

4. Christ-Centered Leadership: Servant leadership, human dignity, purpose-driven innovation

This cross-disciplinary integration is what allows MSAIS graduates to "glide further" than purely technical AI specialists or purely strategic business leaders. They operate at the intersection of

technology, business, strategy, ethics, and humanity. As Toto et al. (2025) suggested that cross-disciplinary AI integration greatly accelerates innovation and significantly improves complex problem solving. It also provides effective solutions to various social challenges and increases impacts across disciplines and fields. Several research studies also echoed these similar research findings (Cai et al., 2025; Gao & Wang, 2024; Zhang & Tang, 2025). Therefore, AI education should emphasize cross-disciplinary collaboration, enabling AI and business graduates to facilitate knowledge transfer more effectively and efficiently. It also benefits a much wider range of research and application fields through multidisciplinary AI integration.

Lesson 6: Correct Ancient Misunderstandings - The Need for AI Education

The scientific name for flying fish, exocoetid, comes from an ancient Greek term (Vergados, 2021), meaning "sleeping outside" because people mistakenly believed these fish left the water at night to sleep on land.

The Application for Lesson 6

AI is widely misunderstood. Some see it as a magic solution. Others fear it as an existential threat. Many don't understand how it works, what it can and can't do, or how to deploy it responsibly.

In the authors' university, the MSAIS program exists to correct these misunderstandings:

1. AI literacy: Teaching leaders what AI is (and is not)

2. Demystification: Breaking down complex technical concepts into strategic insights

3. Responsible deployment: Ensuring AI is used with wisdom, not hype

Just as ancient Greeks misunderstood flying fish, modern organizations often misunderstand AI. MSAIS graduates bring clarity, competence, and ethical grounding to AI transformation. By addressing various misconceptions, Christian business leaders will be better equipped to navigate AI-driven disruptions with clear vision and direction.

The Bottom Line

Flying fish don't just survive; they thrive in two worlds. The implication for Christian business students is that they must learn to work with people from diverse backgrounds in both Christian and secular environments. Whether at school or at future workplace, Christian students need to learn from the flying fish to thrive in two worlds through helping brothers and sisters in the Kingdom and leading people in the secular world to come to Christ. The MSAIS program helps prepare students to thrive in two worlds by having both the technical capabilities and human organization realities.

The flying fish don't just escape predators. They redefine the rules of engagement. Therefore, Christian business students should not just adopt AI but lead the AI transformation with strategic vision. As Proverbs 29:18 states, "Where there is no vision, the people perish." Through daily prayer and reflection, seeking God's guidance and wisdom, and equipping themselves with AI technologies, Christian business leaders will be able to engage actively in the AI-driven world with the right vision.

The flying fish don't just glide, they adapt mid-flight to extend their journey. The researchers' university strongly encourages students to obtain resilience, agility, and course correction in the face of disruption.

Conclusion

In conclusion, AI is impacting almost every industry and business sector. The changes that it brings are undeniable and inevitable. Based on the flying fish framework, the current researchers strive hard to cultivate Christian business students with ethical and responsible AI leadership. Students are encouraged to learn from flying fish to swim smarter, not harder; to change dimensions; rise above disruption; and perform strategic AI transformation. By taking various AI and cross-disciplinary courses, in combination with AI technology, strategy, ethics, and leadership,

students can maximize Christian impact with disciplined and purpose-driven AI deployment. In the meantime, students are prepared to navigate threats with technical mastery and ethical vigilance.

It is essential for Christian business leaders and MSAIS graduates to create, develop, and deploy ethical and responsible AI by mastering transparency, accountability, bias awareness, and human-centered decision-making grounded in Biblical principles. The researchers pray that Christian business schools work closely together to lead AI adoption across organizations, industries, and society with strategic vision and ethical clarity. By grounding AI leadership in Biblical principles, servant leadership, human dignity, and purpose, by combining data-driven analytics with discernment to guide organizations through disruption, Christian business leaders can drive ethical innovations forward!

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Developing Ethical Christian Cybersecurity Leaders Through AI-Augmented PCAP Analysis and Network Forensics Education

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Abstract

Artificial intelligence (AI) transforms cybersecurity operations, threat hunting, network monitoring, and incident response. As organizations increasingly integrate AI-assisted technologies into security operations centers, higher education institutions face growing pressure to prepare graduates who can effectively leverage AI while maintaining critical thinking and ethical decision-making. Guided by 1 Thessalonians 5:21, this paper positions AI as an analytical assistant rather than an autonomous decision-maker and presents packet capture (PCAP) analysis as an environment where students validate AI-generated findings against objective network evidence. A four-phase classroom integration model aligns learning outcomes, teaching and learning activities, and assessments so that students confirm or refute each AI finding before recommending a response. Integration of technical validation with Biblical discernment prepares graduates to lead cybersecurity initiatives with accountability in increasingly automated environments.

Keywords: artificial intelligence, cybersecurity education, network forensics, packet capture analysis, intrusion detection, ethical leadership, Christian worldview, evidence-based investigation

Developing Ethical Christian Cybersecurity Leaders Through AI-Augmented PCAP Analysis and Network Forensics Education

Artificial intelligence (AI) is now reshaping cybersecurity operations by incorporating automated advances in threat detection, predictive analytics, behavioral monitoring, and incident response. While learning models have been used for decades, modernized security operations centers (SOC) increasingly rely on AI-assisted technologies to process vast quantities of network data and identify potential threats more rapidly than previous traditional methods. Rapid adoption of AI technologies continues to adapt and create opportunities for improved cybersecurity performance while simultaneously introducing concerns regarding reliability, transparency, accountability, and verification of machine-generated conclusions.

Cybersecurity professionals remain responsible for validating evidence and making decisions regardless of the sophistication of the analytical tools employed. Threat indicators, vulnerability assessments, and incident reports generated by AI systems can accelerate investigations, but automated recommendations do not eliminate the need for professional judgment. Dependence upon automation without verification increases the likelihood of inaccurate conclusions, improper remediation efforts, and ineffective response activities (Parasuraman & Manzey, 2010). Effective cybersecurity practice depends upon a professional's ability to validate automated findings through objective evidence (Alahmadi et al., 2022).

The growing reliance on artificial intelligence throughout cybersecurity operations is increasing pressure on higher education institutions to prepare graduates for technology-rich security environments. Traditional cybersecurity curricula emphasize network security, digital forensics, risk management, and incident response. Modern workforce expectations now require proficiency in AI literacy, analytical validation, and the ability to distinguish between reliable and unreliable machine-generated outputs. Educational research indicates that students are better prepared for professional

practice when technical instruction is reinforced through critical evaluation, evidence-based analysis, and active problem-solving activities (Roshanaei & Jachura, 2025; Tian, 2025). Therefore, students must learn not only how to use AI tools, but also how to validate AI-generated findings through objective analysis rather than unquestioned acceptance of machine-generated recommendations.

Network forensics education provides a particularly effective environment for developing these competencies. Packet capture (PCAP) analysis requires the examination of network communications to identify malicious activity, reconstruct events, and support investigative findings with verifiable evidence. Packet-level data allows investigators to confirm or reject analytical conclusions through direct observation of network behavior. Availability of objective evidence creates opportunities for students to compare AI-generated findings against actual network traffic and determine whether recommendations are supported by the available facts.

Packet analysis has long served as a foundational technique within network forensics because captured traffic provides a detailed record of communications occurring within a network environment. Modern analytical platforms increasingly employ artificial intelligence to classify traffic, identify anomalies, and detect patterns associated with malicious behavior (Sikos, 2020). Integration of AI-assisted analysis within educational environments allows students to experience the advantages of automation while maintaining responsibility for evidence validation. Repeated exposure to AI-assisted validation encourages the development of investigative habits that prioritize factual verification over algorithmic convenience.

Ethical leadership remains equally important as technical competence within cybersecurity practice. Security professionals routinely make decisions that affect privacy, organizational operations, regulatory compliance, and the protection of sensitive information. Professional responsibility requires careful evaluation of evidence before action is taken. The instruction found in 1 Thessalonians 5:21 to "test them all; hold on to what is good" (New International Version,

1973/2011) aligns closely with investigative principles that govern effective cybersecurity operations. Paul gave the instruction immediately after warning believers not to treat prophecies with contempt (1 Thessalonians 5:20). Testing in that setting applies to claims presented as authoritative, and machine-generated verdicts carry a similar appearance of authority before any examination occurs. Validation, examination, and evidence-based decision making represent essential characteristics of responsible cybersecurity leadership regardless of whether the analysis originates from a human investigator or an artificial intelligence system.

Development of ethical cybersecurity leaders requires educational experiences that strengthen technical proficiency while cultivating discernment and accountability. AI-augmented PCAP analysis offers an instructional approach that reinforces evidence-based investigation through objective validation of machine-generated conclusions. Consistent application of verification practices prepares future cybersecurity professionals to employ innovative technologies responsibly while maintaining accountability for the decisions they make.

Literature Review

Artificial Intelligence and Cybersecurity Education

Recent research emphasizes that cybersecurity education must evolve to address the opportunities and limitations associated with AI-assisted systems. As artificial intelligence becomes increasingly integrated into threat detection, security monitoring, vulnerability assessment, and incident response activities, academic programs face growing pressure to prepare graduates who can effectively operate within technology-rich security environments. Tian (2025) found that successful integration of AI into cybersecurity curricula requires practical learning experiences that develop technical competencies while promoting critical thinking and active engagement with AI technologies. Similarly, Roshanaei and Jachura (2025) argued that workforce readiness depends upon educational frameworks that expose students to AI-enabled cybersecurity tools commonly

encountered within professional security operations. Exposure to these technologies helps students understand the benefits of automation while recognizing the continued importance of human judgment and analytical reasoning.

The increasing adoption of AI-assisted security technologies has also generated concerns regarding overreliance on machine-generated recommendations. Elkhodr and Gide (2025a, 2025b) reported that AI-enhanced learning environments can improve student engagement, analytical reasoning, and problem-solving capabilities. The researchers also identified risks associated with unquestioned acceptance of AI-generated outputs. Automated systems may produce inaccurate conclusions, incomplete interpretations, or recommendations lacking sufficient contextual understanding. Educational environments that encourage students to evaluate and validate machine-generated findings therefore play an important role in developing analytical discipline and professional accountability. Effective cybersecurity professionals must understand not only how to use AI tools but also how to identify situations where AI-generated recommendations require additional investigation or verification.

AI-Augmented PCAP Analysis and Network Forensics Education

AI-assisted PCAP analysis can accelerate threat identification and support student learning while preserving the requirement for evidence-based validation. Although these analysis activities are easy to implement, students learn to compare AI-generated findings against packet-level data only through repeated practice. Initial training focuses on developing foundational knowledge of network protocols, services, and associated ports, including port 25 for Simple Mail Transfer Protocol (SMTP). Students learn how common services communicate across a network and how those communications appear within PCAP data. Familiarity with standard ports and protocols enables students to identify unusual traffic patterns, recognize unauthorized services, and detect vulnerabilities that may expose organizational assets to attack. Sommer and Paxson (2010) described

a semantic gap between the anomalies that machine-learning detectors report and the operational meaning an analyst requires, leaving interpretation of the underlying traffic to the analyst. Development of these foundational skills prepares students to validate AI-generated findings through direct examination of packet-level evidence rather than relying solely on automated classifications and recommendations.

Network forensics education provides an ideal environment for teaching verification because investigations rely upon objective evidence captured within PCAP files. Packet-level evidence allows students to reconstruct network events, identify suspicious activity, analyze communications, and support conclusions using observable data rather than assumptions. Sikos (2020) described packet analysis as a foundational network forensic capability because captured traffic provides a detailed and defensible record of network behavior that can be examined repeatedly throughout an investigation. Availability of objective evidence creates opportunities for students to compare AI-generated findings against actual network traffic and determine whether automated classifications, threat indicators, or intrusion alerts are supported by the available data.

AI-augmented intrusion detection environments expand these educational opportunities by combining automated analysis with evidence-based investigation. Modern AI systems can rapidly classify traffic patterns, identify anomalies, detect indicators of compromise, and prioritize suspicious activity for analyst review (Marcus, 2025). Indicators of compromise (IoCs) are observable artifacts tied to an attacker or the attacker's activity, such as malicious IP addresses, domain names, file hashes, and attack tooling (Paine et al., 2023). Verma et al. (2015) emphasized the growing importance of security analytics for processing large quantities of security data and supporting threat identification activities. Integration of these capabilities within a PCAP analysis dashboard allows students to observe how AI systems evaluate network activity while maintaining responsibility for validating conclusions through direct examination of packet-level evidence.

Development of verification habits becomes increasingly important as artificial intelligence assumes a larger role within cybersecurity operations. Security analysts routinely evaluate alerts, investigate anomalies, assess indicators of compromise, and determine whether remediation efforts are necessary (Alahmadi et al., 2022). Educational environments that require validation of AI-generated findings reinforce analytical reasoning and reduce reliance on automated recommendations that have not been examined. Each confirmation or refutation of an AI finding builds the verification discipline required for alert triage and remediation decisions that carry organizational consequences. Graduates who develop these competencies will be better prepared to lead cybersecurity initiatives in environments where artificial intelligence increasingly influences operational decisions and where independent judgment remains essential for effective cybersecurity practice.

Artificial Intelligence Integration Within Cybersecurity

Artificial intelligence has become increasingly integrated into cybersecurity operations as organizations seek mechanisms to process growing amounts of security data and respond to threats more efficiently. Advances in machine learning, natural language processing, predictive analytics, and behavioral analysis have expanded the role of AI within security operations centers (SOCs). According to Ansari et al. (2022), AI applications in cybersecurity now include machine learning, data mining, natural language processing, simulation modeling, social network analysis, and virtual assistant technologies. Expanding use of these technologies has allowed organizations to automate selected security functions while improving the ability to detect and respond to emerging threats. At the same time, increasing dependence on AI systems has created concerns regarding accuracy, transparency, and reliability of machine-generated recommendations. Arp et al. (2022) reinforced those concerns after identifying design and evaluation pitfalls that produced misleading results across 30 machine-learning security studies published at top-tier venues.

The rapid evolution of AI capabilities has accelerated organizational interest in deploying automated cybersecurity solutions. Market projections summarized by Malone (2025) indicate that the artificial intelligence cybersecurity market is expected to continue substantial growth as organizations adopt AI-assisted approaches for security monitoring, threat detection, and vulnerability management. Growth in AI adoption reflects the increasing volume of data generated by modern networks and the difficulty of performing manual analysis at scale. Automated systems can process large quantities of security information more rapidly than human analysts. Professional oversight nevertheless remains necessary to validate findings and support decision making.

Artificial Intelligence and Automated Intrusion Detection

One of the most significant applications of artificial intelligence within cybersecurity involves automated intrusion detection and threat identification. Security analysts routinely monitor network traffic, investigate alerts, and identify indicators of compromise across large and complex network environments. Manual review of packet data and security logs can be time-intensive, particularly when analyzing high-volume enterprise networks. AI-assisted systems provide opportunities to automate portions of manual review by identifying patterns, anomalies, and suspicious behaviors that warrant further investigation. Marcus (2025) identified automated threat detection, behavioral analysis, and decision support as significant opportunities for information security teams adopting AI technologies within operational environments.

Behavioral analytics and anomaly detection represent important components of modern intrusion detection systems. AI-driven algorithms can establish baseline activity patterns and identify deviations that may indicate malicious behavior, unauthorized access, or security incidents. The AI-Enhanced Cyber Defense Framework (AICDF) proposed by Malone (2025) incorporates AI-assisted anomaly detection, predictive threat intelligence, automated response workflows, and continuous monitoring to strengthen organizational security posture. Integration of these capabilities

allows security teams to identify potential threats more rapidly while supporting proactive defensive measures. Despite these integration benefits, automated detection systems still require validation by skilled analysts who can determine whether identified anomalies represent legitimate security concerns or false positive findings (Malone, 2024).

AI-Assisted Threat Analysis and Network Forensics

Network forensics remains a critical component of cybersecurity investigations because network traffic provides objective evidence regarding communications, system interactions, and potential attack activity. Packet capture analysis allows investigators to reconstruct events, identify malicious activity, and evaluate network behavior at a granular level. Sikos (2020) also reviewed AI-powered packet analysis methods that add advanced traffic classification and pattern identification to traditional inspection. AI-powered classification highlights suspicious communications and potential indicators of compromise for analyst review rather than replacing the review itself.

AI-assisted network analysis has become increasingly important as organizations confront larger datasets and more sophisticated attack techniques. Verma et al. (2015) argued that security analytics has become an essential competency for cybersecurity professionals because modern threat environments generate more information than analysts can efficiently evaluate using traditional methods. Integration of machine learning and security analytics allows organizations to improve network visibility and threat identification while reducing investigative burden. Greater visibility does not remove the analyst's obligation to confirm automated findings against the traffic itself.

Offensive Artificial Intelligence and the Expanding Threat Landscape

Growing adoption of artificial intelligence within cybersecurity is accompanied by increasing use of AI by threat actors. Guembe et al. (2022) identified multiple applications of offensive AI technologies across the cyber kill chain, including reconnaissance, access operations, exploitation, malware development, command and control, and concealment activities. Expansion of offensive

AI capabilities has increased the complexity of defending organizational assets and contributed to demand for proactive, AI-assisted defensive solutions. Automated attack techniques can adapt more rapidly than traditional methods, creating significant challenges for security teams responsible for monitoring enterprise environments.

Emerging threats further reinforce the need for cybersecurity professionals capable of evaluating AI-generated intelligence critically. AI systems may identify indicators associated with malicious activity, but defensive decisions require contextual understanding, investigative analysis, and professional judgment. Reliance upon automation alone may create blind spots that reduce security effectiveness or result in inappropriate response activities. Developing professionals who can evaluate AI-generated findings against observable evidence therefore remains a critical objective within cybersecurity education and workforce development initiatives. Research examining AI integration within cybersecurity environments consistently emphasizes the importance of balancing automation with human oversight, analytical reasoning, and independent decision making (Elkhodr & Gide, 2025a, 2025b; Roshanaei & Jachura, 2025; Tian, 2025).

Educational Implications for AI-Augmented Intrusion Analysis

Preparation of future cybersecurity professionals requires educational experiences that reflect contemporary operational environments. Modern security operations increasingly utilize AI-assisted tools to support network monitoring, threat identification, vulnerability management, and incident response activities. Hands-on application and exposure to AI-enabled tools, identified as central to curriculum integration and workforce readiness (Roshanaei & Jachura, 2025; Tian, 2025), carry particular weight in intrusion analysis, where automated alerts drive investigative priorities. Exposure to AI-assisted cybersecurity tools allows students to experience the capabilities and limitations of automated technologies while developing professional judgment, analytical reasoning, and evidence-based decision-making skills required for modern cybersecurity practice.

AI-augmented PCAP analysis provides a practical mechanism for achieving these learning outcomes. Students analyzing network traffic through an AI-assisted dashboard can observe how machine learning algorithms identify potential threats, classify network activity, and highlight suspicious communications. Packet-level evidence simultaneously provides an objective basis for validating machine-generated findings and determining whether automated classifications are supported by observable network behavior.

Validation of AI-generated recommendations encourages students to move beyond passive acceptance of automation and engage in active investigation of the underlying evidence. Research examining AI integration within cybersecurity education suggests that effective learning environments combine technological innovation with analytical reasoning, independent judgment, and practical problem solving (Roshanaei & Jachura, 2025; Tian, 2025). Graduates who develop these habits of investigation and verification will be better prepared to evaluate AI-generated intelligence, support cybersecurity operations, and make informed decisions within increasingly automated security environments.

Biblical Integration and Ethical Leadership

The instruction in 1 Thessalonians 5:21 to "test them all; hold on to what is good" naturally aligns with the principles underlying cybersecurity investigations and the responsible integration of artificial intelligence. Cybersecurity analysts are expected to test indicators, validate evidence, and verify conclusions before making informed decisions, reflecting the same need for critical evaluation emphasized in emerging AI-focused cybersecurity education research. As organizations increasingly incorporate AI into security operations, professionals must evaluate AI-generated recommendations rather than accept automated outputs without examination. Elkhodr and Gide (2025a, 2025b) and Tian (2025) reached a similar position, emphasizing the importance of integrating AI into cybersecurity education while maintaining critical thinking, responsible use, and human oversight.

Similarly, Sikos (2020) highlights the importance of systematic analysis and evidence validation within network forensics, reinforcing the need for cybersecurity professionals to apply analytical rigor when interpreting complex information. These same expectations apply to cybersecurity leaders, who must critically evaluate information before recommending corrective actions. Discernment requires careful examination of available evidence, accountability requires ownership of decisions and outcomes, and professional judgment determines whether analytical findings warrant an organizational response.

Proverbs reinforces the principle of careful examination before action. Proverbs 14:15 states, "The simple believe anything, but the prudent give thought to their steps." Analysts who forward an AI alert without examination reflect the first posture, while analysts who trace the alert to the packets that produced it reflect the second. Proverbs 18:17 adds, "In a lawsuit the first to speak seems right, until someone comes forward and cross-examines." Within an investigation, the AI classification speaks first, and packet-level validation supplies the cross-examination that confirms or overturns the classification. Christian scholarship on artificial intelligence reaches a compatible position. Schuurman (2019) argued that a faithful response to AI begins with a clear understanding of what humans and machines are before deciding how AI should be used, and Jones (2025) framed cybersecurity within a theological and philosophical account of spiritual discernment. Scripture and scholarship together establish examination as a precondition for trusting machine-generated output.

Discernment, Accountability, and Christian Leadership

Technical competence alone does not adequately prepare cybersecurity professionals for leadership responsibilities within complex organizational environments. Cybersecurity leaders routinely make decisions affecting privacy, regulatory compliance, risk management, and the protection of sensitive information. Jones (2025) argued that cybersecurity effectiveness requires ethical reasoning and informed judgment in addition to technical expertise. Similarly, Roshanaei and

Jachura (2025) emphasized that workforce readiness requires graduates who can navigate emerging technologies while maintaining accountability for operational decisions. Ethical considerations become increasingly important as artificial intelligence assumes a larger role in cybersecurity operations.

Development of ethical decision-making capabilities requires professionals to evaluate information critically rather than relying solely upon automated recommendations. Elkhodr and Gide (2025a, 2025b) reported that AI-assisted learning environments can improve analytical engagement and problem-solving capabilities while also creating concerns related to overreliance on machine-generated content. Likewise, Tian (2025) found that effective AI integration within cybersecurity education requires instructional approaches that promote critical thinking and active engagement rather than passive acceptance of automated outputs. Educational experiences that require students to validate AI-generated conclusions against observable evidence help reinforce investigative discipline while reducing the likelihood that unverified recommendations drive decisions.

The instruction found in 1 Thessalonians 5:21 provides a useful framework for understanding evidence validation within cybersecurity practice. The command to "test them all; hold on to what is good" reflects principles already embedded within network forensics, threat analysis, and incident response activities. Packet analysis embodies that command, because captured traffic enables investigators to reconstruct events and validate findings through observable evidence (Sikos, 2020). Roshanaei and Jachura (2025) similarly emphasized the importance of analytical reasoning and validation within cybersecurity education. Application of these principles within AI-assisted environments reinforces the value of examination, verification, and evidence-based decision making, all of which remain essential characteristics of effective cybersecurity practice.

Classroom Integration Model

Constructive alignment offers a practical structure for translating evidence validation into course design. Biggs (1996) held that intended learning outcomes, teaching and learning activities, and assessment tasks should align so that students construct understanding by performing the activities the outcomes describe. Applied to AI-augmented network forensics, alignment requires every assessment to measure whether students tested an AI finding against packet evidence rather than whether they repeated the dashboard's verdict. Table 1 organizes the proposed model into four phases that move from protocol fundamentals to defended decisions.

The first phase withholds AI assistance so that students learn how normal services, such as SMTP on port 25, appear in captured traffic and establish the baseline against which later anomalies are judged. The second phase introduces the AI-augmented dashboard, where students process simulated attack captures and record the classifications, flagged indicators of compromise, and confidence levels the system reports. During the third phase, students confirm or refute each AI finding with a packet analyzer such as Wireshark and document false positives and false negatives in a validation log, applying the cross-examination principle drawn from Proverbs 18:17. The final phase places students in an incident simulation where teams recommend a response and defend the recommendation orally on technical and ethical grounds, scored with a rubric that weighs evidence, accountability, and the consequences of acting on an incorrect finding. Learners who complete the sequence should leave with a repeatable verification habit rather than familiarity with a single tool.

Table 1

Classroom Integration Model for AI-Augmented PCAP Analysis

Phase	Learning outcome	Teaching and learning activities	Assessment
1. Protocol foundations	Identify normal service behavior, such as SMTP on port 25, in PCAP data	Packet analysis labs on benign traffic without AI assistance	Practical lab annotating protocols, ports, and services in a capture
2. AI-assisted triage	Explain how the dashboard classifies traffic and flags indicators of compromise	Processing simulated attack captures through the AI-augmented dashboard	Written summary of AI findings and reported confidence levels
3. Validation	Confirm or refute each AI finding against packet-level evidence	Cross-examination of every AI finding in a packet analyzer (Proverbs 18:17)	Validation log scored on correct confirmations, refutations, false positives, and false negatives

Phase	Learning outcome	Teaching and learning activities	Assessment
4. Decision and defense	Recommend and justify a response on technical and ethical grounds	Incident simulation and team decision brief	Incident report and oral defense scored with an analytic rubric

Note. Alignment of outcomes, activities, and assessments follows Biggs (1996).

Discussion

Literature consistently demonstrates that artificial intelligence is transforming cybersecurity education by automating routine tasks, enhancing threat analysis, and helping institutions address the growing demand for cybersecurity professionals (Elkhodr & Gide, 2025a, 2025b; Roshanaei & Jachura, 2025; Tian, 2025). At the same time, researchers caution that AI-generated outputs are not infallible and that excessive dependence on automation can weaken critical thinking, ethical reasoning, and independent problem-solving skills that are essential in cybersecurity practice. Collectively, these findings suggest that the greatest educational benefit is achieved when AI is used to support rather than replace human expertise. Therefore, artificial intelligence should augment rather than replace human judgment in cybersecurity education because effective cybersecurity professionals must develop critical thinking, ethical decision-making, and accountability alongside technical proficiency. While AI enhances efficiency by automating routine tasks, overreliance on automated systems can diminish analytical rigor and reduce practitioners' ability to identify novel threats, evaluate complex security scenarios, and make informed decisions when AI outputs are inaccurate or incomplete. Consequently, cybersecurity curricula should integrate AI as a decision-support tool while emphasizing human oversight, independent analysis, and ethical responsibility to prepare graduates for the evolving cybersecurity workforce.

The integration of artificial intelligence into cybersecurity education requires a thoughtful approach that recognizes its transformative potential alongside its limitations. As emerging technologies continue to influence security practices, educators and practitioners must cultivate the ability to evaluate AI-generated information critically rather than accept automated recommendations without examination. The classroom integration model in Table 1 translates critical evaluation of AI-generated information into outcomes, activities, and assessments an instructor can adopt without redesigning an entire program. By fostering a culture that values technological innovation and human judgment together, cybersecurity programs can prepare professionals who are capable of leveraging AI effectively while maintaining the analytical discipline and ethical responsibility necessary to protect increasingly complex digital environments.

Conclusion

Artificial intelligence continues to influence nearly every aspect of cybersecurity operations, including threat detection, incident response, vulnerability management, and network analysis. Organizations increasingly depend on AI-assisted technologies to process large volumes of information and identify threats at speeds that exceed traditional analytical approaches. Despite these advantages, technological capability does not eliminate the need for professional judgment. Cybersecurity professionals remain responsible for evaluating evidence, validating findings, and making decisions that may affect organizational operations, regulatory compliance, and the protection of sensitive information. AI-augmented PCAP analysis provides a practical environment where students develop technical competencies, critical thinking skills, and ethical decision-making capabilities essential for cybersecurity leadership. Analysis of packet-level data requires students to examine evidence, evaluate competing explanations, and support investigative conclusions through observable network behavior.

The integration of AI-assisted tools within the investigative process exposes students to technologies increasingly used throughout modern cybersecurity operations while reinforcing the importance of independent analysis and professional judgment. Validation of machine-generated findings against objective evidence reflects the principle articulated in 1 Thessalonians 5:21, where believers are instructed to "test them all" before accepting a conclusion. Application of that principle within cybersecurity education encourages discernment, accountability, and evidence-based decision making that extends beyond the classroom into professional practice. Graduates who develop these habits of analysis and validation will be better prepared to lead cybersecurity initiatives in environments where artificial intelligence increasingly influences operational decisions and where faith-based perspectives are less commonly represented in professional decision-making.

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Shepherding the Digital Classroom: The Leadership Role of Christian Educators in Preparing Students for GenAI Literacy

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Abstract

This systematic literature review examines current and future leadership roles for educators as Generative Artificial Intelligence (GenAI) is adopted in small Christian universities, with an emphasis on the business education curriculum. It reviews the authentic leadership model, which integrates servant, transformational, and ethical leadership principles that business educators should embrace in higher education today. The research shows how educators can blend leadership styles to leverage GenAI to improve student learning and success while upholding Christian values. Faculty development programs should prepare educators to design curricula that integrate GenAI, prioritizing the cultivation of agency over convenience. Although authentic leadership—defined by the four behavioral dimensions of self-awareness, transparency, balanced decision-making, and strong moral principles—is well established in secular settings, its application within faith-based institutions is less studied. These insights provide practical guidance for educators and administrators on ethically integrating GenAI tools with purpose and biblical principles in the AI classroom. A systematic thematic matrix was developed to synthesize the findings into six major themes. These findings support peer-reviewed research on how business educators can align curricula with their institution's mission and teaching guidelines.

Keywords: generative AI, business education, ethical leadership, authentic leadership, servant leadership, transformational leadership

Shepherding the Digital Classroom: The Leadership Role of Christian Educators in Preparing Students for GenAI Literacy

The rapid development and increased access to Generative Artificial Intelligence (GenAI) and adaptive learning platforms are ushering in a transformative era across many industries, including higher education (Bobula, 2024). This nascent technology, capable of generating new content such as text, images, and computer code, presents unprecedented opportunities and complex challenges for academia (Wen et al., 2024). In business education, which primarily focuses on adapting to technological advancements, the impact of GenAI is significant. Christian higher education, with its unique mission of combining rigorous academics with the nurturing of faith and a commitment to core Christian values, plays a distinctive role as it navigates this technological change. The recent rise of GenAI tools, such as ChatGPT and DALL-E, marks a significant advance in AI's capabilities and potential within higher education curricula (Schuurman, 2023). As collegiate educators, we strive to adopt new learning technology platforms while upholding moral integrity in our academic and personal lives. Therefore, we must ask ourselves: Does the use of GenAI support our Christian theistic mission to provide our students with the knowledge and skills to succeed in today's business world?

The profound impact of GenAI on higher education warrants careful assessment to ensure its use is both beneficial and ethical for all students (Huo & Siau, 2024). The integration of GenAI into business education signals a pedagogical shift that aligns with several post-humanist principles (Nath & Manna, 2025). Educators in Christian institutions, while recognizing the potential benefits of this technological change, must also thoughtfully consider the ethical and societal effects to ensure responsible use of GenAI in the globalized business era, guided by enduring Christian values. As Felch (2026) suggests, despite the benefits these tools can offer humanity, what are the risks, and how can we identify and reduce them? The literature highlights academic integrity and plagiarism as

crucial issues when using GenAI in educational settings. Are there shared moral principles or behaviors that society and businesses can agree upon to help guide us, as educators, in navigating the current landscape of GenAI?

How can Christian educators ethically and thoughtfully integrate GenAI into their teaching practice and curriculum? First, they must foster students' critical thinking, nurture genuine creativity rooted in human intellect and spirit, and uphold ethical integrity grounded in biblical principles (Mun & Shields, 2025). This paper begins by defining GenAI and examining its effects on students' academic performance. Through a systematic literature review, the research emphasizes the importance of Christian educators adopting a value-based leadership style, specifically Authentic Leadership, to navigate ongoing AI-driven changes in academia. The study also underscores the importance of business educators embodying authentic leadership in the classroom, guiding students to understand their moral responsibilities in using GenAI. The conclusion offers suggestions from peer-reviewed sources on adopting a blended leadership approach to address these institutional challenges. A central challenge and pedagogical shift in this evolving landscape is balancing GenAI's impressive capabilities with the traditional focus on human creativity and authorship (Reicho et al., 2025). Furthermore, as GenAI tools become more adept at emulating and enhancing human creative work, significant questions arise for Christian institutions committed to the holistic moral development of their students. As a result, the researchers propose the following research questions for their study:

RQ1: How does the use of GenAI support the Christian theistic mission to provide students with the knowledge and skills to succeed in today's business environment?

RQ2: What leadership behavior should Christian educators employ in their classrooms to ensure the effective implementation of AI platforms, such as GenAI?

RQ3: How can the Authentic Leadership model be adopted as the most practical method for business educators?

In summary, this research paper explores how GenAI affects the academic outcomes of Christian business students. It addresses ethical challenges associated with using GenAI in academic settings, particularly those related to Christian values. The research further examines how an educator's classroom leadership behavior influences the integration of technologies such as GenAI and underscores the importance of integrity in their use. Through the literature review, the paper highlights the vital role of Christian higher education in preparing students to address the practical and ethical challenges posed by emerging learning models such as GenAI.

Literature Review

Understanding Generative Artificial Intelligence (GenAI)

According to Feuerrigel et al. (2024), Generative AI is a significant subgroup of artificial intelligence that uses machine learning models trained on extensive datasets to produce new and original content. Gen AI has emerged as a relevant technological advancement capable of creating content, including text, audio, and video, thereby transforming various sectors, particularly in the field of higher education (Bobula, 2024). This nascent technology, demonstrated by tools such as ChatGPT and DALL-E, is pivotal in reshaping traditional higher education methodologies by introducing new avenues for creativity, collaboration, interpersonal skills, and personalized learning experiences among Christian universities (Manicone, 2025). Furthermore, interpersonal skills in a professional employment setting emphasize supportive and effective communication, gaining power, and transforming that power into positive influence. These interpersonal skills are seen as cultivating a motivating work environment that enhances competitive performance outcomes (Huo & Siau, 2024).

In business education, GenAI presents both opportunities and challenges. For example, educators need to prepare students to critically evaluate and integrate GenAI outputs, as overreliance on these tools could impede the development of essential analytical and decision-making skills vital in business contexts (Huo & Siau, 2024). Integrating GenAI into the curriculum enables educators to enhance teaching, research, and student engagement. According to Sun et al. (2026), GenAI can improve learning practices by enabling personalized education and intelligent teaching strategies. It also fosters collaborative environments, allowing both students and educators to benefit from innovative assessment structures and dynamic content generation. However, adopting GenAI raises ethical and pedagogical concerns. The rapid evolution of AI technologies necessitates a critical reassessment of how educational values align with AI literacy and the biblical teachings promised by Christian universities (Manicone, 2024).

The Impact of GenAI in Small Christian Universities

The adoption of GenAI tools, particularly ChatGPT, has risen rapidly among college students across the United States. Reports indicate that over one-third of college-aged young adults now use ChatGPT, with a significant share of interactions focused on learning and schoolwork (Yu & Guo, 2023). Students report using ChatGPT to start papers and projects, summarize lengthy texts, brainstorm creative ideas, and explore new topics. Recognizing the growing importance of GenAI in the professional world, business schools across the U.S. are increasingly incorporating it into their curriculum (Schuurman, 2023). Research suggests that a significant majority of business schools now include GenAI in their curriculum or learning experiences (Yu & Guo, 2023). The primary focus areas for this integration are GenAI and ethics, GenAI in decision-making processes, and practical applications of GenAI in various business contexts (Reicho et al., 2026). Furthermore, while enthusiasm for GenAI in business education is evident, approaches to integration and the

development of formal GenAI policies for both curriculum and admissions processes still vary considerably (Hua & Siau, 2024).

By integrating faith and learning throughout the curriculum, Christian institutions offer a well-rounded education that pairs rigorous technical training with a deep grasp of ethical and theological principles. This approach underscores the importance of cultivating wisdom, discernment, and character alongside technical expertise, recognizing that true preparation for the future extends beyond technical skills (Manicone, 2024). Christian educators can serve as role models and authentic leaders by thoughtfully integrating faith and learning into technology, demonstrating how to approach GenAI with both intellectual seriousness and spiritual mindfulness. Christian universities aspire to encourage students to view their careers in business and technology as a calling—an opportunity to use their God-given talents and knowledge to serve others, advance the common good, and positively impact an increasingly AI-centered world, while upholding high Christian standards (Gaudet et al., 2022). "And do not be conformed to this world, but be transformed by the renewing of your mind, that you may prove what is that good and acceptable and perfect will of God" (New King James Version, 1982/2016, Romans 12:2).

Upholding Christian Integrity and Ethics in the Age of GenAI

In the context of GenAI and its role in Christian college business programs, upholding Christian integrity is a fundamental aspect of ethical behavior (Carter, 2025). This means intentionally applying biblical principles to technology use and remaining committed to ethical standards. Stewardship is a core principle that reminds us to view technology, including GenAI, as a divine gift meant for responsible use to honor God and serve the common good (Sangwa & Mutabazi, 2025). It calls us to carefully consider how our technology use affects ourselves, others, and the environment. Wisdom is essential, guiding us to seek God's guidance in ethically and appropriately using these powerful tools while recognizing their potential benefits and limitations.

Furthermore, discernment is crucial for Christians engaging with the digital world, helping us distinguish what is good from what might divert us or others from righteousness.

Promoting honesty, responsibility, transparency, and ethical AI use in Christian universities requires several steps (Bittle & El-Gayar, 2025). These institutions should develop clear policies that define acceptable and unacceptable ways students may use GenAI in academic work, including plagiarism, unauthorized collaboration, and passing off GenAI-generated content as their own (Carter, 2025). It is also important to educate students about the ethical considerations of GenAI—such as bias, data privacy, and aligning its use with Christian values like fairness, justice, and human dignity (Mun & Shields, 2025). Additionally, promoting transparency, such as requiring students to disclose their use of GenAI, can help build a culture of integrity (Smith et al., 2026).

The aim is to create an environment that values originality, encourages active engagement with coursework, and nurtures critical thinking, ensuring that GenAI enhances rather than hampers learning. Incorporating student feedback ensures that institutional boundaries are practical and impactful, transforming abstract guidelines into collaborative classroom tools. While it's important to develop guidelines grounded in Christian principles, understanding students' current experiences and perceptions of GenAI is crucial for effective application and positive outcomes (Mun & Shield, 2025). As Proverbs 11:3 states, "The integrity of the upright guides them, but the crookedness of the treacherous destroys them."

Leadership Role for Educators Using GenAI in the Classroom

Integrating GenAI into higher education requires a proactive shift in the pedagogical paradigm (Bobula, 2024). This study examines the authentic leadership role of Christian educators who deploy GenAI in the classroom through three primary lenses: servant, transformational, and ethical leadership (see Figure 1). The rise of generative tools has shifted the role of the contemporary educator from a traditional information distributor to an active academic leader.

Classrooms are no longer isolated from automated text, code, and media generation (Schmidt et al., 2025). Consequently, educators must exercise intentional leadership to ensure these technologies serve as cognitive scaffolds rather than shortcuts that undermine deep learning (Elrehail et al., 2021). This paper situates this educational evolution within established leadership theories, demonstrating how educators can lead by example, meet student needs, and transform Christian institutional pedagogical standards (Carter, 2025).

Figure 1

Tri-Phasic Authentic Leadership Matrix



Transformational Leadership: Redesigning Pedagogical Paradigms

Transformational leadership in education inspires students to transcend traditional boundaries and adopt innovative approaches. When incorporating GenAI tools into the classroom, transformational educators challenge conventional assessment methods and emphasize critical thinking. Perspicacious leaders can shift from grading solely final products, such as final reports, to recognizing progress throughout the learning process. This promotes intellectual engagement and ensures that GenAI enhances analysis and reasoning rather than replacing them (Schmidt et al., 2025). Higher education faculty remain committed to their institution's mission and policies. Alshamsi (2025) emphasizes the importance of setting a vision and personalizing the student learning experience. Transformational leaders view GenAI disruption not as a threat to academic stability but as an opportunity to modernize higher education. They foster collaboration, build resilience to technological change, and prepare students to act ethically in their chosen professions

(Pushpanadham et al., 2025). Furthermore, transformational leadership is used to redesign assessments and encourage students to engage in more complex, higher-level problem-solving and creativity.

Servant Leadership: Student-Centric AI Integration

Servant leadership in GenAI emphasizes holistic student growth and future AI literacy. Educators using this approach aim to equip students with essential skills for an AI-driven workforce. Carter (2025) suggests that this strategy prioritizes academic support over fostering institutional mistrust, thereby boosting college students' emotional engagement and creative problem-solving in structured learning environments. By incorporating inclusive assignments that promote AI literacy alongside traditional course content, educators support students' long-term professional and intellectual development (Xiao & Huang, 2023). When servant leadership aligns with biblical virtues, educators can move beyond traditional classroom facades, foster genuine institutional dedication, and cultivate a shared moral and faith-based purpose. Servant leadership is used to reduce student anxiety and provide cognitive scaffolding.

Ethical Leadership: Modeling Integrity and Transparency

When dealing with disruptive technologies, such as ChatGPT, that complicate authorship, copyright, data privacy, and the concept of originality, ethical leadership must be foundational. Christian educators must serve as a visible moral compass, establishing clear norms for reasonable AI use in the classroom (Mun & Shields, 2025). Ethical leaders must articulate clear, granular classroom policies that define precise thresholds for acceptable AI use and leave no room for ambiguity. Bittle and El-Gayar (2025) recommend specifying AI usage boundaries, such as distinguishing between using GenAI for an initial brainstorming task and copying and pasting text as original work, to maintain academic integrity.

Educators must teach students about the ethical implications of uploading intellectual property or sensitive personal information to public or proprietary databases. Smith et al. (2026) argue that by establishing strict institutional disclosure norms and openly discussing algorithmic bias, ethical leaders protect student data privacy and foster responsible digital citizenship. Furthermore, aligning these frameworks with broader institutional values helps ensure that technology respects fundamental human dignity (Zhao & Ren, 2025). Ethical leadership secures academic integrity and transparency and protects user data privacy.

Dimensions of Authentic Leadership

Figure 2 illustrates the four core dimensions of authentic leadership. According to Elrehail et al. (2018), authentic leadership in higher education institutions is a pivotal driver of academic creativity and knowledge sharing, demonstrating that value-driven communication can foster greater trust between educators and students. Christian higher education involves more than teaching academic theories and facts; it aims to holistically integrate faith, character development, and intellectual excellence (Felch, 2026). For illustrative purposes, the traditional classroom can be viewed as a small entity, with professors as leaders and students as followers. Authentic leadership is built on the core principles of self-awareness, relational transparency, balanced decision-making, and moral and ethical integrity (Hsu et al., 2024). "Better is a poor person who walks in his integrity than one who is crooked in speech and is a fool" (Proverbs 19:1). Furthermore, by connecting these academic principles with biblical virtues such as humility, servant leadership, and ethical leadership, educators can break down traditional classroom barriers, build faith-based communities grounded in shared moral values, and encourage deep institutional loyalty (Walumbwa et al., 2008).

Figure 2

Four Core Dimensions of Authentic Leadership



The primary aim of Christian higher education is to equip students to serve the common good with both spiritual maturity and professional excellence (Beech, 2026). Authentic leadership in the classroom promotes student well-being by easing the pressure to appear perfect. When educators engage in balanced processing, objectively assess student viewpoints, and foster open communication, they model Christ's collaborative and servant-hearted leadership, providing students with a viable behavioral example. Research by Xiao and Huang (2023) shows that authentic instructional leadership practices are associated with a healthier classroom atmosphere, reduced psychological burnout, and increased student well-being.

The rise of generative tools has transformed the role of modern college educators from simple information providers to discerning academic leaders. Higher education classrooms now integrate automated text, coding, and media creation, making it essential for educators to lead proactively (Wen et al., 2024). Educators must guide students so that these technologies serve as supportive tools for learning rather than shortcuts that hinder deep understanding (Sun et al., 2026). This paper situates this shift within traditional leadership theories, showing how educators can set an example and address student needs to lead changes in teaching practices successfully.

Methodology

The emergence of generative tools has transformed the role of today's educator from merely conveying textbook information to active academic leadership. Modern classrooms now use automated tools to generate text, code, and media (Schmidt et al., 2025). A targeted literature review in this study examines the Authentic Leadership model, which integrates the core principles of servant, transformational, and ethical leadership—principles that business educators should embrace in higher education today. This qualitative study analyzed 32 topic-specific articles, highlighting the importance of Christian educators adopting a value-based leadership approach, such as Authentic Leadership, to navigate the ongoing changes brought by AI in academia. The researchers used an open/axial and selective thematic approach to identify common themes in the literature review.

This study uses a qualitative systematic narrative review to examine the role of authentic leadership in Christian business education classrooms. Because it relies solely on secondary literature rather than primary empirical data, a structured, transparent, and thematic search protocol was implemented to minimize bias and ensure rigorous synthesis of findings. This research approach is particularly appropriate for this specific leadership topic, as it enables thorough conceptual integration of two distinct literatures: secular authentic leadership theory and Christian pedagogical frameworks.

Results

The researchers organized the qualitative data into final themes using a thematic matrix as part of their findings. The thematic matrix allows researchers to chart summarized data into specific cells while maintaining links to the source (Smith & Firth, 2011). The sample size was n=32, consisting of thirty-two literature review articles on artificial intelligence use in higher education settings and on authentic leadership behavior in academia. The thematic findings are shown in Table 1.

Table 1

Synthesized Thematic Matrix

Theme Title	% of Usage	Thematic subgroup phrases/words
AI-Literacy	97%	AI education, AI learning & training, digital learning, competency, privacy
Transformation	78%	Student creativity, Problem-Solving, change, innovation, critical thinking
Servant Leaders	50%	Servant, Stewardship, Trust, Selflessness, Well-being of others
Ethical	100%	Ethics, principles, morals, integrity, Ethical behaviors, Ethical leadership
Authentic Leadership	31%	Transformational, Ethical, Genuine, Transparency, Morals, Value-Based
Higher Education	91%	Higher Education, Christian educators, Faith-based learning

Role of Authentic Leadership in the Classroom

By synthesizing peer-reviewed literature, this study supports authentic leadership as the most effective approach for educators to implement GenAI in the classroom curriculum. It outlines how Christian educators can champion academic integrity, foster equitable learning environments, and inspire critical thinking while navigating the disruptive challenges posed by innovative AI tools.

RQ1: How does the use of GenAI support the Christian theistic mission to provide students with the knowledge and skills to succeed in today's business environment?

According to Pushpanadham et al. (2025), a key aspect of AI in education is for educators to understand its applications and help students become AI-literate. It is vital to provide students with a clear grasp of how to use AI effectively. They note that one objective is to prepare educators for AI-driven education while enabling AI to understand educational contexts better. Educators should view Gen AI as a collaborative partner in student learning (Rana, 2025). For instance, when students work on a final business project, they should use GenAI to help develop the paper's framework, not merely as a productivity aid to minimize student effort, but to gain more time for creative application to the project. Engaging with GenAI for brainstorming and critical thinking encourages teachers to guide students in developing, questioning, and validating their results, rather than accepting them at face value (Sun et al., 2026). Today, business leaders want graduates who are well-versed in using AI as a productivity tool, emphasizing AI literacy as a key requisite (Hennekeuser et al., 2025). Furthermore, Christian educators should act as moral and ethical role models, setting clear standards for responsible AI use in classrooms, which can later be applied in their business settings (Mun & Shields, 2025).

RQ2: What leadership behavior should Christian educators employ in their classrooms to ensure the effective implementation of AI platforms, such as GenAI?

The study recommends integrating servant, ethical, and transformational leadership skills into daily classroom practices. Combining these behavioral skills fosters authentic leadership and creates a learning environment in which educators can lead by example. Authentic Leadership holds that leaders and educators build their legitimacy on ethical foundations, respect, and honest relationships with their students (Elrehail et al., 2018). These research insights offer valuable guidance for higher education faculty seeking to sustain mission fidelity, foster trust among students, and navigate contemporary financial and ideological challenges without compromising core institutional values. This behavioral approach is uniquely suited to Authentic Leadership because it

enables the conceptual integration of two distinct bodies of literature: secular authentic leadership theory and Christian pedagogical frameworks (Walumbwa et al., 2008).

RQ3: How can the Authentic Leadership model be adopted as the most practical method for business educators?

Kia and Majesty (2025) argue that Christian educators must guide students to view AI-based data interpretations, such as data analytics, as tools aligned with ethical values rooted in a Christian worldview. They highlight an important observation about younger students: "Young people who grow up with AI technology may tend to rely more on machines for answers to their theological questions, instead of seeking guidance from pastors or church communities" (Kia & Majesty, 2025, p. 38). Christian educators, especially those in business studies, need to quickly adapt to AI's rapid development and leverage its business potential to improve teaching and learning outcomes. The research emphasizes the importance of Christian educators adopting value-based (Authentic) leadership to navigate ongoing AI-driven changes effectively.

Discussion

The Impact of GenAI on Future Business Leaders

The real-world AI experiences of business students in today's universities highlight the need for AI literacy in higher education, especially as tools like GenAI become more common in classrooms (Bergenholtz et al., 2026). This review shows how Christian business educators, guided by biblical principles and ethical development, address the challenges posed by these powerful tools. Does a Christian university environment provide a necessary space to critically evaluate GenAI, not only for its productivity benefits but also through the lens of biblical truths that stand the test of time? This question has become a concern for educators shaping their curriculum for the future job market. A Christian university offers an important setting to examine GenAI critically, weighing its

productivity gains against the values of enduring biblical principles, which can sometimes conflict with the governance ideas that endorse such technologies in the business world (Beech, 2026).

Christian universities should aim to integrate GenAI as a tool that fosters critical thinking and original creation. While research on GenAI's impact on academic performance is ongoing, maintaining a focus on GenAI literacy and responsible use is essential to prevent over-reliance and the erosion of critical skills. Navigating the philosophical terrain requires Christian educators to uphold Scripture's objective truth vigilantly and to recognize human beings' special identity as created in God's image. Ultimately, Christian universities can prepare students to engage with AI thoughtfully, grounded in biblical wisdom and discernment. Proverbs 3:5-6 advises us to "Trust in the Lord with all your heart, and do not rely on your own understanding. In all your ways acknowledge him, and he will direct your paths."

The Impact of Authentic Leadership Behavior in Higher Education

Higher education in Christian institutions faces unprecedented modern challenges, including fluctuating funding structures, accelerating digital transformations, and heightened demands for institutional accountability, to name a few. Navigating these complex shifts requires leadership that moves away from traditional top-down, directive styles toward frameworks built on trust, ethics, and emotional transparency. Within a university setting—where faculty autonomy and intellectual freedom are foundational—traditional directive or transactional leadership models often spark professional friction, cultural resistance, and alienation. Conversely, authentic leadership operates on the premise that leaders build genuine operational legitimacy through ethical foundations, collaborative respect, and completely honest, transparent professional relationships (Walumbwa et al., 2008).

Limitations

One limitation is that the authors drew on an average sample of thirty-two research sources. More empirical research is needed with larger samples, perhaps comparing secular data with faith-based institutions. Although authentic leadership—defined by self-awareness, transparency, balanced decision-making, and strong moral principles—is well established in secular settings, its application within faith-based institutions is less studied (Frederick et al., 2016; Walumbwa et al., 2008). Integrating artificial intelligence into Christian higher education requires more than administrative updates or software mandates. Without authentic leadership, a purely technical approach to AI integration could weaken the communal and transformational atmosphere that defines faith-based education. Faculty members need to intentionally model authentic behaviors, such as being honest about technical limitations, analyzing data objectively, and firmly adhering to an internalized biblical worldview (Beech, 2026).

Conclusion

This literature review highlights the vital role of Christian higher education, particularly in small colleges that cultivate close-knit communities, in preparing future business leaders with a biblical worldview to address the ethical and practical issues of GenAI. By grounding their understanding in Christian values, students are better equipped to use AI in ways that honor God, serve humanity, and foster a just and prosperous business environment. Proverbs 4:7 reminds us, "The beginning of wisdom is this: Get wisdom, and whatever you get, get insight." The study examines various facets of GenAI, including its definition, uses, ethical issues, and its impact on student learning in Christian higher education. It emphasizes that GenAI represents a major milestone for Christian educators, presenting significant opportunities alongside challenges.

Research indicates that while GenAI can enhance personalization, efficiency, and creativity in business education, it also underscores the need for educators to take a leadership role in

curriculum development. The study advocates integrating servant, ethical, and transformational leadership into everyday classroom practices because these behaviors foster genuine leadership by example. Christian universities are at a pivotal point to adopt technological innovations while remaining true to their mission of combining faith, learning, and ethics.

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Who Wrote This Review? When AI Sounds More Human Than Humans

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Abstract

As artificial intelligence (AI) becomes increasingly capable of generating communication indistinguishable from human writing, questions emerge about consumers' ability to distinguish AI-authored content from human-authored communication and whether perceived authorship influences credibility. This exploratory study examines consumer perceptions of AI-generated versus human-authored online travel reviews, focusing on review evaluations (specifically credibility, usefulness, and behavioral intention) and authorship attribution accuracy. Using a mixed-methods approach, respondents evaluated two travel reviews (one authored by a human and one by AI) and rated each on the aforementioned evaluation variables prior to attributing authorship. Results uncovered that while the human-authored review was rated more useful ($p = .030$) and had a greater impact on behavioral intention ($p = .007$), respondents struggled to accurately attribute authorship. Notably, the AI-generated review was perceived as significantly more human ($M = 76.86$) than the actual human review ($M = 63.69$, $p = .047$) and only 11.1% correctly identified the AI author. Thematic analysis revealed that consumers rely on narrative cues such as personal details, emotional tone, and balanced critique but these do not reliably lead to accurately assigning authorship. These findings have implications for consumer trust, AI disclosure practices, and ethical communication practices in an era where AI-generated content is becoming indistinguishable from human writing. For Christian business leaders navigating AI innovation, this study also reveals that consumers' perceptions of what "sounds" like AI or "sounds human" are unreliable, showing a need for AI transparency rather than reliance on consumers' ability to detect it.

Keywords: artificial intelligence, online reviews, authorship attribution, credibility, narrative cues

Written Communication Perceptions

> "Dear Professor,
>
> I am emailing you because of a concern I have with the paper my team turned in Sunday night. While scanning the document, I noticed a team member had edited the whole essay. They said they 'humanized' the essay because they were concerned that we would get accused of using AI since we used professional language. In my opinion, this hurts our essay. It removed much of the professionalism and specifics in our essay, 'dumbing it down' for lack of a better phrase."

While this student submitted email to a professor is just one example, it reflects a broader question emerging across industries regarding the role of AI in written communication. The novelty of AI use within everyday communication has shifted from what it *can* do to *how* it should be used (Bednarski, 2025; Longoni et al., 2025). Business professionals, leaders, and educators are now questioning when AI use is appropriate, whether human writers are feeling pressured to sound "less AI," and how organizations can balance this innovative technology with authenticity and ethical responsibility.

Consumers rely heavily on online reviews when making decisions, evaluating them based on credibility, usefulness, and authenticity (Filieri, 2016; Ma et al., 2026). As AI-generated content becomes more difficult to distinguish from human writings (Crothers et al., 2023), the question is no longer whether AI can write like a human, but how consumers perceive authorship and whether that perceived authorship influences their evaluations.

While communication credibility has been studied extensively (e.g. Metzger et al., 2003; Sundar, 1998), little research has examined how consumers determine the author of online reviews.

This exploratory study investigates attribution authorship accuracy within travel reviews and the use narrative cues used within that process.

Literature Review

Consumer Behavior, the Travel Industry, and Electronic Word of Mouth (eWOM)

The consumer decision-making process is heavily influenced by information-seeking behavior, with over 80% of consumers consulting online reviews before making a purchase decision (Turner & Rainee, 2020). This reliance is especially noticed within the travel and tourism industry where 95% of travelers have confirmed they read reviews prior to making booking decisions (Adams, 2025). Travel as a product is classified as an experiential consumption product (Nelson, 1970) due to its intangibility (Racherla et al., 2013), service orientation (Babin & Harris, 2022), and high involvement in the decision making process (Racherla, 2011). Additionally, as Van Laer et al. (2019) explain, "experiential consumption always implies the essential elements for stories" (p. 38) and travel reviews are positioned as being narrative-driven forms of electronic word of mouth (eWOM).

Travel review platforms such TripAdvisor, which received over 31 million reviews in 2024 alone (TripAdvisor, 2025), are perceived as more trustworthy than other eWOM sources (Burgess et al., 2011). Research has identified multiple review attributes that influence purchase behavior such as writing style, word count, message sender identity, usefulness, authenticity, trustworthiness, credibility, and overall review patterns (Amos & Zhang, 2024; Drozd & Solin, 2026; Filieri, 2016; Henestrosa & Kimmerle, 2024; Racherla, 2011). AI-generated reviews raise questions about authorship attribution, credibility, and behavioral intention, especially in an area where narrative authenticity has traditionally been key to developing consumer trust (Hamby et al., 2026).

While word of mouth (WOM) traditionally focused on human-to-human communication (Arndt, 1967), the emergence of the digital age expanded WOM communication to online

environments through eWOM (Henning-Thurau et al., 2004) which includes online reviews (Kozinets et al., 2010). In more recent years, the concept of eWOM has expanded to include the influence of AI and its potential impact on communication with the emergence of Word of Machine (Longoni & Cian, 2022). AI's influence on eWOM is still in its infancy, and researchers are continuing to explore its influence on consumers (Ma et al., 2026) while refining definitions. A summary of AI eWOM related definitions is included in Table 1. This study attempts to focus on artificial intelligence that would most closely align with Cheng et al. (2025) where the written communication provided is created by AI and may have "varying degrees" (p. 2) of human integration

Table 1

Summary of AI Influence on eWOM

Title	**Definition**	**Researcher**
Artificial intelligence generated content (AIGC)	"aggregates authentic consumer feedback and generates reviews that closely resemble human-authored content in format, tone, and emotional expression" (p.1)	Ma et al., 2026
Artificial intelligence generated content (AIGC)	"content created by AI, with varying degrees of human intervention or guidance." (p. 2)	Cheng et al., 2025
Algorithmic word of mouth (aWOM)	"powered by algorithms that analyse vast amount of data to provide personalized recommendations" (p. 490); "AI-driven recommendations" (p. 490)	Sâsâeac et al., 2025
aiWOM	"real-time oral conversations between a consumer and a technology equipped with AI and oral communication	Tassiello et al., 2025

	gadgets that can perform tasks on consumers' behalf, have an oral exchange, and influence consumers; decision-making process and emotions" (p. 4249)	
Generative Artificial Intelligence (GAI)	"advanced type of AI that not only analyses structured data but also leverages existing data to create new content" (p.1); "generate fluent text that aligns with the context of product reviews" (p. 1)	Cheng et al., 2025
Interactive AI WOM	"…continuous interaction between consumers and AI virtual assistant, enabling the exchange of product information and acquisition of personalized WOM suggestions to help consumers choose suitable products or services." (p. 4)	Ma et al.,2026
Unidirectional AI WOM	"it aggregates all authentic evaluations from consumers on the platform where the product is listed, distilling the core content of consumer feedback;" it summarizes "genuine consumer feedback through AI algorithms" (p. 3)	Ma et al., 2026
Word of machine	"phenomenon by which hedonic/utilitarian attribute trade-offs determine preference for, or resistance to, AI-based recommendations compared with traditional word of mouth, or human-based recommendations" (p. 2)	Longoni & Cian, 2022

Narrative Communication

At its core, narrative communication is the telling of a story (Hamby et al., 2026) and is present across all industries and familiar to communicators (Boje, 2014). Raffloer and Green (2025) identify narratives as "one of the most time-honored means of human creativity and communication" (p. 100168). Storytelling and narratives are often identified synonymously and used interchangeably to describe an event (Boje, 2014). Overtime, storytelling has also been influenced by technologies and the infiltration of those technologies within culture (Weedon, 2018). Bruner (1986) describes narrative language as the way humans naturally communicate. Narratives often have persuasive tones, especially when presented as reviews (Hamby et al., 2026) and can appear within advertisements and in WOM messages (Racherla, 2011; Van Lear et al., 2019). Because of their influence and impact on the consumer decision-making process, narrative reviews are especially appealing for both marketers and consumers (Hamby et al., 2026).

Within narrative communication, authenticity, credibility, and reliability emerge as important concepts (Jia et al., 2025). Real-life experiences presented as narratives allow readers to perceive the story as authentic (Marsh & Fazio, 2006). Metzger et al. (2003) identified several cues used to determine credibility of online messages which included message structure, content, opinioned language, presentation, and delivery speed. Recent research also suggests that consumers use narrative elements, emotional expression, and stylistic variation as signals of human authorship (Hamby et al., 2026; Rusell et al., 226; Van Laer et al., 2019), yet the accuracy of these attributions remains underexplored as AI technologies continue to imitate human writing patterns.

With the advancement of AI technologies, aiWOM can now provide AI-generated summative reviews that "closely resemble human-authored content in format, tone, and emotional expression" (Ma et al., 2026; p 1), paralleling narrative undertones. This echoing of human sentiment

through generated AI communication leads to question how such written communication is perceived by others.

Evaluating Online Communication

Credibility

Online reviews represent a form of digital mediated communication in which message credibility and source credibility shape consumer perceptions (Metzger & Flanagin, 2013). Defined, credibility is "the belief that the other party in a transaction is reliable and honest" (Ba & Pavlou, 2002 as cited in Hajli et al., 2014, p. 4) and can be attributed to both the source author and the message content. Source credibility, rooted in perceptions of expertise and trustworthiness (Hovland et al., 1953; Metzger et al., 2003; Sundar, 1998), has traditionally been key to persuasion research. However, in online environments where authors may not provide many "credibility cues," (Clerwall, 2014, p. 9), message credibility becomes crucial. Understood as "how message characteristics impact perceptions of believability" (Metzger et al., 2003, p. 302), message credibility can take precedence over source credibility.

Research has identified specific message characteristics that signal credibility, including stylistic cues, specific details, review length, tone, and the use of "consumer language" (Filieri, 2016, p. 59). Van Laer et al., (2019) expanded on these to include narrative elements such as characters and events. Metzger et al. (2003) concluded that information quality within the message often serves as a better assessment of credibility than source characteristics alone, especially when source identity is ambiguous or unknown. This positions narrative communication cues as critical to credibility judgments in online review contexts.

The emergence of AI-generated reviews has impacted narrative heuristics as AI technologies can now create content that "closely resembles human-authored content in format, tone, and emotional expression" (Ma et al., 2026, p. 1). As AI imitates the narrative and stylistic cues

consumers have traditional associated with credible human communication, questions of authorship attribution have emerged (Filieri, 2016). This challenge is significant because credibility is becoming increasing in importance in digital communication environments.

Attribution Theory

Attribution theory proposes that meaning is attached to what is perceived and that individuals seek causal explanations for observed behaviors and outcomes (Heider, 1958; Jones & Davis, 1965; Mizerski et al., 1979). In the context of online reviews, consumers engage in authorship attribution by relying on available cues (Manusov & Spitzberg, 2008). As Manusov and Spitzberg (2008) note, "Every comment a person makes and every action in which a person engages can be subject to attributional analysis, by self and by others" (p. 40). This process involves evaluating the information provided in the review and making causal explanations about the message source (Mizerski et al., 1979). For example, readers may consider why the reviewer left the review, whether the review is trustworthy, or who wrote the review.

AI & Authorship Attribution

AI technologies have rapidly advanced in their ability to generate online review content including summative insights and personalized recommendations (Jia et al., 2025; Ma et al., 2026; Zihan & Che, 2025). While authorship attribution as AI versus human is a relatively new consideration (Lee et al., 2025), research findings remain mixed.

Machine-generated text, including AI-generated content, has been acknowledged as difficult to identify when compared to human-authored text (Crothers et al., 2023). However, studies suggest that AI use may increase trustworthiness (Clerwall, 2014) or be evaluated similarly to human reviews in terms of credibility and usefulness (Cheng et al., 2025). In contrast, other research finds that AI-generated content lowers perceived trust and authenticity (Drozd & Soilen, 2026) and can cause consumers to feel "moral disgust" (Kirk & Givi, 2025, p. 2) when they perceive content as AI-

generated. Even the disclosure of using AI assistance in crafting an online review negatively impacts perceived credibility, regardless of whether the review was written by a human (Henestrosa & Kimmerle, 2024). Recent research additionally found that consumers rely on narrative cues for authorship attribution, but that human-authored content tends to be less linear and more structurally varied than AI-generated content (Russell et al., 2026).

These contradictions suggest that traditional communication theories may be insufficient for understanding AI-generated content (Raffloer & Green, 2025). This presents a need for research that examines how consumers distinguish AI from human authorship and whether perceived authorship influences credibility perception. Due to these findings and the lack of research examining authorship attribution accuracy in online reviews, this study seeks to explore how consumers attribute authorship and if that attributed authorship influences credibility, usefulness, and behavioral intention within the travel review context.

Research Questions

This study explores consumer perceptions of human-authored versus AI-authored online reviews within the travel context. Specifically, the following research questions guide this research:

RQ1: Are there differences in consumers' perceptions of credibility, usefulness, and consumer behavior intention between human-authored and AI-authored online reviews?

RQ2: To what extent can consumers accurately attribute the authorship of human-authors and AI-authored online reviews?

RQ3: Is perceived authorship associated with evaluations of credibility, usefulness, and consumer behavior intention?

RQ4: What guides authorship attribution for online reviews?

Methodology

To answer these research questions, a within-subjects comparison survey was distributed through a Qualtrics link using convenience sampling after receiving Institutional Review Board approval from the author's academic institution. The survey was structured to determine credibility, usefulness, booking intention, and authorship attribution. Two reviews were presented in random order (one written authentically by a human, the other solely by AI) before providing Likert scales related to credibility, usefulness, and intention to book (see Table 2).

Table 2

Survey Construct Statements

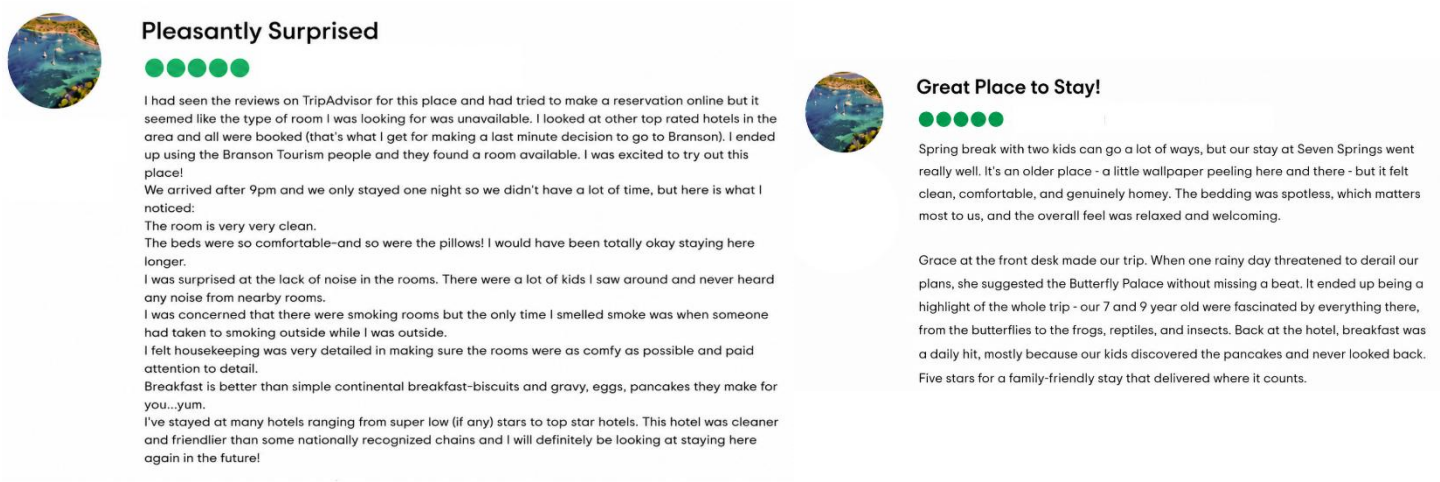
Construct	**Statement**	**Researchers**
Credibility	I believe this review is trustworthy	Drozd & Soilen, 2026; Filieri, 2016; Roman et al., 2023
Credibility	This review is believable	Cheung et al., 2012; Smith & Vogt, 1995
Credibility	I believe the author of this review has firsthand experience with this accommodation	Drozd & Soilen, 2026; Filieri, 2016
Usefulness	This review would make it easier for me to make a booking decision	Cheung et al., 2012
Usefulness	I would use a review like this when evaluating where to stay	Drozd & Soilen, 2026; Filieri, 2016
Usefulness	Reading a review like this would help me make a booking decision with confidence	Cheung et al., 2012

Intention	After reading this review, I would consider staying at this accommodation in the future	Roman et al., 2023
Intention	If comparing accommodations, after reading this review I would probably stay at this accommodation	Roman et al., 2023
Intention	From what I read in this review, I would give the accommodation a try	Roman et al., 2023

To ensure the human authentic review was free of AI influence, a TripAdvisor travel review from 2013 titled "Pleasantly Surprised" (PS) was selected. The AI review, titled "A Great Place to Stay" (GPS) was generated through Claude 4.6 Sonnet. These are presented in Figure 1. Both were presented with consistent formatting and fonts to ensure that evaluations would be based more on narrative content and writing style rather than visual or grammatical differences (though some characteristics, such as length, did vary). Following the reviews, respondents were asked to attribute authorship (human vs. AI), provide reasoning for their decisions, and identify the narrative cues guiding their decision. Presentation order was randomized to alleviate potential negative bias toward AI (see e.g., Henestrosa & Kimmerle, 2024). The conclusion of the survey included demographic information and prior AI usage.

Figure 1

Travel Reviews Given to Survey Respondents



Results

The survey was open for three weeks between June and July 2026 and responses were collected through convenience sampling. A total of 100 respondents began the survey however, after removing respondents who did not meet the verification checks and who did not complete the questionnaire past the first two portions (reading of the reviews), a total of 45 surveys were deemed appropriate for data use.

The majority of respondents (93.3%) had stayed overnight at an accommodation within the last twelve months, with over 20% experiencing an overnight stay at least nine over the same period. Consistent with other research (Adams, 2025), these participants rely on online travel reviews prior to making booking decisions (88.9% agreed or strongly agreed that they access travel reviews).

Respondent demographics, including AI usage, were examined using descriptive statistics to characterize the sample and are summarized in Table 3.

Table 3

Respondent Demographics

Gender			Education		AI Use	
			Some college	25.6%	Never	11.6%
	Male	30.2%				
	Female	69.8%	Bachelor's	27.9%	1x/month	20.9%
Age			Master's	34.9%	1x/week	32.6%
	25-34	7.0%	Doctoral	11.6%	1x/day	20.9%
	35-49	69.8%			1x/day+	14%
	50+	23.2%	States Represented	13		

Reliability Analysis & Descriptive Statistics

The consistency of each statement used in the Likert scale portion of the survey (Table 2) was evaluated using Cronbach's alpha. Individual reliability analyses were conducted for credibility, usefulness, and consumer behavior intention (referred to as Behavior in the data) for each review.

Reviews and constructs were presented in varying order to minimize bias. All constructs demonstrated appropriate internal consistency which supported the reliability of the measures used in this study. Cronbach's alpha values are summarized in Table 4. Because each construct presented acceptable reliability, composite variables were computed to formulate three key variables of Credibility, Usefulness, and Behavior. Their composite means and standard deviations are provided in Table 4.

Table 4

Reliability Analysis & Standard Deviations **Construct**	**Human-Authored review Cronbach's alpha**	**AI-Authored review Cronbach's alpha**	**Human-Authored Std. Deviation**	**AI-Authored Std. Deviation**
Credibility	0.875	0.917	0.77525	0.71476
Usefulness	0.831	0.918	0.75262	0.87155
Behavior	0.926	0.869	0.81340	0.80473

Comparison of Human-Authored and AI-Authored Review Evaluations

To compare the human-authored review and AI-authored review, paired-samples t-tests were conducted to determine whether the reviews were evaluated differently, with respondents having no information at this point that one could be authored by a human (Table 5).

Table 5

Paired-Samples t-Tests Results

					95% Confidence				**Significance**	
		Mean	Std. Dev.	Std. Error Mean	Lower	Upper	t	df	One-sided p	Two-sided p
Pair 1	PS_Cred	0.11852	0.94590	0.14101	-0.16566	0.40270	0.841	44	0.203	0.405

	GPS _Cred									
Pair 2	PS_Use GPS _Use	0.27407	0.95158	0.14185	-0.01181	0.55996	1.932	44	0.030	0.060
Pair 3	PS_Beh GPS_Beh	0.48148	1.13386	0.16903	0.14083	0.82213	2.849	44	0.003	0.007

Credibility showed no statistically significant differences between the two reviews. Usefulness received a higher rating for the human-authored review (M = 3.92, SD = 0.75) than the AI-authored review (M = 3.30, SD = 0.87). The impact to consumer behavior intention demonstrated statistical significance (p = .003, .007) with a higher impact to behavior for the human-authored review (M = 3.78, SD = 0.81) than the AI-authored review (M = 3.30, SD = 0.80).

Perceived Authorship

To provide a deeper understanding of this outcome, participants who completed the entire survey were asked to provide who they perceived the author to be for each review followed by a qualitative portion and an estimated percentage of how much they believed each review was written by a human. Respondents estimated that the AI-authored review was more human-authored (M = 76.86) than its authentically human-written counterpart (M = 63.69) which showed significance (p = .047).

Table 6

Perceived Authorship

	Pleasantly Surprised (Human)	**Great Place to Stay (AI)**
Human Author	34.10%	64.40%
AI Author	15.90%	11.10%
Hybrid	50%	21%
Mean for human authorship attrib.	63.6905	76.8605
Std Dev.	28.90395	25.49564

Thematic Analysis

A key component of this exploratory study was to capture qualitative data within the survey. This data centralized on asking respondents to provide information on why they attributed the author to be human, AI, or hybrid. Thematic analysis was conducted on the information provided for each review and together, resulted in the following themes:

1. Writing style influenced authorship attribution
2. Personal details increased credibility perceptions
3. Specificity could increase or decrease credibility
4. AI considered as an editing tool
5. Intuition is relied upon

Within the human-authored review, the additional theme of balanced critique also appeared to be influential.

While narrative elements and their potential impact were specifically captured after this question was presented on the survey, various narrative cues emerged within this qualitative portion, specifically the writing style, emotional tone, specificity, and personal details.

Associations Between Perceived Human Authorship and Review Evaluations

Pearson correlations were conducted to examine whether attributed human authorship was associated with the evaluations of Credibility, Usefulness, and Behavior in reviews. While respondents incorrectly attributed human authorship across both reviews, only when the authentically human-authored review was attributed as such did an association with Credibility develop. Attributing the AI-authored review as more human did not significantly influence perceived Credibility, Usefulness, or Behavior intentions (see Table 7).

Table 7

Perceived Human Authorship Associations

Variable	Human Review (*r*)	*p*	AI Review (*r*)	*p*
Credibility	0.462	.002	0.026	.867
Usefulness	0.271	.083	-0.016	.919
Behavioral Intention	0.177	.263	-0.016	.917

Narrative Heuristics Used in Authorship Attribution

To better understand how respondents determined authorship of the reviews, they were asked to consider six narrative cues that may have ultimately impacted their attribution decisions. Respondents were permitted to select more than one option. Table 8 presents these findings.

Table 8

Narrative Heuristic Cues in Attribution

Narrative Cue	Pleasantly Surprised			Great Place to Stay (AI review)		
	Human	AI	Hybrid	Human	AI	Hybrid
Writing Style	28.6%	10.7%	60.7%	54.5%	15.2%	30.3%
Grammar/Language	25.0%	5.0%	70.0%	45.0%	20.0%	35.0%
Emotional Tone	50.0%	0.0%	50.0%	63.3%	10.0%	26.7%
Specificity	40.0%	20.0%	40.0%	73.9%	8.7%	17.4%
Personal Detail	66.7%	8.3%	25.0%	79.2%	8.3%	12.5%
Length	23.5%	29.4%	47.1%	41.7%	16.7%	41.7%

Note. Values represent the percentage of respondents who attributed authorship to Human, AI, or Hybrid. Chi-square analyses were not interpreted due to expected cell counts as below the recommended thresholds.

Respondents frequently selected writing style, emotional tone, specificity, and personal details when attributing authorship. Personal details were selected the most in both reviews as the cue that assisted in attributing authorship as human content even if the perceived was inaccurate. Specificity, emotional tone and writing style were relied on in attributing human authorship within the AI review while personal detail, emotional tone, and specificity were relied on in correctly attributing human authorship.

Discussion

Differences in Credibility, Usefulness, and Behavior (RQ1)

This study sought to examine credibility, usefulness, and behavior between human-authored and AI-generated reviews while also using narrative heuristics. While credibility and behavior

intention means were higher for the human-authored review, usefulness showed the greatest difference with the human review significantly outperforming the AI review ($p = .030$). These results contrast with studies like Cheng et al., (2025) where AI and human reviews were evaluated similarly. Within these results, the human-authored review's significant impact on behavioral intention ($p = .007$) suggests that between these two reviews, human experiences may remain more persuasive in motivating booking decisions, even when credibility ratings are similar. Additional research will be necessary to determine if this would apply across other review samples.

Authorship Attribution Perceptions (RQ2)

Respondents struggled to accurately attribute authorship, consistent with Crothers et al.'s (2023) observation that machine-generated text is difficult to distinguish from human content. The AI-generated review was perceived as significantly more human ($M = 76.86$) than the actual human-authored review ($M = 63.69$, $p = .047$). Additionally, only 11.1% of respondents accurately identified AI as the author of the AI-generated review with 50% attributing the human review as hybrid content. This suggests that consumers may view AI as an editing tool rather than as a separate author which also emerged within the thematic analysis.

Authorship Attribution and Review Evaluations (RQ3)

The more respondents believed the authentic human review was written by a person and not machine, the more credible they perceived it to be; however, the increased perception of human authorship did not significantly increase usefulness or behavioral intention. Credibility was not impacted by authorship attribution regarding the AI-authored review. In fact, none of the variables under consideration (credibility, usefulness, and behavior intention) showed influence with association. Respondents frequently misattributed the authors of the two reviews, yet the misplacement of the authorship had little influence on the evaluation of the reviews. These findings suggest respondents may rely more on the narrative qualities of a review than perceived authorship.

Narrative Cues and Authorship Attribution (RQ4)

Both thematic analysis and narrative heuristic data revealed that writing style, personal details, and specificity were primary attribution cues. Cross-tabulations revealed personal details were the most influential heuristic, with 79.2% of respondents citing them as evidence of human authorship for the AI-authored review and 66.7% for the human-authored review. Within the thematic analysis, a theme of balanced critique also emerged as a cue for human authorship. Respondents noted that the human review's inclusion of imperfect experiences (such as wallpaper peeling and smoking) contributed to the perceptions of a genuine experience. This aligns with Filieri's (2016) findings that "consumer language" (p. 59) enhances credibility when realistic and less than perfect experiences are provided.

In contrast, the AI review's lack of flaws or critiques may have signaled inauthenticity to some respondents. However, its use of personal details (naming an employee, providing ages) and absences of widely recognized AI characteristics (such as the em dash, which one respondent specifically noted as missing) appear to have outweighed the lack of critique, leading to misattribution of authorship. Additionally, respondents also relied on intuition, claiming that something "sounded" like AI, "like a mom," or "like something I would write."

These findings suggest that consumers use a combination of objective narrative cues (personal details, balanced critique) and subjective impressions (intuition, "sound") to attribute authorship – but these heuristics do not reliably lead to accurate attribution.

Ethical Implications

If consumers cannot accurately distinguish authorship of online reviews, similar challenges may exist in other settings such as education and business. Throughout this study, respondents frequently relied on subjective narrative cues that often resulted in misplaced attribution. According to Middleton (2017), "technological innovations [and] forms of communication" (para. 6) require

ethical considerations, especially in understanding humanity is created in the image of God, or the *imago Dei*. Viewed through this lens, the integration of AI into written communication requires Christian business leaders and educations to consider how to weave discernment, trust, and transparency into communication present in organizations and classrooms. As AI continues to reshape communication, the challenge may not necessarily be in discerning human-sounding AI communication but rather being "prudent [to] sift and weigh every word" (The Message, 2002, Proverbs 14:15b).

Limitations & Future Research

This exploratory study used a small convenient sample ($N = 45$) which skewed toward advanced degrees, limiting generalizability. Additionally, respondents may have become aware of AI's potential use after the first set of authorship attribution questions, potentially influencing subsequent responses.

Future research should address these limitations by engaging in a large, more diverse sample and examining a broader range of reviews across other experiential product categories. Studies could explore varying degrees of human-authorship (e.g. fully AI-generated vs. AI-assisted), test different AI platforms, and review the impact of individual narrative cues on attribution accuracy. Within education, future research could consider how educators and students perceive the credibility, usefulness, and authorship attribution of written communication.

This study demonstrates that AI authorship attribution is unreliable as only 11.1% accurately identified the AI-authored review as AI. Researchers should continue to explore how AI is reshaping written communication and how the perception of being considered as "AI" could motivate humans to alter their authentic voices. As the student's email in the introduction revealed, the pressure to "humanize" writing to avoid AI detection may ultimately dilute the narrative cues that make human communication detectable.

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Artificial Negligence: Artificial Intelligence, Social Media, the Online Data Ecosystem, and the Erosion of Spirituality

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Abstract

This paper examines applied artificial intelligence, social media and the online ecosystem through a biblical lens. Specifically, it creates a conceptual framework that analyzes existing research on the design and anthropological outcomes of this online ecosystem in light of Paul's call to put to death the flesh and live Spirit-led lives. We propose the system has been designed to promote humanity's descent to the natural state, and this directly conflicts with our biblical mandate to walk in the Spirit. Immersion in this ecosystem is a potential driver of recent declines in faith, and Christian believers and organizations who understand the architecture of these systems are better positioned to exercise deliberate, disciplined engagement with these platforms rather than unreflective use. Practical implications for Christian individuals and organizations are discussed.

Keywords: AI, social media, online data ecosystem, surveillance economy, natural man, spiritual man

Artificial Negligence: Artificial Intelligence, Social Media, the Online Data Ecosystem, and the Erosion of Spirituality

"But the natural man does not receive the things of the Spirit of God, for they are foolishness to him; nor can he know them, because they are spiritually discerned" (New King James Version, 1982, 1 Corinthians 2:14). The emergence of social media (SM), immersive digital environments, and artificial intelligence (AI) driven personalization systems represents one of the most consequential developments in the history of human attention and self-conception. What began as discrete technological innovations has converged into a mutually reinforcing ecosystem that scholars across disciplines have struggled to characterize. Business ethicists have documented the commodification of attention (Wu, 2016); behavioral economists have catalogued the exploitation of cognitive heuristics (Thaler & Sunstein, 2008); and media theorists have outlined the structural incentives built into platform architectures (Zuboff, 2019), but academics have yet to holistically explore the online ecosystem that connects these tools. Most importantly, no one has questioned whether this ecosystem conflicts with a biblical worldview. This paper builds on the work of Hinsch and Walz (2026) and argues that this ecosystem is not neutral from a biblical perspective because it is specifically designed to displace spiritual contemplation and growth by exploiting our natural appetites and psychological flaws. These pervasive technologies steal time, attention, and focus from our spiritual pursuits and redirect them to gratify our most basic and animalistic desires. They do this so surreptitiously that we are unaware of the process. It is only when we reorient ourselves to a biblical perspective that we can recognize how drastically our thoughts, feelings, perceptions, and desires have changed.

Social media, online search, and applied AI have evolved for a common purpose: the maximization of user engagement to generate consumer data as a commercially and institutionally valuable commodity (Wu, 2016). Understanding this convergent architecture is essential not merely

for policy or market analysis, but for Christian scholars and practitioners who must assess these technologies in light of a coherent theological anthropology. Paul makes a distinction between our natural desires and our spiritual calling in many of his epistles (e.g., Galatians 5, Romans 7). Natural man, with roots in our fallen nature, is driven to fulfill basic desires, with outrage, division, sexual perversion, gratification, and drunkenness as its congenital domain. Conversely, spiritual man is led by the Holy Spirit to generate fruit (e.g., love, joy, peace, and kindness). Since Christians are called to deny ourselves, natural man and spiritual man conflict by design, and Paul's epistles frequently recount his struggles to resist natural impulses and embrace spiritual calling both in thought and deed.

Christians must be aware that the online ecosystem, utilizing RLAs (Suh, 2021) is designed to promote humanity's descent to the natural state, and this directly conflicts with our spiritual mandate. However, little research has explored the evolution of this ecosystem and most of us are unaware of its purpose, how it is funded, and the network of data brokers that it feeds. The following pages use existing research and published information to conceptualize a model for this system, and we propose immersion in this ecosystem as a potential driver of recent declines in faith (Gallup, 2024). As Christians and Christian organizations, we are called to stand above the fray and lead both our siblings and non-believers away from our natural proclivities and towards our spiritual callings. The following pages disclose what is happening in our culture and how Christians should respond spiritually.

Background

Natural Man Versus Spiritual Man

All humans are born with a sin nature inherited from Adam. This sin nature is sometimes referred to as the "flesh" and describes the natural, sinful desires that are at war with God's desires for our life. These sinful desires and their consequences are found throughout the Bible, from

Genesis to Revelation. Paul says the works of the flesh are obvious (Galatians 5:19–21) and that these sinful desires lead to death. Contrasted with this fleshly nature is a life lived by the Spirit of God. Paul makes it clear that once a person, dead in sin, professes faith in Jesus' death and resurrection for the forgiveness of sins, that person receives new life through the Spirit of Christ that now lives inside them (e.g., Romans 6:4, 10:9). This new life is governed by the Spirit of Christ, freeing us from the bondage to our natural, sinful flesh that leads to death.

The New Testament (NT), especially the letters, spends a significant amount of time explaining the difference between a life in the Spirit and the flesh. Paul informs believers that what natural man desires is contrary to and in conflict with what the Spirit desires (and vice versa). However, Paul does not just share this comparison to explain what happens at the point of salvation, but also to implore believers to take necessary action to live a Spirit-filled life and continually put the desires of the flesh to death. Believers have a choice: they can either live by the Spirit, or they can remain enslaved by their fleshly nature. Even though the war with sin has been won through the cross, Christians still face a daily battle with their fleshly nature. So, with regards to their fleshly nature, NT writers call them to "put to death" their flesh (Romans 8:13), "avoid foolish disputes" (Titus 3:9), and "not let sin reign" (Romans 6:12). How do believers do this? Paul tells Christians to "walk in the Spirit, and you shall not fulfill the lust of the flesh" (Galatians 5:16). "Walk" in the original Greek carries the meaning of "being governed by"; therefore, believers are instructed to make sure the Holy Spirit governs their mind, body, and emotions. Paul also uses the word "govern" in Romans 8, describing the mind governed by the flesh as death, but the mind governed by the Spirit is life and peace. The mind governed by the flesh is hostile to God; it does not submit to God's law, nor can it do so.

Through the Holy Spirit, believers receive wisdom, understanding, instruction, and counsel guiding every aspect of their lives. The following paragraphs will outline the design of the online digital ecosystem and detail its effect on a Spirit-led life.

The Convergent Architecture of Digital Platforms: A Shared Functional Purpose

Although SM companies, search providers, and AI firms operate in nominally distinct industries, they share a common business logic rooted in the attention economy (Wu, 2016). Revenue generation depends on holding user attention to log behavioral signals that reveal preferences and to optimize future content delivery using these signals. Zuboff (2019) describes this logic as "surveillance capitalism," a business model in which human experience becomes the raw material for behavioral prediction products. This logic has permeated browser and phone-based, fully immersive environments (i.e., the Metaverse) and AI-driven recommendation, filtering, and generation products. The result is a data environment in which behavioral signals are extracted not just from deliberate searches or social posts, but from virtually every action that takes place through or even in the presence of a connected device (Harkin et al., 2020).

The Rise of Artificial Intelligence in Social Media

Mark Zuckerberg filed the first SM-focused AI patent in 2006 when the industry was in its infancy (Justia, n.d.), and dozens of patents have been filed since. SM companies are generally unashamed of their employment of AI in operations and reference their use on company webpages (e.g., Pazur, 2025). Facebook established its AI research division in 2013 (FAIR), and the rise of SM in its current form could not have happened without using AI to manage the vast amount of data generated. For example, in 2014 Facebook introduced FBLearner as a "paint by numbers" system to push AI integration throughout varied departments of the organization. DeepFace was also launched in 2014, advancing the conversion of visual information into usable computer language (Taigman et al., 2014). While modern SM would not be the same without AI, the reverse is also true.

The vast amounts of data produced by SM participation provide the fodder to both train and feed burgeoning AI systems (Perozzi et al., 2014). This SM-derived information was integral in feeding RLAs to optimize content publication (determining what content to display to what consumer) and ad targeting (Wei et al., 2020).

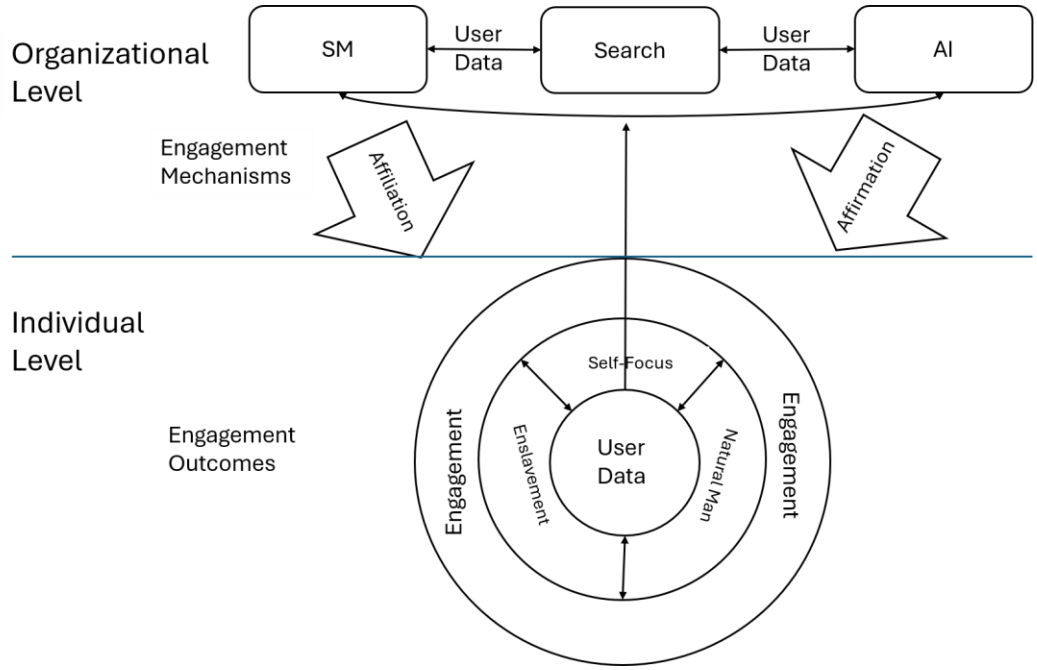
The most obvious use of AI involved moving SM from a historical model displaying content based primarily on the timing of friends' posts to an algorithmic curation determined by reinforcement learning (Bucher, 2017). This extended beyond what content is presented to include the order in which it is presented, the content presented alongside it, what content is amplified, and what content is demoted (Gillespie, 2022). Essentially, the platform morphed from a place to explore what your friends are doing to a personalized portal designed to keep you engaged through constant experimentation and personalization (Dekker et al., 2025). Through the use of applied AI, SM was fundamentally transformed from a relational tool to a demand manager with the ability to prime customers for either purchase or attitude change (Marti et al., 2024).

As AI became more and more involved, researchers began to piece together a dark side. Studies linked SM use to lower life satisfaction and procrastination (Hinsch & Sheldon, 2013), narcissism, social comparison, and addictive behaviors (Andreassen et al., 2017), and correlations with depression, anxiety, and psychological distress (Haidt, 2024; Kross et al., 2013; Woods & Scott, 2016). At the same time, we see drastic decreases in both spirituality (Pew Research Center, 2012) and Christianity (Gallup, 2024).

Figure 1 depicts a conceptual model of how the online data ecosystem has evolved to focus on user data generation. The following sections expand on this model discussing how these systems focus users on their natural desires at the expense of spiritual growth.

Figure 1

Conceptual Model of Spiritual Effects of Online Data Ecosystem



Design of Online Data Ecosystem

The emergence of AI has facilitated the rise of a data broker ecosystem. This ecosystem is almost entirely unregulated. No one knows its true size or scope; however, most estimates place its annual revenue around $200–$300 billion, nearly $1,000 for every adult in the United States (Deshpande, 2026). This machine uses SM, search, and AI as a source of data and AI is also employed to process this data into products. These products can be employed to both predict and coerce future behavior (Christl & Spiekermann, 2016).

Thousands of data brokers operate worldwide, and most people have never heard of these firms. One exception is Oracle, which in 2017 claimed to control data on over two billion people with an average of 30,000 data points on each individual (Christl, 2017). While many publicly held companies engage as data brokers, private entities and even government organizations are highly involved, making the true scale of brokered data impossible to determine.

Modern marketing has become intricately connected to the data broker economy both as users of the data generated and as a funnel enticing others to connect and donate their data to the ecosystem. When a company encourages a SM user to "like" or engage with them through the platform, they are asking them to become a lead for both for that company and for others. What most have not considered is that this preference is tied to thousands of other data points that can be leveraged by AI to manipulate this individual in the future. Human beings have been reduced to profiles, engagement metrics, and revenue streams.

Engagement Mechanisms: Affiliation and Affirmation

There are two primary drivers that entice users to submit their data into this ecosystem: affiliation and affirmation. Affiliation is based on attributes we share with a triune God and how we relate to others. It refers to the human need for belonging, group membership, and social identity, a basic human need that social media companies use to lure users (Makki et al., 2018). Platforms promise affiliation by facilitating the formation of communities around shared interests, ideological commitments, or cultural identities. The social recognition of likes, shares, followers, and group membership creates behavioral reinforcement loops that sustain engagement far beyond what purely informational or entertainment content would produce. Affiliation has two sides. The dark side of affiliation is a focus on who is different. Polarization and defining someone as an "other" or "not like you" is enhanced in this ecosystem (Metzler & Garcia, 2024). The perception of "others" can be influenced by both how strongly and how normative an individual perceives their position with respect to others.

Affirmation, on the other hand, operates at the individual rather than social level. Platforms do not maximize engagement by challenging users' beliefs; they do so by confirming them (Cheng et al., 2026). Recommendation algorithms, trained on engagement signals, systematically filter content that aligns with users' existing perspectives and cognitive biases. The result is what researchers have

termed "echo chambers" or "filter bubbles" (Hastuti et al., 2025): informationally impoverished environments in which confirmation bias is structurally reinforced rather than corrected.

Critically, this is not a design failure but a design feature (Cheng et al., 2026). Conflict and cognitive dissonance reduce time on these platforms and affirmation increases it (Ansari & Ghasemaghaei, 2026). The platform's interests and the exploitation of confirmation bias are structurally aligned by maximizing platform time and the generation of user data. This design leverages and corrupts our imago Dei need for connection while simultaneously closing off our posture of openness to spiritual formation by affirming fleshly desires.

Engagement Fuel and Outcome: Data

The primary output of the engagement process is not the content consumed, the relationships formed, or the experiences undergone. It is the behavioral data generated as a by-product of these activities. User data, preferences, interaction histories, emotional responses, relational networks, and temporal patterns comprise the terminal product produced by this ecosystem.

This data is valuable for at least three reasons. First, it increases precise behavioral prediction, allowing platforms to deliver more engaging content and to sell more accurate access to prospective buyers. Second, it can be licensed, aggregated, and provided to third-party actors including advertisers, political campaigns, insurers, employers, and financial institutions. Third, it is used to train AI systems that themselves become commercially deployable products. The user, in this architecture, is simultaneously the consumer, the raw material, and the producer. The ecosystem essentially coordinates the exchange of the data that is produced and alerts the ecosystem entities when an individual is ripe for consumption or attitude change. Engagement, itself a function of affiliation and affirmation, ensures generation of data. That data, deployed to further deepen

engagement, creates a self-reinforcing cycle in which the platform progressively learns to manipulate individual users with increasing precision.

Engagement Outcome: Spiritual Erosion

> For those who live according to the flesh set their minds on the things of the flesh, but those *who live* according to the Spirit, the things of the Spirit. **6** For to be carnally minded *is* death, but to be spiritually minded *is* life and peace. **7** Because the carnal mind *is* enmity against God; for it is not subject to the law of God, nor indeed can be. **8** So then, those who are in the flesh cannot please God. (Romans 8:5–8)

Artificial intelligence-driven RLAs optimize specific, company-determined metrics based on the constraints within which they are programmed. This means that engagement metrics (e.g., time on site, clicks, and shares) are maximized regardless of whether they edify the individuals involved. Numerous studies have shown that emotional arousal is highly correlated to increased engagement, and AI-driven RLAs foment anger, fear, envy, and lust to optimize engagement (for a review of how these platforms influence journalism see Hastuti et al., 2025). This data driven ecosystem promotes dopamine-driven behavioral loops that crowd out both focused attention and spiritual contemplation. While SM companies have become increasingly successful, U.S. Christianity has shown the opposite trend (Gallup, 2024; Pew Research Center, 2012).

Artificial intelligence has no conceptualization of the soul. RLAs optimize strictly for engagement metrics correlated with advertising and company revenue. By selling access to "ripe" customers, SM companies have created an entirely new business model that is significantly more effective than traditional advertising. AI-driven RLAs prioritize the shareability of content by leveraging affective preferences and biases to the detriment of spiritual value (Hastuti et al., 2025).

Spiritual reorientation happens gradually and imperceptibly. Research shows that users have a very limited understanding of how these sites determine what content they are exposed to

(Choudhary & Kar, 2025). Users are largely unaware that they are being shaped by AI-driven RLAs and shepherded toward their natural impulses.

Crowding Out the Spirit in Favor of Natural Man

We are inborn with the tendency to gratify the desires of our flesh (e.g., lust of the eyes), and it is only through the work of the Spirit that we can put these desires to death. This work of the Spirit is a patient, resilient work birthed from self-denial, silence, contemplation, and prayer that leads to the governance of the Holy Spirit. The online ecosystem was created to perpetually engage its users' flesh (i.e., through instant information and momentary pleasure) (Lupinacci, 2021) effectively crowding out the Holy Spirit. The online ecosystem is designed to craft content specific to the individual user with the goal of keeping the user engaged for as long as possible (Chandra et al., 2022). When we engage in the online ecosystem, especially in search of wisdom and knowledge without thought to the consequences, we are promoting the wisdom of the world while cognitively offloading our ability to discern spiritual wisdom.

Perhaps the most theologically significant consequence of the platform architecture is what we term the "crowding out" of spiritual formation. The Apostle Paul's distinction between the natural man (*psychikos*) and the spiritual man (*pneumatikos*) in 1 Corinthians 2 turns on the capacity to discern and receive what is given by the Spirit of God (Hendi et al., 2024). The natural man, oriented toward the gratification of appetitive desires and the affirmation of existing perception, is unable to receive spiritual things because they are "foolishness to him" (1 Corinthians 2:14).

Enslavement and the Erosion of Epistemic Autonomy

Christian theology has consistently affirmed the dignity and moral agency of the human person as created in *imago Dei*. Central to that agency is the capacity for rational deliberation: the ability to evaluate competing claims, to reason across differences, and to form beliefs through processes that are responsive to evidence and argument rather than appetite or social pressure.

The platform architecture described above is structurally hostile to this form of agency. By systematically confirming existing beliefs and filtering out disconfirming information, it degrades the informational conditions under which genuine rational deliberation can occur. More perniciously, by learning individual bias profiles with increasing precision, these systems create conditions in which platforms can predict and shape user behavior before users are consciously aware of their natural or desired inclinations. This represents not merely a limitation on freedom but an inversion of it. Users believe they are exercising preference while in fact executing a behavioral script authored by the platform.

Self-Focus and the Atrophying of Relational Depth

A second consequence of sustained platform engagement is the deepening of self-referentiality. Our digital feeds, in all their incarnations, are designed to provide content relevant to the individual user's profile. The effect is a view that consistently curves back toward the self where one's own opinions are confirmed, one's own aesthetic preferences are catered to, one's own social grievances are validated. This is the digital embodiment of what Augustine (ca. 397/1955) described as the will curved inward upon itself (*incurvatus in se*). Aligning with our natural man proclivities, this is a condition of spiritual disorder in which the person is oriented toward the self rather than toward God and neighbor.

Spiritual man, by contrast, holds that human flourishing is inherently relational and other-directed. The Greatest Commandments (Matthew 22:37–39) structure human life around love of God and love of neighbor. Sustained platform engagement systematically atrophies the ability to focus on others. Even though elements are named social, the effect is inward focus and derogation of the other.

Consequences of the Data Broker Ecosystem

While published evidence has existed demonstrating the negative effects of SM for more than a decade (e.g., Hinsch & Sheldon, 2013), this evidence has become more prevalent and increasingly difficult to ignore. Jonathan Haidt's bestselling book *The Anxious Generation* documented a mental health crisis among children that began in and around 2012, essentially when AI began curating SM feeds. This book documents negative mental health impacts across several western countries including sharp increases in depression, anxiety, self-harm, and suicide (Haidt, 2024; Twenge, 2019). Other studies showed that heavy use of SM (3–4+ hours a day) was associated with sharp increases in depression (Kelly et al., 2019). Others documented polarization and social fragmentation facilitated by content presented through AI-driven SM (Metzler & Garcia, 2024). Others noted the erosion of attention spans and the capacity for contemplation. The established negative correlation between SM use and well-being has been documented numerous times (e.g., Karim et al., 2020).

While Haidt's (2024) book outlines the extensive correlational evidence linking the rise of SM and negative mental health outcomes, a similar book could be written linking the rise of SM and the decline of Western Christianity. Pew Research Center first published an article detailing the decline in faith titled *"Nones" on the Rise* in 2012, noting a 30% increase in those unaffiliated with religion since 2007 (Pew Research Center, 2012). Unsurprisingly, this decline coincides with SM becoming a cultural force, and the rise of the nones has been accompanied by a decline in Christianity in the west. Whether we look at church attendance or simply claiming Christianity, all have experienced steep declines over the last decade (Gallup, 2024).

The public is just now realizing the extent of the damage caused by this ecosystem. The United Kingdom announced plans to ban SM for those below 16, and France recently banned SM for children under 15. Australia and Norway have both implemented age restrictions. Many states

have banned phones in the classroom. The U.S. Surgeon General called out the harms of SM back in May of 2023. Most Christians believe that SM is more harmful than helpful to the Christian faith, though 96% still engage on these platforms (Grey Matter Research Consulting & Infinity Concepts, 2024).

Christians or Christian organizations are not immune to the downsides associated with this ecosystem, yet many uncritically participate in these AI-controlled platforms. Most churches and ministries have a SM presence despite the unambiguous pathways to spiritual erosion. Christian businesses and organizations both fund these platforms and lure others to participate in them through a type of 21st-century pyramid scheme, despite the manipulation potential that accompanies the data broker ecosystem.

Discussion

Implications for Christian Business Practice

The analysis presented here carries practical implications at multiple levels of organizational and professional life. At the individual level, Christian professionals who understand the architecture described above are better positioned to exercise deliberate, disciplined engagement with these platforms rather than unreflective use. This might include structured digital silence, the intentional cultivation of information sources that challenge rather than confirm prior commitments, and the habitual examination of one's own engagement patterns in light of the formation they are producing.

At the organizational level, Christian businesses and institutions bear a stewardship responsibility with respect to the attention and formation of employees, students, and communities. This may require explicit organizational norms around platform use, the creation of protected spaces for reflection and discernment, and a willingness to evaluate technology adoption decisions not merely on efficiency grounds but on spiritual and anthropological ones: what kind of person is this technology designed to form?

At the broader cultural and ethical level, Christian scholars have a distinctive contribution to make to the emerging public conversation about platform regulation and digital rights. The dominant frameworks in that conversation (privacy law, antitrust analysis, behavioral economics) are necessary but insufficient. They do not ask the question that a robust theological anthropology demands: how do these systems impact human beings as moral, relational, and spiritual agents? Christian business scholarship should insist that this question belongs in the conversation.

The Imperative for Christian Leadership

Christian leaders have both the moral clarity and the spiritual connection to reject the patterns of this world where our secular counterparts may not. Thought Christianity has waned since the advent of SM (Gallup, 2024), Christians remain a powerful market influence. Christian organizations can lead the way in showing that success does not require participation in systems that commoditize and dehumanize human agency and the soul. We have the opportunity to model alternative approaches to marketing, communication, relationships, and humanity by forsaking manipulative platforms in favor of spirituality and human dignity. Christians have a special call to both discernment and faith, which makes forgoing participation in AI a reasonable consideration despite the relative efficiencies. We are called to "not be conformed to this world, but be transformed by the renewing of your mind, that you may prove what is that good and acceptable and perfect will of God" (Romans 12:2).

Practical Stewardship in a Digital World

So how might a Christian organization take steps toward weaning itself from the data broker ecosystem? The first step requires both research and education. Few are aware of either the extent of the data broker ecosystem or AI's role in managing and processing user data. These platforms admit to many practices that would worry the average Christian, and other factors can be logically inferred.

Significant research has exposed the impacts of AI-driven SM over the last 15 years, but this has largely been ignored (see Haidt, 2024; Twenge, 2019).

Once education reaches a critical mass in your organization, begin to diversify both your data gathering and communication channels. Shift your investments to direct relationships or community-building approaches that leverage face-to-face communication and word of mouth rather than clicks and swipes. Alternative platforms may come to exist which eschew the data broker ecosystem and the AI management that accompanies it, so be prepared to leverage these. Produce and communicate content on owned or trusted inbound platforms (e.g., email, blogs, and newsletters) which contribute less detailed data to the ecosystem that facilitates manipulation by AI-driven RLAs.

When the above are established, begin a phased withdrawal from SM, indiscriminate AI use, and the data broker ecosystem. Make conscious decisions on any ad spending or customer data purchase through an ethical lens. Work to exit platforms that commodify human interaction and preferences and seek alternatives which may be less effective but more respectful of human agency. Finally, go public with your decisions and the reasoning behind them. While the AI-driven SM system will likely suppress this information on their platforms, the alternative communication approaches that you recently cultivated will be effective. Invite other Christian organizations to join you.

Public opinion on SM is shifting, and the negative effects of AI-driven SM use from the past 15 years of research are becoming known. Early adopters of responsible data use may be ahead of a significant cultural trend, but it is the ethical and spiritual principles that should drive this movement. Like Daniel's refusal to eat the royal food and his choice of a vegetarian diet, choosing faithful spirituality and minimal participation in the data broker ecosystem may pay similar dividends for Christian organizations.

Conclusion

Outrage and discord are sought-after commodities in the new surveillance economy (Zuboff, 2019), and technological systems cultivate envy by presenting only carefully curated "others" to which we pale in comparison (Kelly et al., 2019). Ambition and self-promotion are cultivated as both an expectation and a natural consequence of SM design. The sorting mechanisms that have enabled more effective communication have also split factions and tribes apart in places where little division was seen before. Expressing an opposing view is no longer tolerated in many online and offline venues, and this has become a feature, not a bug, of SM design. The constant feed of platform content, calibrated to desires, preferences, and biases, functions as a structural impediment to spiritual formation. Spiritual formation in the Christian tradition requires solitude, silence, sustained attention, and exposure to what is genuinely other (Foster, 1978; Willard, 1988). These are precisely the conditions that platform architectures are designed to eliminate. The infinite scroll, the notification, the curated feed each represent an engineering decision that cultivates our flesh and defies the attentive rest in which spiritual perception is cultivated.

There are two distinct sides to modern tech's spiritual coin. On one hand, these venues promote our base desires to keep our attention (often sexual immorality, impurity; idolatry and witchcraft; hatred, discord, jealousy, fits of rage, selfish ambition, dissensions, factions and envy). On the other hand, our base desires are the opposite of spiritual values and gifts. Forbearance and self-control do not win any money from advertisers. Peace and gentleness generate low engagement, which means little money for advertisers or tech companies. While kindness may occasionally go viral, the probability of a kindness video accumulating substantial hits is a fraction of a divisive video's (Milli et al., 2025). This ecosystem is built to feed the flesh, which directly conflicts with becoming a spiritual human. The specific architectures described in this model are, at the structural level, aligned with the formation of the natural man and misaligned with the formation of the

spiritual man. This has direct implications for Christian business professionals, educators, and organizational leaders who bear responsibility for the formation of those in their care. Social media, search, and applied AI have evolved as a convergent system oriented towards a common end: the extraction and commodification of behavioral data. Leveraging affiliation and affirmation to manipulate users is not morally neutral. These techniques crowd out the conditions necessary for spiritual formation, exploit and entrench cognitive biases, erode epistemic autonomy, and deepen self-referentiality.

By studying the available research and often the public policies and statements of tech companies themselves, there is little doubt that this ecosystem was designed to promote natural man at the expense of spiritual man. It directs focus away from the fruits of the spirit and toward envy, hate, and division. Christian organizations face a choice to either continue to fund systems based on commodifying humanity and AI-driven manipulation or foster alternatives that honor spirituality and dignity. This is not simply a business decision, but one of stewardship and discipleship with eternal implications.

For Christian scholars and practitioners in business, this analysis is not merely academic. It bears on the formation of human persons (colleagues, students, customers, and citizens) whose flourishing is crucial. To build, use, or commend these systems without reckoning with their human consequences is to participate, perhaps unwittingly, in the displacement of the spiritual man by the natural one. The recovery of a robust theology of attention, formation, and human dignity is not peripheral to Christian business scholarship. It may be among its most urgent tasks.

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COACHing Students to Think Beyond the Algorithm: A Framework for AI-Mediated Judgment

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Abstract

Generative artificial intelligence (AI) has made it easier for students to produce convincing artifacts while making it harder for faculty to determine whether students exercised judgment in producing them. The danger is not merely that AI hides student thinking; it is that AI may replace the formative struggle through which judgment develops. This paper develops the construct of AI-mediated judgment to describe the degree to which students demonstrate intellectual agency, source-aware attention, evaluative discernment, prudential weighing, and accountable ownership when AI has generated or shaped the claims under consideration. The paper then proposes COACH (Cultivate Initial Judgment, Orient Attention, Appraise Reasoning Quality, Challenge Before Choosing, and Hold to Account) as a framework that supports faculty and students to develop and assess AI-mediated judgment. Because written evidence of judgment can itself be generated by AI, COACH anchors assessment in live, unscripted demonstrations of judgment while treating written artifacts as formative scaffolding. To examine whether the framework can be operationalized, we developed a web-based prototype that guides students through the five COACH practices during an AI-mediated business case and piloted it in a small feasibility study ($N = 6$) with a scaffolded treatment condition and an unstructured control condition. Although the study was too small to test for a treatment effect, the prototype elicited all five practices within a reasonable time burden and made the formation of student judgment visible in treatment transcripts, whereas control participants' final recommendations alone did not reveal whether the judgment behind them was their own.

Keywords: generative AI, Christian business education, judgment, evaluative judgment, AI literacy, biblical integration, business pedagogy

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The difficulty of distinguishing authentic judgment from AI-generated answers renews a long-standing concern in assessment. Students develop evaluative expertise as they learn to monitor the quality of their work "during the act of production itself," yet higher education has often evaluated only the finished artifact, leaving the judgment supporting it unexamined (Sadler, 1989, p. 121). Prior to the adoption of AI, artifacts such as written essays could offer a glimpse into student thinking, including its flaws, which made them acceptable proxies for assessment.

However, the rapid adoption of AI, which can allow students to bypass substantial portions of the reasoning process, has given it new urgency (American Association of Colleges and Universities, 2026). In business education, this concern is especially noteworthy because success in business requires not only the ability to summarize information but also the ability to frame problems, weigh evidence, and make recommendations while accepting responsibility for consequences (Melendez, 2025). AI can support these activities, but when assignments assess only finished submissions, AI-assisted work can make it harder to determine whether students have engaged in the judgment process (Kofinas et al., 2025). This concern is more than academic. The graduates Christian business programs send into the marketplace will be expected not merely to use innovative tools but to lead ethical innovation with them, and that leadership rests on precisely the judgment that unexamined AI use can erode. If judgment is weakened, that loss may occur during artifact development, and since process records may not reveal understanding, neither inspection of a finished artifact nor later review of process artifacts is sufficient.

Dell'Acqua et al. (2026) found that AI assistance improved performance on some professional tasks while degrading performance on similar tasks that fell outside AI's capability frontier, a boundary they describe as jagged because even experienced professionals struggle to see

where it lies. Graduates will therefore enter workplaces where the value of AI assistance depends on a judgment the tool itself cannot supply. Recent work in management education argues that such judgment must be a deliberate aim of learning design rather than a byproduct of AI use (Johnson et al., 2026). Faculty therefore need a framework that guides students through the judgment process while evaluating whether high-quality judgment is exercised.

Building on Leo and Delano's (2024) work that reframed the professor's role in the age of AI, this paper presents a framework for coaching and assessing student judgment in AI-mediated decisions. We posit AI-mediated judgment as a theoretical construct representing the process by which learners evaluate, revise, and own claims that AI has influenced in some way, and is measured by how well students demonstrate agency, attention, discernment, prudence, and ownership throughout that process. We also present a corresponding framework named COACH as a dual-facing framework through which faculty can coach and assess judgment, and students can learn to exhibit it. The next section presents a review of the literature along three dimensions: how the concept of judgment has been developed and assessed, the impact that AI has had on judgment, and the moral implications of judgment. Following that, the remaining sections present the COACH framework, discuss the design of a prototype that implements the principles of the framework, and discuss the results of a pilot study showing the prototype's capability. The paper concludes with some limitations and recommendations for further study.

Literature Review

The Development and Assessment of Judgment

Scripture presents human beings as creatures made in the image of God, entrusted with stewardship, and accountable before God and neighbor (English Standard Version, 2001/2016, Genesis 1:26–28). Part of this stewardship includes the ability to discern quality in decision making, something the literature refers to as evaluative judgment. Tai et al. (2018) define evaluative judgment

as the capability to make decisions about the quality of one's own work and the work of others. Their argument shifts assessment away from simply grading completed products and toward helping students develop the capacity to recognize quality for themselves. Bearman et al. (2024) extend evaluative judgment explicitly into the generative AI context, arguing that students need to develop judgment not only about final products but also about AI outputs, AI-supported processes, and AI-assisted evaluation. Evaluative judgment, however, does not integrate the demands of agency preservation, morally weighed decisions based on an AI-framed problem, organizing evidence, expressing confidence, or proposing action, which means it anchors AI-mediated judgment but cannot carry it alone.

The evaluative judgment and professional judgment literatures share the perspective that sound reasoning can be made visible and assessed through identifiable components. Lasater (2007) demonstrates that judgment can be operationalized through dimensions and performance levels, which suggests that AI-mediated judgment also occurs along different levels of maturity. The process-product assessment approach by Awadallah Alkouk and Khlaif (2024) assesses these levels through observable moves in the context of AI-mediated judgment by evaluating students' prompts, revisions, choices, and reflections as evidence of learning.

Abrami and colleagues' (2015) meta-analysis suggests that critical thinking can be improved through intentional instruction, while Halpern (1998) emphasizes transfer, metacognitive monitoring, and practice across domains. Together, these findings imply that judgment in AI-mediated contexts is teachable, but students will not develop it simply by using AI more often. Students need coached practice in judging AI outputs across multiple contexts, with feedback, so that inquiry, revision, and responsible recommendation-making become habits rather than assignment-specific behaviors.

AI and the Vulnerability of Judgment

The theological starting point of man as finite and fallen brings important implications for how students use AI tools. Students use tools because they are limited knowers who need help organizing information and considering alternatives. Fallenness warns against misplaced trust and the desire for effortless competence (Barnhart & Turner, 2024). Christian pedagogy should therefore neither romanticize unaided human reasoning nor surrender judgment to the tool (Saunders & Locke, 2020). It should teach students to receive assistance with humility while retaining responsibility for the judgment that results (Barnhart & Turner, 2024).

Work by Hofer and Pintrich (1997) on epistemological beliefs, along with Sandoval et al.'s (2016) scholarship on epistemic cognition, provide additional reasoning that explains why AI use is not merely technical. Students' responses to AI depend on what they believe knowledge is, where authority resides, and how claims should be justified. In business education, students must decide what counts as evidence, whose expertise matters, which assumptions are warranted, and how much confidence a recommendation deserves. Jose et al. (2025) argue that generative AI can function as a "surrogate knower" in learning spaces, reshaping how students build knowledge. When AI functions as a surrogate knower, students may outsource not only wording but also parts of the judgment process itself. These issues become especially important when AI presents a synthesized answer that appears more settled than the underlying evidence supports or when it smooths over disagreements and gaps in the evidence.

Although this paper focuses on AI, the broader pedagogical issue is misplaced deference to perceived authority in that students may defer too quickly to AI. AI is distinctive, because it provides immediate, fluent, and seemingly authoritative recommendations at scale. Therefore, the central question is not whether students react skeptically to AI as a source, but whether they develop the judgment to recognize when AI is useful, when it is incomplete, and when it may lead them

confidently in the wrong direction. That capacity requires repeated, guided evaluation of AI output against a biblically based understanding of knowledge and authority.

Scripture provides the ultimate answer to what knowledge is and where authority resides. Since God is the source of knowledge and holds all authority (Proverbs 2:6; Colossians 2:3), no created source holds final epistemic authority. This conviction neither dismisses AI nor defers to it, but it does demand that every AI output be subject to the litmus test of God's authority and wisdom.

Critical thinking scholarship has sought to explain what active knowing looks like in student work. Facione's (1990, p. 3) Delphi Report defines critical thinking as "purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference," as well as the ability to explain the context around which the judgment was based, and self-regulation behavior. This definition frames judgment as an active process rather than a passive outcome.

From a biblical perspective, this active process entails the application of the litmus test of God's word, and failure to do so is the abdication of wisdom. Proverbs presents wisdom not as mere information but as rightly ordered discernment before God (Proverbs 1:7; Proverbs 2:1–11; Proverbs 18:17). This matters for AI-mediated judgment because AI can provide information without wisdom, fluency, or moral formation. A Christian pedagogy of AI should therefore train students to examine claims and discern what is true rather than accepting the first coherent answer.

Research on automation bias, overreliance, and cognitive offloading makes the need to coach judgment even more urgent. Automation bias refers to the tendency to over-rely on automated systems or recommendations even when independent judgment or contradictory evidence should prompt caution. Romeo and Conti (2026) identify automation bias as a central challenge in human-AI collaboration, particularly as AI systems enter high-stakes decision contexts. Tian and Zhang's (2025) study of university students found that AI dependence was associated with

lower critical thinking, with fatigue functioning as a mediating mechanism and information literacy serving as a buffering factor. Lee et al.'s (2025) study of knowledge workers found that higher confidence in AI was associated with less critical-thinking effort, while higher confidence in one's own ability was associated with more critical thinking. These studies support the concern that unstructured or overconfident reliance on AI may reduce critical engagement unless students are coached to remain active evaluators.

AI literacy frameworks are necessary but not sufficient to address this challenge. Existing frameworks help faculty teach students to understand, use, evaluate, create with, and ethically engage AI (Ng et al., 2021; Zhou & Schofield, 2024), but they do not provide a means to assess whether students remain active, discerning knowers in AI-mediated contexts. It would appear that students need structured coaching that slows down reliance on AI, preserves agency, and requires them to evaluate AI-generated recommendations.

Christian business scholarship sharpens this concern by framing AI reliance as a matter of responsibility, not only cognition. Saunders and Locke (2020) warn that AI-supported business decisions invite the surrender of control and the attempted transfer of moral responsibility. From this view, AI overreliance is not only a calibration problem, but also an accountability problem.

The Moral Weighting of Judgment

Scripture frames truthfulness as a moral obligation. Students who submit AI-assisted claims without testing them risk bearing careless or misleading witness. In business education, this matters because recommendations carry real consequences for others. Christian business education should therefore teach students to verify claims, acknowledge uncertainty, and avoid presenting unsupported conclusions with unwarranted confidence. Even then, a well-supported recommendation that is profitable may still be deficient if it ignores the burdens placed on others.

Business judgment is not only analytical, but also moral. Moral judgment research shifts attention to what is morally important when competing considerations are present. One example is the Defining Issues Test that Thoma and Dong (2014) describe as assessing moral reasoning through the importance that individuals assign to competing considerations in moral dilemmas.

The New Testament reinforces this posture of active discernment and directs it toward faithful action, testing everything and holding onto the good (1 Thessalonians 5:21). Jesus' command to love God and neighbor (Matthew 22:37–40), together with the prophetic call to do justice, love mercy, and walk humbly with God (Micah 6:8), reminds Christian business educators that judgment must serve more than effective performance. Mature AI-mediated judgment requires students to weigh tangible outcomes through the lens of mercy, humility, and justice.

In terms of AI-mediated judgment, an AI-generated recommendation can frame ethical considerations without giving them any importance, but the morally aware student should be able to produce a morally acceptable recommendation. When a scenario is framed before students have made sense of it themselves, the framing may also determine which features of the environment appear salient, which stakeholders appear relevant, and which actions appear available, effectively pre-empting the very sensemaking that judgment requires (Maitlis & Christianson, 2014; Tsoukas et al., 2024). AI-mediated judgment should therefore train students to make sense of complex situations and move responsibly from information to action.

This biblical frame does not require rejecting AI. Rather, it requires refusing to transfer agency, wisdom, or accountability to AI. AI may assist analysis, generate alternatives, summarize data, or expose blind spots, but it cannot love neighbor, pursue justice, confess error, or stand accountable before God. Christian business education should therefore teach students to use AI as a tool under wisdom, not as a substitute for wisdom.

The COACH Framework

The literature reviewed above offers strong but incomplete resources to address the challenge of AI-mediated judgment in Christian business education. These streams point toward a common problem where AI can shape the framing of a business problem before students have exercised judgment for themselves. Since Scripture does not treat judgment as mere opinion, preference, or technical analysis, Christian business faculty need a framework that coaches students to exercise judgment, while making that judgment visible as it forms.

COACH translates that concern into a pedagogical process by requiring students to demonstrate judgment throughout an AI-mediated interaction. The framework is based on five dimensions of AI-mediated judgment quality that follow the temporal arc of an AI-mediated decision: before AI is consulted, as its output is received, while its reasoning is appraised, when the decision is made, and when the work is submitted. Each dimension names the quality of judgment required at one of those points. First, students need intellectual agency so that AI does not become the first and only framer of the problem. Second, they need source-aware attention so they can notice how AI shapes what appears relevant, trustworthy, or certain. Third, they need evaluative discernment so they can appraise the soundness of AI-shaped reasoning. Fourth, they need prudential weighing so they can test alternatives, stakeholder effects, and moral consequences before choosing. Finally, they need accountable ownership so they can stand behind the final recommendation and its consequences. These dimensions provide the foundation for the COACH framework. Table 1 summarizes each dimension, the concern it addresses, the COACH practice that develops it, and the evidence that makes judgment visible.

Table 1

COACH Framework Dimensions and Practices

Dimension	Core concern	Practice	Visible evidence
Intellectual agency	AI may frame the problem before students form their own understanding.	Cultivate Initial Judgment	Pre-AI judgment memo; criteria list; uncertainty statement
Source-aware attention	AI may hide assumptions, omissions, uncertainty, or source influence.	Orient Attention	Annotated output; claim-assumption-omission chart
Evaluative discernment	Students may mistake fluent writing for sound reasoning.	Appraise Reasoning Quality	Evidence audit; logic critique; feasibility and ethics appraisal
Prudential weighing	Students may accept a recommendation before testing alternatives and consequences.	Challenge Before Choosing	Alternatives matrix; stakeholder-impact analysis; revised recommendation
Accountable ownership	Students may submit AI-assisted work without owning the final judgment.	Hold to Account	Final account statement; oral defense; revision narrative

For faculty, COACH supports assignment design, classroom coaching, and assessment by creating structured opportunities for students to exercise and display judgment. For students, COACH provides a disciplined process for engaging AI-generated or AI-shaped material without surrendering the work of judgment itself. COACH is therefore not an AI-use policy, a prompt-

engineering method, or a compliance checklist. It is a judgment-formation framework designed to help students move from persuasive AI-assisted input to a defensible judgment of their own.

COACH also treats judgment as a disciplined habit rather than a one-time performance. Because students encounter AI across assignments, courses, and professional contexts, the work of judgment must be renewed at each engagement. Each practice reinforces that habit at a different point in the judgment process. The following sub-sections expand on the five practices of COACH, showing their connection to the underlying dimension, the core concern they target, and the evidence the practice makes visible for assessment.

Cultivate Initial Judgment

Cultivate Initial Judgment develops intellectual agency by requiring students to form an initial understanding before AI frames the problem for them. Intellectual agency is grounded in reflective judgment, epistemic cognition, and biblical wisdom (Genesis 1:26–28; Proverbs 2:1–11), because it protects the student's role as an active knower and steward. For faculty, cultivating initial judgment means designing AI-free or AI-delayed moments in which students externalize their own reasoning before consulting AI. This approach serves as a formative safeguard that helps faculty determine whether later AI use deepened, corrected, complicated, or replaced the student's thinking. For students, this stage asks them to pause before outsourcing the first act of judgment. They should state what they think the problem is, what criteria matter, what assumptions they are making, what evidence they need, and what remains uncertain. This practice can be documented through a pre-AI judgment memo, live concept map, criteria list, or brief explanation of evidence that might change the student's preliminary view.

Orient Attention

The aim of Orient Attention is source-aware attention, which connects directly to epistemic authority, automation bias, and the biblical call to test claims (Proverbs 18:17; 1 Thessalonians 5:21),

because students learn to ask not only what the source says, but how the source has framed what counts as relevant knowledge. Students learn to examine how AI shapes what they notice, assume, trust, or ignore. This disciplined attention helps them to read AI output as a mediated message rather than as a neutral answer. For faculty, orienting attention means teaching students to notice what AI emphasizes, assumes, omits, and presents as certain. For students, this practice asks them to slow down and examine the AI-generated response before deciding whether to trust it. They should identify how the response frames the problem, what evidence it uses and leaves out, and what questions remain unanswered. Evidence may include an annotated AI output, a claim-assumption-omission chart, or a brief explanation of how the AI response shaped what the student noticed, questioned, or reconsidered.

Appraise Reasoning Quality

Appraise Reasoning Quality turns to evaluative discernment. Here, students judge the strength of the reasoning embedded in an AI-generated or AI-shaped response. The practice draws most directly from evaluative judgment and critical thinking scholarship, as well as biblical wisdom (Proverbs 12:22; Ephesians 4:25). Students learn to ask whether a recommendation is supported, honestly framed, and morally trustworthy, not merely whether it is useful, efficient, or well written. For faculty, appraising reasoning quality means requiring students to scrutinize a response's accuracy, its evidentiary support, the assumptions it rests on, what it omits, and the ethical risks it carries. For students, this stage asks them to explain why the recommendation is strong, weak, or only conditionally useful. Students should identify which claims are supported, which require verification, which assumptions are reasonable or fragile, and which parts of the recommendation require revision. Work products such as an appraisal table, an evidence audit, a credibility check, or a reasoned critique of the AI-generated output can display this discernment.

Challenge Before Choosing

Challenge Before Choosing exercises prudential weighing. Before deciding what to accept, revise, or reject, students must test a recommendation against alternatives, counterevidence, stakeholder concerns, and moral obligations. It draws from professional judgment, reasoning under uncertainty, moral judgment, business sensemaking, and the biblical principles of justice, mercy, humility, and love of neighbor (Micah 6:8; Matthew 22:37–40; James 1:5). Students learn not only whether a recommendation works, but whom it affects, what goods it serves, what harms it risks, and whether it reflects biblical principles. For faculty, challenging before choosing means designing tasks that require students to subject AI output to this same testing. For students, this practice asks them to show how they tested the recommendation before choosing a final position. A strong response will explain what evidence is needed, why that evidence matters, and how different findings would change the recommendation. Suitable artifacts include a counterargument paragraph, an alternatives matrix, a stakeholder-impact analysis, a revised recommendation, or a statement of decision thresholds.

Hold to Account

Hold to Account centers on accountable ownership, which is grounded in process-product assessment and the biblical principle of stewardship with accountability (Matthew 25:14–30; Luke 16:10–12; Romans 14:12), recognizing that while tools may assist human work, they cannot answer for it. A student's recommendation must withstand scrutiny in its claims, evidence, and ethical implications, and the student must be able to give an account and defend their final submission. For faculty, holding students to account means requiring them to disclose appropriate AI use, explain what they accepted or rejected, justify their revisions, acknowledge remaining uncertainty, and defend the final recommendation as their own. For students, this practice asks for an accounting of their process, including the recommendation being submitted, how AI shaped it, and why they are

willing to stand behind the final decision. A final account statement, a short oral defense, a decision memo, or a revision narrative can each serve this purpose.

Operationalizing COACH

The Recursion Problem

COACH must confront an objection that arises from its own design. The framework asks students to make judgments visible through artifacts, yet nearly every artifact it names is itself a text that AI can produce, indicating a problem of recursion. COACH addresses this problem through triangulation, where confidence rises when multiple forms of assessment converge. In addition, resistance to delegation to AI becomes an important criterion for selection of key assessments. Assessments that provide live, dialogic, and unscripted evidence are generally more resistant to delegation because they must be produced in real time, in the student's own voice, before a witness. Written artifacts remain essential, but their role changes to rehearsal and documentation rather than evidence. Faculty do not need to verify every COACH practice dialogically, however. For example, a small number of unscripted moments may be sampled, rotated across practices, or embedded in ordinary class activity, so that students complete the written work knowing that any part of it may need to be explained or extended in person.

Prototype Design

To validate the COACH framework, we used Anthropic's Claude Code to help produce a web-based prototype to coach students through an AI-mediated judgment task. Participants were given a short business case that asked for a recommendation of whether to adopt a vendor's predictive hiring tool as an automatic screen to reject low-scoring applicants before human review. The case paired strong but shallow trial results with an unstated fairness concern, which required participants to weigh efficiency against the moral implications of automated screening. The business case remained viewable throughout the COACH practices. Once participants indicated that they had

read the case, they were asked to Cultivate Initial Judgment by providing answers to the following four questions: "What do you think the core problem is in this case?", "What matters most here?", "What assumptions are you currently making?", and "What don't you know yet that you wish you did?".

After participants provided substantive answers to the initial questions, the prototype communicated via API with OpenAI's gpt-4o model with a system prompt that instructed the bot to behave like a study assistant helping the participant to think through the provided business case. The bot was also told to begin by offering a genuine, substantive analysis of the case, and then draw the participant's attention to what the bot emphasized, its assumptions, its omissions, and possible alternatives, stakeholders, or considerations it did not include in the analysis. The bot was then told to ask the participant what they noticed about the way the bot framed the case, with the intention of getting them to Orient Attention to the source. Participants conversed with the bot using an interface very similar to most AI chatbots. When the bot recognized that the participant had noticed at least one specific way the bot's original analysis had framed, emphasized, assumed, or omitted something, the bot replied with a short message indicating that the participant could continue discussing the source framing or continue with the study. The response also included an encoded signal to the prototype that the participant was ready to move to the next phase. The signal was hidden from the participant, but the prototype showed a continue button, allowing the participant to move to the next practice. A relief valve was also built into the prototype to allow participants to continue to the next practice after five rounds of conversation with the bot, regardless of receiving the encoded signal. In either case, the participant made the final choice to advance.

The bot was then given a new system prompt explaining that it was continuing a conversation regarding the case, and its new job was to help the participant judge whether the reasoning in play is logically valid, effectively asking the participant to Appraise Reasoning Quality.

When the bot recognized that the participant distinguished at least one supported claim from an unsupported one, it once again responded with a short message and an encoded signal to progress to the next practice as before.

The bot was then given a new system prompt explaining that its new job was to help the participant test a recommendation before they commit to it, effectively presenting a Challenge Before Choosing. When the bot recognized that the participant either engaged with at least one substantive alternative or considered conditions that could change the decision, it once again responded with a short message and an encoded signal to progress to the next practice.

The prototype then presented a prompt for the final recommendation, but on the same screen, we designed the prototype to Hold to Account by prompting the participant with the following accountability type questions: "What is the most important thing you accepted from the AI's output, and why?", "What did you reject or substantially revise from the AI's output, and why?", "What claims or assumptions does your final recommendation depend on?", "What is the strongest case against your recommendation?", and "What remains uncertain even after this conversation, and what would resolve that uncertainty?".

Feasibility Study

We invited students who were enrolled in four separate online courses to participate in a feasibility study. The study was reviewed by the authors' Institutional Review Board and determined to be exempt. A total of 47 undergraduate and graduate business students were invited to participate in exchange for a chance to win one of four $25 gift cards. Students were randomly pre-assigned to treatment and control groups (50% each). Of the 47 invited, a total of 15 began the study with only 6 completing it (n = 2 treatment, n = 4 control), for a response rate of 31.9% and a completion rate of 12.8%. Of the 6 respondents who completed the study, half were graduate students and half were undergraduates. Treatment and control groups split evenly across those academic levels.

Students in the treatment group progressed through all five COACH practices as described in the prior section, while those in the control group were simply asked to confirm that they read the case, and then, to replicate real-world interaction, they were presented with a general-purpose AI chatbot based on OpenAI's gpt-4o model with no knowledge of the case. The participant's user interface included instructions to discuss the business case with the AI assistant by asking questions, exploring different angles, and thinking through the analysis.

Session durations ranged from about 8 to 29 minutes across most participants, with one control session of 78 minutes likely reflecting an inactive open tab; typical engagement was roughly 15–29 minutes in both conditions, establishing that the COACH practices did not impose an unreasonable time burden. Overall, treatment participants interacted with the bot for four turns each, while the control group ranged from 3 to 13 turns. In addition, both treatment participants completed the AI interaction portion in one to two turns per practice, such that the five-turn relief valve was never triggered.

For each participant, the prototype recorded a complete chat transcript as well as the participant's final recommendation. The lead author evaluated each recommendation on a scale of 0–100 without awareness of the participant's group assignment. The mean treatment group score was 67.5 (scores of 75 and 60), while the mean control group score was 59.5 (scores of 88, 55, 50, and 45). Given the small sample size and the fact that the highest score was in the control group, there is insufficient evidence to conclude whether a treatment effect exists.

The lead author also scored the transcripts of all submissions for evidence of the COACH practices. This was scored by assigning a maximum of 20 points per practice for a total of 100 points per submission. This score was calculated as a manipulation check to provide evidence that the prototype elicited the COACH practices, since the treatment group was structured by those practices and the control group was never prompted toward them. The mean treatment group score

was 77 (scores of 67 and 87) while the mean control group score was 23 (scores of 5, 15, 31, and 41), suggesting that the manipulation was successful.

We then examined the individual transcripts with a focus on the case's embedded fairness concern. Both treatment participants raised this concern prior to interacting with the AI bot, while one of them sharpened it into a specific objection about algorithmic bias during the appraisal phase. In both cases, the scaffolded transcript made the development of this judgment visible. Engagement with the fairness concern in the control group was more variable, and where it appeared it was less clearly the participant's own idea. Two of the four control participants did not raise it. A third participant was presented the concern by the bot, but then appeared to set it aside, choosing to ask the bot to create a report that supported their predetermined conclusion. The fourth control participant, who also produced the highest-scoring recommendation in the study, addressed bias, legal exposure, and the exclusion of qualified applicants, but this content originated from the bot after being prompted to "explore all aspects" of the case. The final product was strong, but the transcript suggests that the reasoning behind it belonged substantially to the model, as the participant asked the assistant to state a recommendation and draft the memo. This contrast is illustrative rather than conclusive. In the treatment condition, the formation of the student's judgment was visible in the transcript, whereas in the control group, the same recommendation could reflect the reasoning from the participant or the AI bot, with no way to distinguish them. The highest-scoring control submission illustrates this directly, in that a polished recommendation concealed how little of the judgment was the student's own.

Discussion

The results of the feasibility study show that the COACH framework can be operationalized as a closed system that provides visibility into the judgment formation process of AI-mediated decisions. The prototype elicited each of the five practices from both treatment participants,

captured a complete record of their reasoning, and did so within a timeframe comparable to ordinary chatbot use. These are modest but meaningful results for a framework whose central claim is that judgment can be coached and made observable rather than inferred.

The study's most instructive finding concerns visibility rather than performance. In the treatment condition, the transcript showed how judgment formed. In the control condition, there was no way to discern judgment formation from the final product alone, illustrated by the highest-scoring recommendation in the study. This is precisely the condition the framework is designed to expose. As such, the study establishes that the framework is deployable and capable of highlighting the differences between judgment formation and judgment that was merely displayed. This result confirms that the central problem the framework addresses is not only real but observable under the conditions the framework creates.

Limitations and Future Research

These findings must be held within clear limits. The study was small, and although it was designed to detect a difference between conditions, it was far too underpowered to do so. The qualitative contrast is therefore illustrative rather than confirmatory. Whether COACH-structured assignments produce better judgment, and whether students carry these practices into settings where the scaffold is absent, are questions a larger study will need to answer.

Research in Christian business education should also examine whether biblical commitments influence the substance of student judgment. The important question is not simply whether students mention truthfulness, justice, stewardship, humility, or love of neighbor, but whether those commitments change what students notice, how they weigh evidence, and what they finally recommend. This would help distinguish biblical integration that shapes judgment from biblical language added after the decision has already been made.

Conclusion

Generative AI has not created the need for student judgment, but it has made judgment harder to see. A polished submission may no longer show whether the student framed the problem, evaluated the evidence, considered alternatives, or took responsibility for the recommendation. If faculty assess only the final product, they may reward fluency without knowing whether the judgment behind it was exercised or developed.

This paper has proposed AI-mediated judgment as a construct for naming that concern and COACH as a framework for addressing it in Christian business education. By placing judgment within the learning process itself, COACH presents a biblical understanding of judgment as wisdom-shaped accountability, so that faculty can coach judgment as it forms and students can learn to make it visible. In this respect, COACH is itself an exercise in ethical innovation: it embraces AI as a pedagogical tool while subjecting its use to biblical principles, forming graduates who can drive innovation without surrendering the discernment that must direct it. For Christian business faculty, then, the goal is not simply to help students produce better work with AI, but to form students who can judge what AI gives them and remain responsible for what they say and do.

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From Distraction to Devotion: Attention Formation as a Learning Outcome

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Abstract

Student attention is increasingly fragmented by smartphones, social media, and emerging technologies such as large language models (LLMs), posing significant challenges for learning in higher education. Drawing on cognitive science research related to working memory, attention control, and executive function, this paper argues that attention is a foundational component of learning that must be intentionally cultivated. It further situates attention within a Christian framework, suggesting that the formation of attentional habits carries both academic and spiritual significance. This paper presents a classroom-based intervention in undergraduate accounting courses that reframes attention as a learning outcome rather than a behavioral rule. Students were encouraged to develop greater ownership of their attentional habits. Preliminary findings from student reflections, survey data, and exam performance suggest improvements in focus, metacognitive awareness, and academic outcomes. Although limited by its exploratory design, the study offers initial evidence that integrating attention formation into course objectives may enhance both learning and student development. For Christian educators, cultivating attention also serves as a bridge between faith and learning, supporting practices of presence, reflection, and spiritual awareness. The paper concludes with recommendations for refining instructional approaches that promote sustained attention and lifelong learning habits.

Keywords: College teaching, working memory, attention control, pedagogies, faith integration

From Distraction to Devotion: Attention Formation as a Learning Outcome

In 2017, the artificial intelligence (AI) revolution accelerated significantly with the publication of the seminal work, *Attention is All You Need* (Vaswani, et al., 2017). In it the authors introduced the concept of self-attention within machine learning, which greatly increased training speeds and laid the foundation for current large language models. While it significantly advanced AI, the title and concepts espoused were ironically relevant to education today. Large language models (LLMs) have had the reverse effect on students' attention. Rather than increasing students' capacity for self-attention, LLMs might be contributing to its decline.

Separately, in a landmark case in New Mexico, Meta was found guilty of designing its platforms to intentionally provide addiction levels of attention hacking. Citing claims of public nuisance, prosecutors are asking Meta to include age verification and limit the ability of minors to infinite scroll (Jones, 2026). These restrictions would obviously mitigate Meta's ability to monetize attention. However, without these restrictions, the demands on students' attention will continue to increase, and negatively impact their ability to give attention in the classroom.

All these issues were brought to light in Dr. Jonathan Haidt's work, *The Anxious Generation: How the Great Rewiring of Childhood is Causing an Epidemic of Mental Illness*. In it, Dr. Haidt describes the pervasively negative impacts of smartphones on Gen Z students. As children have spent increasing amounts of time on their smartphones their devices have served as experience blockers, which have significantly impaired social learning, relationships, and emotional regulation. Additionally, as children spent more time in defend (as opposed to discover) mode, they were more prone to see unknowns as fraught with potential danger, and they are not nearly as open to learning and growing. Further, as children have spent significantly more time on smartphones, they have experienced greater rates of social deprivation and sleep deprivation which are correlated with cognitive deficits, poor learning, and lower grades. Devices are significantly fragmenting their attention and reducing

their executive function. In response, Dr. Haidt has not been shy in advocating for phone-free classrooms (Haidt, 2024). Many states have responded to his warnings by implementing such measures, with 29 states have "bell to bell" policies and 8 others restricting access during instructional time (Prothero, 2024).

Attention is at a premium. With major players trying to hack and monetize it, the expanding role of the educator is to help students see what a valuable and transformative asset attention can be. More to the point, Christian educators have the distinct opportunity to elucidate the sacred element of being fully present. To help students not only see the danger in giving their attention over, but also the spiritual dimensions of developing and honing their attention to enhance community, learning, prayer, and knowledge of God. To breathe in the sacredness and awe of a moment rather than feeling compelled to document it in a stream of selfies, posts, and hot takes. Attention is crucial not only to learning, but also to spiritual life.

In this moment, educators must take up the task of teaching students how to learn, and how to cultivate the habit of attention. To this end, this paper will explore the negative impacts of social media, cellphones, and LLMs on the students' attention and learning. It will first offer a definition of attention followed by research on attention and learning. It will then outline a classroom attempt to cultivate the habit of attention followed by research-based best practices. It will end by highlighting the spiritual component of a Christian educator's work in this area and how they might be well-served to teach such habits, in addition, to teaching their regular content.

Literature Review

The creators of the Intelligence Quotient (IQ) test, Binet and Simon (1916), argued that educational success depends not only on intelligence but also on "attention, will, and character" (pg. 254). Similarly, British educator and reformer, Charlotte Mason, constructed a large portion of her educational philosophy around the concept of attention. She states, "Attention is hardly even an

operation of the mind but is simply the act by which the whole mental force is applied to the subject at hand." (Mason, 2005, pg. 137). She goes on to suggest that the highest intellectual gifts can only be comprehended by an intentional cultivation of the habit of attention. She refers to it as a habit because she is convinced it can be developed and improved (Mason, 2005). Investigating research in the construct of attention might confirm many of Binet, Simon, and Mason's suspicions.

Working Memory

The classic definition of attention is the cognitive process of selectively focusing on certain information while ignoring other stimuli (James, 1890). Seminal work in the area of attention posited that even the most robust minds have a limited capacity for attention. Because there are many stimuli competing for one's attention, increased amounts of effort must be exerted to apply oneself to a specific task. Further, the amount of effort is often determined by the number of competing distractions and the cognitive load placed upon the student, with higher loads requiring higher effort (Kahneman, 1973). The expansion of working memory has been identified as one method of working around distractions and cognitive load.

Working memory is the finite amount of data that can be actively employed while under cognitive load. It is a temporary storage mechanism that is actively processing incoming information and arranging it to support reasoning and learning. While it does have a limited capacity, there is evidence to suggest that it can expand its capacity as a student is able to give more focused attention. Researchers have found evidence that working memory capacity is more than a passive storage system but can help a student maintain and sustain attention even in the face of competing distractions (Bialystok & Craik, 2022). Further, control of one's attention can help regulate a students' processing resources by limiting distractions and enhancing comprehension (Friedman & Robbins, 2021). Within the discipline of second-language learning, researchers again found a strong link between attention control and working memory but also found that attention control

significantly and positively impacted knowledge retention (Al-khresheh, et al., 2026). For much of the last couple of decades, working memory has been seen as the primary driver of knowledge acquisition, comprehension, and retention. However, in recent years, there has been a shift towards attention control being the primary unifying factor.

Automatic and Deliberate Attention

Regarding attention, researchers first proposed the bifurcation of cognitive processes into automatic and deliberate attention, which separates attention into exogenous/endogenous and unconscious/conscious processes (Posner & Snyder, 1975). The automatic processes are much more reactive, rapid, and stimulus-driven. They are hard-wired and can be disruptive to sustained attention, which means the costs to overcome them are high. However, they can be suppressed or redirected by deliberate processes through neural feedback loops. The deliberate processes are much slower and sequential. They require working memory and are limited in their capacity but can be activated by a clear goal or rule (Nigg, 2017). Identification of a personal goal can often be more effective than a rule in suppressing disruptive, automatic processes.

Automatic processes can be redirected into more deliberate processes or even habit formation. Using deliberate processes such as self-regulation (SR) and behavioral inhibition (BI), automatic processes can be shaped. In addition to suppressing automatic processes, students can also cultivate their executive function (EF), or problem-solving cognitive capacities. Executive function and SR can work together to elicit greater problem-solving capabilities, expanded working memory, and possible habit formation. Working together, they can construct the foundations of habit formation, which are planning, sequencing, and persisting (Nigg, 2017). The common factor underlying all these mechanisms is attention control.

Attention Control

Attention control is the domain-general ability enabling students to maintain pursuit of their goals, resist interference (distractions), and filter out irrelevant information, abandon failed solutions, and explore alternatives (Lee & Engle, 2026). Like the deliberate attention mentioned above, it is a top-down process that must be cultivated (rather than being automatic). Attention control mechanisms appear to be the unifying factor in reasoning, problem-solving, and academic achievement (Lee & Engle, 2026). Further, attention control plays a crucial role in information retrieval and memory.

Knowing how important attention control is to the learning process, professors would be well-served to have a deeper understanding of this mechanism and how to help students develop stronger measures of it. First, because it is goal-oriented, professors could help students formulate learning goals in each and every class that go beyond content mastery or grade achievement and address the foundations and habits of great learners such as knowledge acquisition, comprehension, and retrieval. Directing students toward the formation of learning goals will help activate higher levels of attention control.

Next, to support these goals, professors could actively suggest methods of planning and sequencing learning activities, both in and out of the classroom. Helping students formulate a plan for their learning is not a novel idea, however, there might be specific attention given to the learning environment outside the classroom. Encouraging students to lay aside distractions, dedicate specific time, identify quiet spaces, and even making mention of sleep habits could all be included in the conversation.

Third, professors might need to take a more active role in creating a robust learning atmosphere within their classrooms. Taking a cue from Dr. Haidt, professors must address the growing distractions of smartphones, devices, and constant use of computers with multiple tabs

open. Mitigating distractions and cognitive load is crucial to optimizing the students' attention muscle, and, thus, the learning environment. However, rather than being trapped in a constant cycle of communicating and enforcing classroom rules, professors must take up the task of convincing students to own their own learning, expand their working memory, and cultivate their attention control. While some professors might suggest that this kind of work is beyond the scope of their roles, the project described in the next section provides initial evidence that teaching students how to learn, rather than merely the content of the discipline, is worth the effort.

The Experiment

The post-COVID years have been especially challenging regarding classroom distractions. Smartphones, devices, social media notifications, and overuse of LLMs have served to create a chaotic and fragmented learning environment. During these years, many attempts have been made, both individually and departmentally, to curb these distractions and address the egregious ones. Some efforts have been met with positive outcomes, but others with lack of persistence, resistance, and even a little student disdain. Only in the last few years has a different approach been attempted. The following will outline this adjusted approach. At its core, this approach tried to fan the flames of learning habits and ownership of the learning process, through a research and reflection-based approach.

New Learning Outcome

I teach accounting, both at the undergraduate and graduate level. Last year, one learning outcome was added to all my undergraduate classes (Intermediate I, II, III and Accounting Ethics): To understand and apply the habits of a lifelong learner. While any number of habits could be chosen, I chose to focus on attention. However, instead of communicating it as a classroom rule or static expectations, I communicated it as a goal to pursue.

I emphasized the increasing pace of change in the accounting profession and the absolute necessity for students to know how to learn, in addition to the technical aspects of accounting. I tried to animate their thoughts with the joy of learning. I attempted to engage them in a semester-long conversation that would fan a growing desire to become great learners. I was taking a hint from the Little Prince where Saint-Exupery says, "*If you want to build a ship… don't drum up people to collect wood and don't assign them tasks and work… but rather teach them to long for the endless immensity of the sea*. (Saint-Exupery, 1950).

On the first day of class, I asked them to complete a forty-seven-question survey, which was a self-evaluation of their development in the five habits mentioned above (preparation, attention, engagement, curiosity, and resilience). Across all four undergraduate classes, the habit of attention was consistently rated as their weakest habit, with 42% rating it as such. Preparation and classroom engagement were the next two weakest habits, with resilience being identified as the strongest. I believed preparation and classroom engagement were associated with their attention levels, so I chose to emphasize it by creating a series of readings, reflections, and classroom discussions. I also set the task of re-organizing the pace of our class times.

After providing the individual scores back to each student, I asked them to write their first (of five) reflections in which they were asked to comment on their highest score, their lowest score, and how they might further develop the habit of attention. Predictably, many students were not surprised they struggled with attention, both in the classroom and during their studies. Many of them also communicated a willingness, and even a desire, to improve upon their attention. Their reflections noted their struggle with distractions of smartphones and laptops (particularly regarding notifications), unsuccessful attempts to multitask (even in class), and struggles to maintain self-discipline as they gained increasing amounts of freedom in their personal lives. These comments were very interesting as they were consistent with both the philosophy of Charlotte Mason, the

findings of Dr. Haidt, and with recent research on attention. Students were not unaware of their struggles with attention or their antecedents, but they lacked the necessary information, motivation, and space to work on them.

Goal-Oriented

As students develop learning habits, Charlotte Mason's philosophy identifies the arousal of self-discipline as a key component (Mason, 2005). While the professor should carefully craft a robust atmosphere of learning and development, the students must take ownership. Researchers have found deliberate attention and working memory are goal-oriented and are often activated by self-regulation and inhibition of reactive behaviors (Nigg, 2017) (Lee & Engle, 2026). All these findings suggest getting the students engaged with the idea that attention is an asset foundational to learning and something that can be shaped. Engaging them in this pursuit and filling their imaginations with visions of the immense ocean, rather than laying out rules for classroom behavior, is necessary for the student to own their learning and development. Classroom rules and enforcement can only go so far. Therefore, as part of the second reflection, I asked each of the students to construct two lifetime learning goals.

Across all four undergraduate classes, the students jointly agreed to stow and silence their smartphones during class, turn off notifications on smartwatches during class, and take notes by hand (while stowing away laptops) during the non-problem-solving portion of each class. They agreed to abide by these expectations, and their self-enforcement, through the completion of the first exam (roughly five weeks for each class). In addition, I committed to readjusting the pace of each class session by breaking up the lecture portion into 15-minute segments which were proceeded by a 2-minute period where students could catch up on their notes and ask clarifying questions. During many of these breaks, I chose one or more students to recite back the main points of the section to the entire class, without looking at their notes. Charlotte Mason suggests brief

periods of recitation are key to developing longer attention spans (Mason, 2005). Students were allowed to use their laptops during the problem portion of the class.

Throughout the semester, I assigned short readings on attention (coming from Mason, Haidt, and attention research) to the students. We would discuss them at the start of class sessions. I then assigned three additional reflections for them to complete online where they could provide further comments, insights, and questions over the readings and subsequent classroom discussions. Reflections were given a grade based on completion and timeliness. Students were asked to reflect on points such as:

- What were the main points of this reading? What did you learn about attention? How might you implement these ideas into your personal development of attention?
- How is your development of the habit of attention progressing? What has been helpful? Where are you still struggling?
- As you observe someone in your life who you consider to be a great learner, what do you notice or learn about their ability to maintain attention?

At the end of the semester, students were asked to complete the 47-question survey again. After providing individual results to the students, they were asked to provide a final reflection commenting on both survey responses, their attempts to develop their habit of attention over the semester, strategies they might try in the future, and satisfaction with this emphasis on learning habits in the class.

Results

There is only one year of results to examine with this effort. This new learning objective regarding the habit of attention was incorporated in four undergraduate classes with a total enrollment of 86 students. While this is not an empirical study, there are obvious limitations regarding sample size, single-institution sampling, convenience sampling, self-reporting bias with

reflections, and only one instructor. The goal of this paper is not to establish generalizability, but to offer initial results of a working idea to help students in their pursuit of learning. Despite these limitations, there were some encouraging results that might suggest this learning objective is worthy of future pursuit, refinement, and research.

I have been teaching Intermediate Accounting I, II, and III for seventeen years. Over that period, I have taught 23 sections of Intermediate I, 27 sections of Intermediate II, and 13 sections of Intermediate III. In each class, I have always administered three exams, with each exam covering the same content consistently over the years. I have consistently administered very similar exams across all these courses but change them enough every year to prevent students from achieving increased grades by locating a prior year's exam. I keep averages of all exams across the years.

During the year being examined in which I added the learning objective regarding the habit of attention, I administered nine total exams across all three classes. Across the nine exams, students completed two exams (one in Intermediate II, and one in Intermediate III) that were the highest average ever in my seventeen years of teaching. Additionally, the exam averages for six of the nine exams were at or above the average for the past seventeen years. There was nothing unusual about any of these courses taught regarding size of class, makeup of class (accounting vs. non-accounting majors), or selectivity of students (no entrance requirements other than passage of the two principles of accounting courses).

Additionally, as stated above, the students in each class jointly agreed to pilot this effort (no devices or laptops and adjusted pace to lectures with recitation) for the first five weeks of the class, up to the first exam. After taking the first exam and giving them back to the students, most were encouraged by the positive results. Therefore, all three Intermediate classes decided to extend the pilot until the completion of the second exam. Student interest in developing the habit of attention was high and showed positive results.

Finally, at the end of the semester, the students took the survey again, their scores were provided to them, and they completed a final reflection. After reviewing these reflections, a couple of themes began to emerge. First, the students found value in handwritten notes. They claimed it forced them to identify main points and often generated discussion during short breaks to clarify or expand upon their notes. Second, they consistently stated that stowing devices, smartphones, and smartwatches, while also closing out unneeded tabs during problem sessions was very helpful to attention. While they knew this would positively impact their learning, they were often surprised at the size of the effect it was having. Many had convinced themselves they could multi-task during class periods or remain engaged while receiving a constant stream of notifications. This view was significantly challenged as students became aware of these mini-distractions and their detrimental impact on learning. In their reflections, a couple of students even mentioned they were now intentionally removing distractions during private study time.

Third, the reflective elements of these assignments helped students build metacognition skills. Metacognition is comprised of two parts; knowledge of cognition and the monitoring, evaluation, and control of cognition (Kholodnaya, 2019). The readings on attention control provided knowledge of cognition and how attention impacts it. The reflective exercises supported the monitoring and evaluation of cognition. Metacognition has been shown to increase self-regulation of students (Balashov, et al., 2021). This self-regulation began to appear as some students mentioned a carry-over effect in other areas of their life. They noted an increased focus on attention control in sports, other classes, and personal interactions. This was a very encouraging result and evidence of the students taking the effort seriously and being intrigued by its effects. Additionally, their new-found interest in attention control caused them to seek out additional information on how to cultivate it. Two students mentioned downloading a Focus app on their phones. This is a productivity app that assists users with mitigating distractions and tracking time on task. Others

noted they were prioritizing sleep. These statements suggest some students were engaging in metacognitive efforts to expand their attention control and take greater ownership of their learning.

All these anecdotal results were encouraging to both the students and me. As previously mentioned, though, there were severe limitations in qualifying this as an empirical study. Further analysis is needed to substantiate the results. However, it does appear that understanding and applying attention control in intermediate accounting classes might have a positive impact on learning.

Conclusion

The struggle to engage and maintain students' attention is growing. The number of distractions continues to increase, and most students are aware of the competing forces vying for their attention. However, they may lack the motivation, goals, or metacognitive skills to exert and refine their attention control. Since attention is a key foundation to learning, professors should consider adopting learning objectives to assist students in these areas. In short, professors should go beyond teaching disciplinary content and help students understand how to learn.

Refining the Approach

Given the positive results listed above, I will continue to include this new learning objective in my undergraduate classes. In future efforts, a student's attention control could be encouraged through the following. First, readings and class discussions could include more research findings regarding cognitive load. Students seem surprised at their lack of ability to multi-task in a classroom. Understanding the impact of distractions on cognitive load and working memory are necessary components of students formulating learning goals and attention control. Second, introducing students to the impact of social media on their attention control is important. Initial research has found a strong negative correlation between attention control and consumption of short-form video

content (Hyliti-Sylaj & Sadiku, 2024). Helping students see the repercussions of their social media habits is important in their habit development.

Rather than policing use of devices and other distractions in the classroom, nudging students towards desiring well might help them take more ownership of their learning goals and formulation of learning habits. Helping them see their attention as a finite, malleable, and valuable asset that can be shaped and cultivated will help their goal development. Further, making students aware of concepts like flow state might help them see the long-term positive impacts of fostering attention control.

Flow is described as the state of being where one is so totally absorbed by a task, in which they effortfully and accurately perform it, so much so that they lose track of time (Nakamura & Csikszentmihalyi, 2002). It is often described as being "in the zone." While this state is difficult to achieve, the pursuit of it can be intoxicating. Think of James Hetfield being lost in the pursuit of yet another amazing guitar rift, a surgeon experimenting with a new technique, or Alex Honnold free climbing El Capitan.

Being in this state means mitigating or eliminating distractions. There is always a clear goal of pursuing a skill or answering a problem which challenges the actor. Most importantly, it takes a high level of focus on a limited field of attention (Nakamura & Csikszentmihalyi, 2002). In fact, emerging theories of flow, like synchronization of flow theory, are based upon Posner's (1975) theory of attention mentioned above (Weber, et al., 2009). Developing our attention control is so much more than a worthy classroom discipline. Actively cultivating our attention can lead to states where we are performing optimally. Our heightened attention can bring out the very best of who we are and the talents we've been given.

Integration of Faith

Beyond the academic study of attention, heightened attention appears to have intuitive connections to spiritual life. Haidt (2024) suggests that digital distractions cause drastic detriments to embodiment practices. These are physical practices like kneeling, singing, and dancing. Further, digital distractions are significantly and negatively impacting a students' ability to engage in prayer, meditation, and centered attention. Haidt (2024) calls these practices stillness, silence, and focus. Focused attention is a crucial habit to a deep spiritual life.

The Christian tradition is replete with references to attention. In the spirit of Matthew 25 (New International Version, 1984), St. Hesychios the Priest espoused the "graceful and radiant virtue" of watchfulness and described it as that which opens the intellect to the knowledge of God (Palamas, et al., 1979). The Desert Fathers created vivid imagery exhorting their followers to remain sober and awake in the face of distractions, to acquire techne, a craft of the soul (Ward, 1975). Benedictine monks revolved their days around practices that awoke all the senses to the presence of God.

The habit of attention might be best articulated by St. Ignatius and Brother Lawrence. Brother Lawrence expounded upon the Benedictine conceptions by focusing on the simplicity of attention in everyday tasks, to keep God in mind. He emphasizes that attentional training takes great perseverance in the face of distractions and resistance (Brother Lawrence, 1982). These writings could also be used as readings in support of the attention learning outcome.

St. Ignatius of Loyola gave us the seminal prayer and practice of examen. It is a prayer to end our day by looking back to see God's activity in our lives that day, naming specific areas of his grace and gifts throughout the day, noticing places of our day where we were closed off or distracted, confession of sin, and looking ahead to tomorrow. Through Spirit-guided insight, it helps us see the inclinations of our heart, how God is continually drawing us to Himself and seeing the multitude of

ways He is constantly revealing Himself to us. It is a practice which excites our attention. Through daily practice, we become more aware of God's activity. Asking students to practice this reflective prayer and its daily questions could be a robust way of helping them see the spiritual connections to the habit of attention.

Loving God with all your mind requires us to cultivate our attention. Not only does it jumpstart our learning, but it can also activate optimal learning in flow state and help us experience the sacredness of being fully present with others and God. Attention is an asset to be grown, a muscle to be exercised, and a gift from God to be stewarded. Seeing it as such should give us great pause when we unconsciously and freely hand it over to those trying to hack and monetize it. However, having your eyes, mind, and heart directed to the same place, while holding other thoughts and distractions captive, is a bridge connecting faith and learning. Therefore, intentionally setting aside class space to help students form the habit of attention is part of the special fruit of Christian higher education.

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ABSTRACTS

Accounting

Quaker Capitalism and Faithful Representations

Greg Tindall, *Palm Beach Atlantic University*
Joao Faria, *Florida Atlantic University*
Siri Terjesen, *Florida Atlantic University*
Melina Wilson, *Florida Atlantic University*

Capitalism seeks to accumulate capital for investments that compete among alternatives. To evaluate for whom capitalism functions, we consider duties owed and claims on profits, in terms of minimums instead of best interests. To assist, we invoke Quaker Advices to ensure that financial statements faithfully represent what is left for equity to retain. Our theoretical model predicts negative consequences of environmental, social, and governance factors to output and stock markets. Our empirical evidence presents the negative impact of the 2019 Business Roundtable Pledge for stakeholders over stockholders. We conclude that Quaker Capitalism considers stakeholders without misrepresenting financial statement to stockholders.

A Review of the Compatibility of Women, the Accounting Profession, Working from Home, and Being a Stay-at-Home Mother (Research Incubator)

Avery Shope, *North Greenville University*
John Duncan, *North Greenville University*

This study examines the compatibility of careers in public accounting with the roles of motherhood and family life. Drawing on existing literature, the paper explores the challenges women face when balancing professional responsibilities with family commitments. The study also investigates the extent to which accounting firms have adopted "women-friendly" workplace practices designed to improve the recruitment and retention of female professionals.

Learning the Language of Business: An Intentionally Designed Experiential Campus Partnership in Principles of Accounting

Santhosh Abraham, *Union University*
Georg Pingen, *Union University*
Karen Miller, *Union University*

This paper examines an intentionally designed experiential campus partnership in Principles of Accounting II. Using a mixed-methods design, it explores how an authentic costing project with a university makerspace influenced student learning. Findings indicate improved conceptual understanding, greater confidence in applying activity-based costing, and gains in professional judgment and teamwork, providing a practical framework that other institutions can adapt.

Megachurch Financial Transparency and Misconduct

Dongye Song, *Calvin University*

I study the association between megachurch financial transparency and the overall likelihood of misconduct of the megachurch. Using the membership of the Evangelical Council for Financial Accountability (ECFA) as a proxy for higher financial transparency, I find a negative association between megachurch financial transparency and misconduct likelihood.

Economics

Chesed Economics: The Christian Alternative to an Egoism-Driven Marketplace (Research Incubator)

Larry Locke, *University of Mary Hardin-Baylor and LCC International University*
Kelsiy Scarborough, *University of Mary Hardin-Baylor*

In this paper, the authors examine a series of historical Christian communities that utilized neither economic egoism nor central planning as a basis for their economies but were nonetheless successful, both in economic terms and in other measures of human flourishing. They examine some of the characteristics of these successful Christian communities and consider whether they might be scaled to cover an entire national economy, based on the Hebrew concept of chesed (unfailing love).

Entrepreneurship

The Slow Drift of Good Intentions: A Biblical Framework for Ethical Decline in Innovative Organizations

Emmett Dulaney, *Anderson University*

Innovation often begins with good intentions yet produces ethically troubling outcomes over time. This paper defines ethical drift in innovation systems as gradual deviation from original moral intent through iterative decisions, performance pressures, and normalized boundary shifting. Drawing on business ethics, innovation literature, and biblical narratives, it develops a four-stage model (initiation, optimization, normalization, and institutionalization) explaining how compromise becomes embedded in innovation processes. Using electronic monitoring as an illustrative case, the paper demonstrates how ethically aligned innovations can evolve toward concerning applications. The paper concludes by proposing biblically grounded mechanisms for interrupting drift and sustaining ethical alignment.

Enacted Trust: How Christian Entrepreneurs Manage AI in Consequential Venture Decisions (Best Paper Award Winner)

Miriam Cavalcanti Junqueira, *LeTourneau University*
Allan Discua Cruz, *Lancaster University*

This research uses a trust perspective to explore how entrepreneurs' values-based orientation translates into stakeholder trust as generative AI mediates consequential venture decisions. We drew on qualitative data from three cases in commercial real estate, supply chain management, and creative industries. Our empirical findings present five entrepreneurial work routines that underpin an inward-outward axis perspective, each informed by Christian values and professional experience. Further highlights include how routines shape ethics and stakeholders' trust.

Ethical Scaling: A Case Study Framework of Licensing as a Sustainable Growth Strategy for Small Businesses (Research Incubator)

Mauvalyn Bowen, *Bethel University*

Small firms often face capital constraints when scaling. This research incubator paper explores licensing as a flexible, low-risk alternative to traditional franchising. Through a qualitative case study of a home-maintenance enterprise, we examine licensing as a model for ethical innovation, biblical stewardship, and community empowerment. Using thematic analysis of interviews and internal documents, this study shares preliminary insights, a "Licensing Readiness Checklist" for owners, and a curriculum integration plan.

Architecting Ethical Innovation: A Stewardship-Led Framework for Digital Maturity in Faith-Based Microfinance (Research Incubator)

Pierre Armel Kono Minkoulou, *Regent University*
Emilyn Cabanda, *Regent University*

As faith-based microfinance institutions increasingly adopt automated lending systems, digital maturity models risk prioritizing technological efficiency over mission fidelity and client welfare. This study addresses that gap by developing the Stewardship-Led Digital Maturity Model (SDMM), a framework linking Christian mission, human dignity, client protection, board accountability, and external assurance. Using comparative documentary analysis of HOPE International, Opportunity International, ECLOF International, and Tulay sa Pag-unlad, Inc. (TSPI), the study finds that technological sophistication does not match governance maturity: none of the four meets the model's Transformational gate. The SDMM offers practitioners a diagnostic tool for evaluating digital stewardship.

Ethics

From Information to Formation: A Value Theory for Christian Higher Education in the AI Era

Martin Jones, *Anderson University*

For the first time in nearly a millennium, the university has lost its monopoly on knowledge. Knowledge is no longer scarce. Competent academic output is no longer the achievement the academy has historically certified. This session advances a value theory for Christian higher education in the AI era, arguing that the irreducible value of education lies not in information but in formation, and that Christian institutions are uniquely positioned to make this argument.

Ethical Innovation and Moral Perceptions: A Care Ethics Lens for Christian Business Education

Caroline Herschbach, *Dallas Baptist University*

This paper argues that ethical innovation requires more than evaluating outcomes after decisions are made. For Christian business education, innovation must be understood as stewardship before God, oriented toward love of neighbor, human flourishing, and relational responsibility. A care ethics lens strengthens moral perception by helping future leaders see affected people clearly, discern responsibility faithfully, and embed care into business practice.

Starbucks Korea Tank Day - An Ethics Case Study

Bob Roller, *LeTourneau University*

Starbucks Korea ignited a firestorm with its 2026 Tank Day campaign, coinciding with the anniversary of troops firing on pro-democracy protesters on May 18, 1980. This ethics case is meant to empower future Christian business leaders to drive ethical innovation by making them consider appropriate use of AI, the necessity of following internal controls, the importance of political, cultural, and historical factors in marketing, and the need to make ethical decisions that reflect God's character.

Does a Righteous Firm have Obligations to the Poor? (Research Incubator)

Steven McMullen, *Hope College*

"Economy of Communion" firms give a third of all profits to the poor. Should other firms follow this example? This paper outlines a Biblical framework of justice and righteousness that assigns obligations to those who own productive capital, and I argue that this obligation should include firms. After grappling with the interpretive difficulties, I consider three objections and note that this obligation may conflict with legal institutions and the long-term viability of many firms.

Innovative Christian Pedagogy for Developing Ethical Leaders: Empowering Student Influence Through Trust, Inclusion, and Real-World Consulting

Joseph Kuvshinikov, *Gannon University*

This pedagogical paper examines ethical power and influence dynamics within and across student teams composed of individuals with diverse experiential, motivational, and disciplinary backgrounds. It considers how status, domain-specific knowledge, motivation, and power-dependence relationships shape participation and collaboration. The paper also presents inclusive, equity-centered leadership development practices designed to empower all students to contribute meaningfully and grow as ethical leaders.

AI: An Ethics Advisor or a Moral Decider?

David Hagenbuch, *Messiah University*

Do people who use AI for most decisions pause when it comes to using AI for moral choices? To answer this question, this mixed-methods study used source credibility as a theoretical framework and evaluated reactions to an innovative AI-based app for supporting ethical decision-making in marketing. Although participants rated the app as expert and trustworthy, they still showed reluctance to cede control to AI for moral choices. Discussion considers likely reasons as well as faith implications.

Faith Integration

Developing Business as Mission Internship Program for University Students (Research Incubator)

Hyeong Deug Kim, *The King's University*
Jeff Miller, *The King's University*

Business education often emphasizes technical competence and organizational performance while offering limited opportunities to integrate faith, ethics, and leadership. This Teaching Talk presents a Business as Mission internship that combines coursework, training, and cross-cultural placements to develop ethically grounded Christian business leaders. By reframing business beyond profit maximization, the program emphasizes stewardship, justice, and holistic impact while fostering intercultural competence and vocation-centered leadership.

Redeeming Competition: Teaching Christian Business Students to Compete Faithfully (Best Paper Award Winner)

Melinda Rangel, *Tabor College*

This paper argues that competition, when properly understood, is not inherently opposed to Christian discipleship but can serve as a God-given mechanism for stewardship, discovery, service, and human flourishing. Drawing from biblical theology, business literature, and classroom practice at a Christian liberal arts college, a framework for understanding redeemed competition is presented through six dimensions: competition as creation mandate, discovery, sharpening, neighborly love, community, and stewardship. The article ends with practical teaching applications.

Created to Design: Design Thinking & Faith Integration (Research Incubator)

Glenn Grossman, *Grace College*
Gabe Tribbett, *Grace Theological Seminary*

Design thinking is a framework to create new products and services. Human centered design, found within design thinking, places the "person" at the center of needs identified for a solution. Design thinking is also a methodology that allows instructors to teach students that business design demonstrates God's divine and creative nature. At Grace College we offer a program called Lancer Labs where students work on a business need with a firm using the principles found in design thinking along with faith integration. This presentation will illustrate how design thinking and faith integration work together.

The Unadorned Word: Cognitive Fluency, Rhetorical Restraint, and the Persuasive Power of Direct Scripture (Research Incubator)

Zach Plunk, *Texas Lutheran University*

Marketing prizes polish and storytelling as engines of persuasion. In sharing the Christian gospel, the opposite may hold: plainly quoted scripture can persuade more than crafted narrative. Its effort deepens engagement (the cognitive fluency paradox), and its restraint signals no manipulation, lowering listeners' guard. An in-progress field study compares plain and creative delivery; early results from 45 interviews favor the plain word across diverse audiences.

Teaching Research by Doing Research: A Stakeholder-Engaged Capstone Model for Christian Business Education

Tetyana Khramova, *The King's University*

This paper presents a faith-integrated, stakeholder-engaged capstone model from a Christian business program. Four student teams conducted human-participant research for real organizations, and all four, working independently, followed evidence beyond the stakeholder's original request -- the paper's central finding. A central case, an alumni engagement study, shows how this pivot occurred and argues such capstones build competence alongside integrity and vocational judgment.

Called to the Table: A Christian Theology of Negotiation

Suraj Sharma, *Calvin University*

Negotiation is a complex process in which nearly all individuals within organizations engage. Business negotiations involve not only economic considerations, such as securing the best price, but also relational and social dynamics, such as building trust and rapport, creating a paradox around what constitutes the best outcome. This complexity deepens for the Christian negotiator. This paper proposes that to negotiate in accordance with God's intended order, negotiators should order their loves rightly towards God and grow in virtue.

Created for Holiness: Developing a Conceptual Framework of Holiness Through the Lens of Financial Accounting

Emily Walsh, *Asbury University*

This paper explores the relationship between financial accounting and holiness by using the Conceptual Framework for Financial Reporting as a lens for developing a conceptual framework of holiness. Drawing from financial accounting concepts and Wesleyan holiness theology, the paper examines why one pursues holiness, what characterizes it, and how it is lived out. Concepts of accountability, internal controls, and responsibility illuminate humanity's dependence on God's grace, the transforming work of the Holy Spirit, and the pursuit of becoming more like Christ through perfect love.

Ending Well: Stewardship and Institutional Completion

Andrew Hibbert, *Palm Beach Atlantic University*

Mission-driven organizations may outlast the conditions that justified their creation. Christian leadership scholarship has examined mission drift during institutional continuation but less often fidelity in conclusion. Drawing on four biblical cases, this essay argues that leaders must first ask whether continuation remains warranted. Institutional conclusion may represent not failure, but faithful stewardship of a completed, superseded, or corrupted mission.

Beyond the Classroom: An Intentional Formation Model for Christian Women: Preparing Women to Live and Lead with Christ-Centered Purpose Beyond College (Panel)

Kimberly Merritt, *Oklahoma Christian University*
Kerianne Roper, *Oklahoma Christian University*
Emma Head, *Oklahoma Christian University*
Katie McCook, *Oklahoma Christian University*
Haley Young, *Oklahoma Christian University*

Christian universities have a unique opportunity to prepare women for lives of faithful influence by grounding them in their identity in Christ. This panel presents a holistic model that intentionally integrates Bible study, mentorship, Women's Chapel, and leadership experiences to foster spiritual, personal, and professional flourishing while equipping women to live and lead with Christ-centered purpose in every sphere of life.

Why Christians Belong in the Defense Industry: A Case Against Withdrawal

Thomas Salvan, *Palm Beach Atlantic University*

Facing calls for Christian divestment from the defense industry, this paper argues withdrawal is the less defensible posture. Drawing on the just war tradition, Luther's doctrine of vocation, Romans 13, and Bonhoeffer's ethic of responsible action, it argues Christian presence, not withdrawal, provides that restraint. The paper engages the strongest counterarguments, Anabaptist nonviolence, Catholic institutional divestment, and Pope Leo XIV's recent critique of just war theory, conceding real limits where they exist. Drawing on Hirschman's exit-voice framework and finance research, it shows presence carries greater practical leverage than divestment, with implications for Christian business faculty and practitioners.

Giving Instead of Getting: When Is Profit Maximizing Unbiblical? Maximum Value Extraction vs. the Biblical Examples of Gleaning and the Sower

Andrew Gustafson, *Creighton University*

When should a Christian not pursue profit maximization? I will argue that profit maximization (particularly when conceived in terms of value extraction) is in many situations antithetical to a Christian approach when one considers the Biblical command for gleaning (leaving excess behind for the poor to have), the parable of the Sower (which seems like inefficient allocation of resources), Sabbath years and Jubilee. I will finally provide some concrete examples of how not pursuing profit maximization seems to be more in line with Christian values, drawing on examples from the Economy of Communion approach to business.

Loving the Lord with Your Mind: Intersecting Faith, Accounting, and Analytics Using Course Modifications in Two Online Graduate Accounting Analytics Courses (Research Incubator)

Karen Miller, *Union University*

This study demonstrates faith integration using peer synthesis via discussions and a fraud-case assessment redesign for the artificial intelligence era. The two-course modifications incorporate continuity through analytics and fraud courses. The analytics course modification involves an online discussion design with peer reflections challenging students to love the Lord with their minds by asking the right questions in the analytics process. The fraud course modification continues the focus on scripturally based critical thinking by converting a major fraud-case essay into a professional ethics presentation with disclosure and evaluation of AI usage. These modifications illustrate faith integration without a complete course redesign.

Finance

Using Artificial Intelligence to Teach Finance from a Christian Perspective

Kent Saunders, *Anderson University*

This paper examines the use of AI tools while maintaining theological integrity, academic rigor, and the formational goals distinctive to Christian education. This study documents a framework for faithful AI integration grounded in the biblical principles of stewardship, justice, human dignity, and truth-seeking. The framework is illustrated through a case study of integrating AI into a financial management course covering interest rates, the time value of money, and ethical lending practices.

Two Pouches: Paul's First-Century Financial System and Its Lessons for Christian Financial Formation (Research Incubator)

Dave Pederson, *Wheaton College*

Where did Paul keep his money? Reconstructed from papyrological, numismatic, and archaeological evidence, this paper argues Paul ran a deliberate two-pool system: daily subsistence, self-funded by his trade and carried on his body, and mission reserves, funded by partnership gifts and custodied in trusted households rather than transported. This architecture was theological, embodying Paul's conviction that gospel credibility requires financial independence from recipients, with implications for Christian financial formation.

Innovation and Biblical Principles in Personal Finance Education: Preparing, Equipping and Empowering Christian Business Leaders through a Managing Personal Finance Course (Research Incubator)

Michael Crawford, *Indiana Wesleyan University*
Heather Chadwick, *Charleston Southern University*
Phil Gelatt, *Ron Blue Institute*

A biblically based personal and family finance course is important to the vision and purpose of a Christ-centered and biblically based liberal arts university education. We present empirical research looking at the impact that such courses have in the life of student from a selection of Christian Colleges and Universities and compare outcomes from students who have taken such a class to those who did not while in their undergraduate education. The outcomes of the study revealed a significant difference between the groups in multiple areas of financial literacy, contentment and stewardship.

The Interaction Between AI and Finance (Panel)

Michael Kolta, *Palm Beach Atlantic University*
Scott Pearson, *Palm Beach Atlantic University*
Ben Devan, *Palm Beach Atlantic University*

The interaction between artificial intelligence (AI) and finance is enormous. This includes the use of AI for stock trading, financial planning, the replacement of human workers, and more. Conversely, the funding of AI has had a huge impact on the success of the major players in the AI space. This panel will deliberate some of the most challenging issues related to the use and development of ethical AIs and how that impacts capital markets, both on a macro and micro level.

Cultural Differences in Financial Literacy: A Biblical Framework for Ethical and Inclusive Financial Education (Research Incubator)

Heather Chadwick, *Charleston Southern University*
Thomas Vanderhorst, *Charleston Southern University*

Financial literacy is more than technical knowledge of budgeting, saving, debt, and investing. Family financial socialization, cultural context, access to financial resources and institutional, trust, and prior economic experiences influence how individuals understand and apply financial literacy. This conceptual paper examines racial, ethnic, and cultural differences in financial literacy and considers how Christian business leaders can respond ethically through biblically grounded and culturally responsive financial education.

FinTech Pilgrims: A Faith-based Exploration of Developing Practices for Teaching Finance in the Age of AI (Research Incubator)

Jacob Ratliff, *University of the Cumberlands*

Using a narrative review approach, this research examines current themes within Christian Higher Education, AI in Education, Christian Faith, and Finance to establish a proposed framework to help Christian educators navigate AI integration in the academic discipline of finance through a biblical worldview. The paper explores how rapid changes in higher education due to the widespread use of AI impact Christian Higher education, and Scripture's principles for vocation and finances that should guide the responses of Christian finance educators. This working paper serves as a catalyst for future academic study, including empirical research surrounding the application of the proposed framework.

Higher Education Administration

Business Accreditation Today: Choices, Advantages, Costs, and Processes (Panel)

Bob Roller, *LeTourneau University*
Cora Barnhart, *Palm Beach Atlantic University*
Chrissy Martin, *Belhaven University*
Eveline Lewis, *LeTourneau University*

This panel will discuss the advantages, costs, and processes for business accreditation with each of the three U.S.-based business accreditation associations. Panelists include leaders from business schools accredited by each of these associations and a moderator who has experience with all three organizations. The session will be designed to allow time for Q & A. The goal is to provide information for attendees that will promote quality in Christian higher education in business.

Human Resource Management

Civility, Conviction, and Christ: Navigating Political Polarization at Work (Research Incubator)

Ben LeVan, *Charleston Southern University*
Darin Gerdes, *Charleston Southern University*
Emory Hiott, *Charleston Southern University*

Political polarization increasingly undermines workplace trust, collaboration, productivity, and organizational culture. This session examines the growing challenge of political incivility, reviews practical HR strategies for fostering respectful dialogue, and explores how Christian leaders and employees can model conviction without hostility. Participants will discover how a Christ-centered identity and servant leadership approach can help redeem civility while maintaining biblical truth.

Using Personality Profile Assessments in the Classroom and Beyond:
Useful Practices to Engage in Human Resource Management

Denise Murphy Gerber, *Geneva College*
Matthew Fuss, *Geneva College*
Curtis Songer, *Geneva College*

This paper will include a summary of two of the popular personality profile assessments (the Big Five (OCEAN) and the DiSC), a strengths assessment (CliftonStrengths) and a Spiritual Gifts assessment. The paper will include a comparative analysis between the assessments, specific applications of the assessments providing useful practices within the management and human resource management classroom context and within the human resource industry. Last, we will make connections to the conference theme of ethical innovation.

Information Systems & Analytics

Auditing the Auditor: A Time-Series Analysis of AI-Classified Corruption Findings in Brazil

Samuel Mamede, *Taylor University*

As Brazil's CGU municipal audit program shrank two-thirds (2006–2018), did oversight quality suffer? Analyzing 82,665 real audit findings via structural-break tests, segmented regression, and decomposition methods, this study finds contraction drove sharper targeting: severe findings rose to record highs, unrelated to electoral timing. A hopeful lesson for budget-constrained anti-corruption institutions, closing with a Christian perspective on institutional stewardship.

An Artificial Intelligence-Based Corruption Database for Ethical Analysis from a Christian Perspective: Evidence from the United States (Research Incubator)

Samuel Mamede, *Taylor University*

Corruption research has long relied on subjective perception indices that can't support county-level analysis. This paper presents a construction plan for an AI-assisted, county-year U.S. corruption database built from objective records, enforcement actions, audit findings, and spending data, rather than perceptions. Extending evidence from Brazil linking religiosity and corruption, the project is grounded in a Christian understanding of public authority as stewardship.

Cultivating a Flying Fish Mindset (Best Paper Award Winner)

Danxia (Christina) Chen, *Dallas Baptist University*
Sharon Gorikapudi, *Dallas Baptist University*
Cicely Jefferson, *Dallas Baptist University*
Joanne Hix, *Dallas Baptist University*

Today's society is like turbulent water, full of changes and challenges. Business organizations navigating through AI transformation can learn valuable lessons from flying fish. Flying fish do not just survive predators, they soar above them. The researchers proposed a flying fish framework, grounded in Biblical principles and servant leadership, cultivating students with a flying fish disruptive mindset. Six key lessons and AI applications are intensively discussed. This theoretical and practical framework provides guidelines and key concepts for preparing future Christian business leaders to create, develop, and deploy ethical and responsible AI systems in various disciplines and organizations.

Developing Ethical Christian Cybersecurity Leaders Through AI-Augmented PCAP Analysis and Network Forensics Education

Bryan Malone, *Colorado Christian University*

Artificial intelligence (AI) is transforming cybersecurity operations, threat hunting, network monitoring, and incident response. As organizations increasingly integrate AI-assisted technologies into security operations centers, higher education institutions face growing pressure to prepare graduates who can effectively leverage AI while maintaining critical thinking and ethical decision-making. Guided by 1 Thessalonians 5:21, this paper positions AI as an analytical assistant rather than an autonomous decisionmaker.

Leadership

Shepherding the Digital Classroom: The Leadership Role of Christian Educators in Preparing Students for GenAI Literacy

Steve Panczak, *Palm Beach Atlantic University*
Emily Webster, *Palm Beach Atlantic University*

The study reviews the authentic leadership model, which integrates servant, transformational, and ethical leadership principles that business educators should embrace in higher education today. The research shows how educators can blend leadership styles to leverage GenAI to improve student learning and success while upholding Christian values. Faculty development programs should prepare educators to design curricula that integrate GenAI, prioritizing the cultivation of agency over convenience. The findings support peer-reviewed research on how business educators can align curricula with their institution's mission and teaching guidelines.

The Biblical Principle of Gratitude Can Contribute to Ethical Innovation in Organizations

Jeffrey Godwin, *Saint Vincent College*
Susan Hershelman, *Liberty University*

This paper presentation provides a conceptual framework based in the biblical principle of gratitude and its potential contribution to ethical innovation in organizations. We propose that from a Christian perspective the practice of gratitude can be enhanced through training by utilizing Thought Self-leadership (TSL). Furthermore, individuals who utilize gratitude thought patterns will collectively influence the organizational culture. Organizations with higher levels of collective gratitude will experience increased levels of ethical innovation. We provide a model that guides our conceptual development of the value of gratitude for Christian leaders to drive ethical innovation.

Banking Intelligence: Interpersonal Quantitative Study Examining Social, Emotional, & Cultural Intelligence Among U.S. Bankers (Research Incubator)

H. Rick Jordan, *Dallas Baptist University*
Danxia (Christina) Chen, *Dallas Baptist University*

This quantitative correlational study examined relationships among social, emotional, and cultural intelligence in U.S. banking professionals, using the TSIS, WLEIS, and CQS. Results from a nationally diverse sample revealed significant interrelations among these interpersonal competencies, extending leadership literature by demonstrating that cultivating such intelligences may strengthen leadership effectiveness, customer engagement, and organizational cohesion in banking.

Leadership Risk-Tolerance: A Biblical Model for Small Business Adoption of AI (Research Incubator)

Jacob Voegel, *Coastal Carolina University*

This paper develops a biblical model of leadership risk-tolerance, grounded in the Parable of the Talents (Matthew 25:14-30) and the principle that greater entrusted capacity brings greater expected stewardship (Luke 12:48), and applies it to small business AI adoption. It hypothesizes that firm size and industry sector predict adoption rates. Using Census Bureau BTOS data, cell-level regressions will test this across sectors and firm sizes. Theological framework, literature, and hypotheses are presented.

Stewardship Under Pressure: A Qualitative Single Case Study of CEO Succession Planning Challenges in a Hospitality SME (Research Incubator)

Denise Mazzei, *Culinary Institute of America*

In small to medium enterprise (SME) hospitality organizations, some CEOs overlook succession planning as a strategic imperative. Within the context of SME hospitality organizations, this qualitative method single case study focused on illuminating why some CEOs do not prioritize succession planning amid competing operational demands. The study addressed three core questions: the need for executive transitions, institutional barriers, and how current CEOs develop future leaders outside formalized tracks. Findings revealed that succession planning as part of an organization's strategic plan ensures the deliberate cultivation of internal talent, offers a sustainable leadership model, and leads to organization sustainability.

Servant Leadership as Conceptualized in Christian-Focused Professional Journal Articles: Factor Analysis and a Theoretical Framework (Research Incubator)

Larry Daniel, *Anderson University*

The purposes of the present study were to (a) review journal articles on Christian servant leadership, (b) codify articles using key words identified in previous studies as characterizing servant leadership, and (c) formulate a framework for understanding how Christian servant leadership looks within organizations. Coded key word counts from 33 articles were subjected to principal components analysis which yielded five factors: relationships, organizational health, strengths-based outcomes, organizational culture, and leader motivation. AI software was used to build a conceptual map connecting the five concepts and original variables into a framework for understanding how Christian servant leadership functions within organizations.

Research Insights on Leader Development: Developmental Roles, Contexts, and Behaviors for Identifying and Developing Leaders (Research Incubator)

Justin Irving, *The Southern Baptist Theological Seminary*

Based on a survey of 231 Christian leaders in the nonprofit, education, church, and business sectors, this project identifies the people/roles, contexts, and leader behaviors frequently associated with the development of surveyed leaders. The study findings provide insights for educators and leadership practitioners in the work of identifying and developing prospective leaders. Study implications will be discussed and explored.

Marketing

Who Wrote This Review? When AI Sounds More Human Than Humans

Rebecca Gunn, *John Brown University*

This exploratory mixed-methods study compares consumer perceptions of human-authored and AI-generated reviews. While the human-authored review resulted in stronger consumer behavioral intentions, respondents struggled to accurately identify authorship as the AI-generated review was perceived as significantly more human than the actual human-authored review. These findings have implications for consumer trust, AI transparency, and ethical communications in an era where AI-generated content is increasingly imitating narrative cues traditionally included in human writing.

Artificial Negligence: AI, Social Media, the Online Data Ecosystem and the Erosion of Spirituality

Chris Hinsch, *Grand Valley State University*
Anna Walz, *Grand Valley State University*

This paper examines applied AI, social media and the online ecosystem through a Biblical lens. Specifically, it creates a conceptual framework that analyzes existing research on the design and anthropological outcomes of this online ecosystem in light of Paul's call to put to death the flesh and live Spirit-led lives. Believers who understand the architecture of these systems are better positioned to exercise deliberate, disciplined engagement with these platforms rather than unreflective use.

The FAIR Framework: A Biblical Assessment of Algorithmic Personalized Pricing (Research Incubator)

Tetyana Khramova, *The King's University*

This working paper develops the FAIR framework — an innovative, biblically grounded tool empowering Christian business leaders to evaluate algorithmic personalized pricing ethically. Drawing on theological reflection, a pilot study, and interviews, it translates four biblical principles into practical dimensions: Faithful in Stewardship, Accountable in Covenant, Impartial in Outcome, and Revealing in Method. The goal is to refine it into a validated instrument for ethical business decision-making.

Research

CBFA New Editors Panel for 2026 (Panel)

Marty McMahone, *University of Mary Hardin-Baylor*
Chris Langford, *University of Mary Hardin-Baylor*
Joseph Snider, *Indiana Wesleyan University*
Cora Barnhart, *Palm Beach Atlantic University*

The Christian Business Faculty Association has new leadership for its academic journals. The Director of Publications and the editors for each of the journals have all changed during this year. The presenters address topics that most need to be addressed in papers, best times to submit papers for each journal, timelines for processing of papers, and future directions of the journals. They also discuss how CBFA members can help with reviewing and improving papers that are submitted.

Teaching – Traditional Undergraduates

Six Degrees of Separation: A Semester-Long Project on Networking (Research Incubator)

Robert Holbrook, *Ohio University*

This paper describes a semester-long experiential networking project that teaches students to build relationships through introductions and mutual connections rather than transactional self-interest. Students complete two networking phases involving informational interviews and problem-solving through subject matter experts. The project develops networking, communication, strategic thinking, and ethical relationship-building skills while emphasizing collaboration, connectedness, and professional growth.

Beyond Group Projects: Structured Team Development for Student Collaboration

Shyla Allard, *Bethel University*

Team projects are common in business education, yet students often receive little instruction in how to collaborate effectively. This SoTL study examined how structured team-development practices influenced student collaboration in a semester-long undergraduate marketing course. Using a longitudinal mixed-method design, findings suggest that increased awareness of interpersonal differences was associated with intentional behavioral adaptation, improved communication, and enhanced collaboration.

Artificial Intelligence and the Redemptive Reconstruction of Higher Education

Emory Hiott, *Charleston Southern University*
Darin Gerdes, *Charleston Southern University*
Ben LeVan, *Charleston Southern University*
Maxwell Rollins, *Charleston Southern University*

Generative artificial intelligence has disrupted our traditional model of higher education. Gen AI made it remarkably easy for students to cheat, undermining the integrity of a higher education model focused on outcomes. Gen AI did not create the academic integrity problems professors face, but it has exacerbated the problem. While the emergence of this technology has created some challenges, it has also introduced useful ways to enhance what we do in higher education. In this paper, we catalog what professors are doing to redeem higher education through the proactive use of Gen AI.

From Distraction to Devotion: Attention Formation as a Learning Outcome (Best Paper Award Winner)

Josh Sauerwein, *Lubbock Christian University*

Student attention is increasingly fragmented by smartphones, social media, and emerging technologies, posing significant challenges for learning. Drawing on research related to working memory, attention control, and executive function, this paper argues that attention is a foundational component of learning that must be intentionally cultivated. It situates attention within a Christian framework, suggesting that the formation of attentional habits carries spiritual significance. This paper presents a classroom-based intervention in undergraduate accounting courses that reframes attention as a learning outcome rather than a behavioral rule. Preliminary findings suggest improvements in focus, metacognitive awareness, and academic outcomes.

A Faculty Development Competency Matrix for AI-Enabled Teaching

Brad Gatlin, *John Brown University*

Generative AI has outpaced higher education's ability to respond, leaving faculty to navigate academic integrity, teaching, student AI use, and workforce preparation with limited guidance. This paper proposes a Faculty Competency Matrix for AI-Enabled Teaching and an accompanying self-assessment to guide faculty development while preserving professional autonomy and preparing students for AI-enabled professional work.

COACHing Students to Think Beyond the Algorithm: A Framework for AI-Mediated Judgment (Best Paper Award Winner)

Alina Leo, *Cedarville University*
John Delano, *Cedarville University*

Generative AI lets students produce convincing work while obscuring whether they exercised judgment and may replace the formative struggle through which judgment develops. This paper introduces AI-mediated judgment as a construct and proposes COACH, a five-practice framework anchoring assessment in live, unscripted demonstrations rather than written artifacts. A web-based prototype piloted in a feasibility study (N=6) elicited all five practices and made judgment formation visible.

From Disruption to Discernment: Faculty Lived Experiences of Students' AI Use in Christian Higher Education

Charlene Geisler, *Liberty University*
Kimberly Cashman, *Liberty University*
Nomikos Kipreos, *Liberty University*
Collin Lyons, *Liberty University*
Toni E. Perry, *Liberty University*
Shawn K. Ruiz, *Liberty University*

The increasing use of artificial intelligence (AI) by students in higher education has created significant challenges and opportunities for faculty. This study examines the research question of how faculty at a Christian higher education institution experience students' use of AI in their classes. Using Mezirow's Transformative Learning Theory (TLT) as a framework, this study explored how faculty in a Christian higher learning institution navigated the disorienting dilemma caused by the increasing students' use of AI in their classes and how these experiences transformed their perspectives and pedagogy.

Teaching Business Ethics Innovatively with Mindful Marketing (Best Paper Award Winner)

David Hagenbuch, *Messiah University*

Some business programs require a business ethics course, but most find a standalone marketing ethics class infeasible, which is unfortunate given the field's pervasive impact on the world. For one business ethics course, an instructor uses a unique marketing ethics paradigm, Mindful Marketing, that is relevant and engaging for all majors, as well as for people with different worldviews. Still, its core values are rooted in Christian faith.

TEACHING TALKS ABSTRACTS

Accounting

Accounting Graphic Reimagined: Aligning a Secular Accounting Model with Biblical Stewardship

Rob Williams, *Union University*

This Teaching Talk presents a syllabus-day visualization exercise that biblically aligns the American Accounting Association's Pathways Commission "This Is Accounting" graphic with Christian stewardship. Using 1 Corinthians 4:1–2 and Aristotle's virtue ethics framing, the exercise helps students see accounting as a discipline ordered toward truthfulness, ethical discernment, faithful stewardship, and care for creation under God.

Capital Investment Decisions

Jordan Loman, *Indiana Wesleyan University*

This session shares an experiential activity for an Accounting Principles course that was developed to help students connect capital budgeting concepts to practical business decisions. Students create their own investment proposal before evaluating it using payback period and net present value analysis, leading to thoughtful discussions about the role of accounting in organizational decision-making.

Entrepreneurship

Beyond the Boring Paper: Student-Created Entrepreneurial Podcasts

Erica Vonk, *Northwestern College*

Take your students beyond a boring paper and stretch them creatively through podcast creation. This teaching talk shares the example of podcast creation as part of an undergraduate entrepreneurship class. The session will describe the three steps of the podcast assignment along with fun audio clips, assignment instructions, and student feedback.

Private Capital Investment Club: Experiential Learning in Entrepreneurial Finance

Bob Reader, *Dallas Baptist University*

Introducing a private capital investment club into our Entrepreneurial Finance class has enabled Entrepreneur and Finance students to come together to better learn each other's trades by vetting real pitches from Christian founders who are raising money for Kingdom impact. As a capstone course, students from each discipline can bring skills and tools learned in prior classes to the table as groups complete due diligence. They choose their favorite deals and then raise funds via donation to invest in those companies.

Ethics

Teaching Ethical Innovation Through Trust: Preparing Christian Business Leaders by Building Bridges Across Cultures

Joseph Kuvshinikov, *Gannon University*

This Teaching Talk presents an innovative, faith-integrated model that prepares Christian business students for ethical leadership through community engagement. MBA–Business Analytics students partner with refugee and immigrant seventh graders in experiential trust-building activities grounded in servant leadership, imago Dei, and loving our neighbors. Participants receive a replicable framework for integrating biblical principles, innovation, and experiential learning into business education.

Faith Integration

A Bad Copy of a Bad Copy: Theology and Token Restraints Using AI

Benton Jones, *Bryan College*

This talk pairs Christian reflection on AI as a "bad copy of a bad copy" with a word-card activity that simulates token limits and constrained vocabulary, helping students see AI's fluency, usefulness, and limits for learning, judgment, and wisdom.

Praying the Fridge Over Our Students: Devotion/Prayer Idea for Integrating Faith in the Classroom

Traci Pierce, *John Brown University*

"Praying the Fridge' over our students offers a personal, practical, and purposeful way to encourage students through scripture. Ideas for encouraging students in a secular setting are shared as well.

Helping Accounting Students Explore Calling: A Six-Journal Reflection Sequence for Technical Business Courses

Elizabeth Holbrook, *Point Loma Nazarene University*

A practical model for integrating vocation and calling into technical business courses through a six-part journal reflection sequence used in an Intermediate Accounting course. Learn how brief, low-stakes assignments can help students connect their faith, calling, and future profession without sacrificing technical course content. The talk includes sample prompts, implementation strategies, and student feedback.

To Walk or to Talk - We Drink from Our Own Wells

Mary Kay Copeland, *Regent University*

This activity introduces Gutiérrez's We Drink from Our Own Wells to explore Scripture's teaching on ministry to the poor. Evangelicalism often stressed gospel proclamation over physical needs; Gutiérrez, from a Latin American movement responding to poverty, argues caring for the poor is integral to ministry and deepens one's spirituality. Students read Scripture passages and discuss these themes online or in class, broadening perspectives, especially for profit-oriented business students. Keywords: ministry to the poor, faith integration, Christian spirituality, liberation theology.

Finance

Biblical Financial Wisdom: Connecting Students with their Elders

Paul Babin, *Covenant College*

This teaching talk describes a favorite finance assignment in which students interview an elder and write a three-page essay about the biblical financial wisdom shared by their elder. The assignment encourages the student to consider the topic, spend some time in God's Word, and seek guidance from mature Christians – all worthwhile endeavors.

Peer-to-Peer Financial Coaching: Transforming Students, Universities, and Communities Through Biblical Financial Literacy

Heather Chadwick, *Charleston Southern University*
David Palmer, *Charleston Southern University*

Learn about the development, implementation, and success of peer-to-peer (P2P) financial literacy and coaching program. This program significantly impacts students and the community. P2P coaching activities on campus include individual financial counseling for students and leading financial literacy sessions in general education classes. The peer coaching program is also involved in the community introducing financial literacy to non-profit after-school programs, churches, and other community groups.

Information Systems & Analytics

Bridging AI Innovation with Business Analytics

Danxia (Christina) Chen, *Dallas Baptist University*

The author uses AI innovative tools to facilitate students' needs and enhance teaching. Take "decision analysis" as an example, after explaining the major concepts, AI tools were utilized, seven different case scenarios were generated for students to apply decision analysis. Another tip is building AI live demonstrations to analyze and predict data. By bridging AI and innovative teaching ideas, it accelerates Christian business teaching and enriches students' application experience.

Marketing

Real-Time Marketing Simulation: Implementing Critical Thinking and Application into a Final Project

Stephen Panczak, *Palm Beach Atlantic University*

This Teaching Talks session will discuss why business educators should incorporate a real-time marketing simulation as the final assignment in upper-division marketing courses. The program follows an eight-quarter schedule, with students submitting weekly quarter reports displayed on a balanced scorecard dashboard. This real-time simulation project requires students to navigate a dynamic environment where competitors move, customer preferences shift, and economic conditions change all at once. This hands-on approach has been demonstrated to improve student knowledge retention and mirror the fast-paced nature of the job market after graduation.

Management

Learning to Avoid Misunderstandings Through Emojis

Emily Eaton, *Palm Beach Atlantic University*

This Teaching Talk will overview an activity that is fun, encourages class engagement, and is used to teach the importance of being mindful of possible communication misunderstandings through a discussion about emojis. While effective communication is integral for business and leadership success, one of the greatest hinderances is misunderstandings caused by differences in culture, generation, and other factors, which can be taught through this exercise.

The Five-Minute Boardroom Buster: Transform Students into Decision Makers

Trish Berg, *Heidelberg University*

Business students often learn management concepts through lectures and case studies, but what if every class began with a five-minute executive board meeting? This interactive teaching strategy transforms students from passive learners into decisionmakers by placing them in executive leadership roles to solve realistic business challenges. During this Teaching Talk, participants will experience the activity firsthand. Faculty members will be assigned executive roles—including CEO, CFO, COO, and Chief Marketing Officer—and work together to respond to a real-world business scenario.

Business Communications – Group Project for Communication Readiness

Dawn Olson, *Trevecca Nazarene University*

This teaching talk will describe a group project used to improve students' communication readiness as they prepare to enter the workforce. The purpose of this project was to engage students in presenting a hypothetical business to potential employees and community members, reviewing resumes, conducting interviews, making hiring decisions, calculating compensation, and creating an offer letter. The teaching talk will describe the group expectations and design, project components, and the results.

Teaching – Graduate & Adult Learners

Diss Buddy: Ethical AI-Enhanced PhD Support Beyond the Chair

Anthony Caito, *Anderson University*

The "Diss Buddy" is a custom-trained AI chatbot offering PhD students 24/7 dissertation support—supplementing, not replacing, their chair. Built on BoodleBox using Claude 4.5, it provides ethical grounded guidance on writing, methodology, and goal setting while using a scaffolding framework to preserve student critical thinking. This five-minute Teaching Talk equips faculty to build discipline-specific AI support tools, curate knowledge banks, and design biblically grounded, replicable AI mentoring frameworks.

The Triumvirate of Experience

Greg Lowhorn, *Pensacola Christian College*

This Teaching Talk addresses how students can engage with current scholars in their field. When researching topics, most students only collect and synthesize published information but do not consider connecting with experts due to fear of rejection, inaccessibility, or simply not considering it. This presentation will give students the steps needed to thoughtfully engage with scholars and experts and add a contextual layer to their research.

Strategy

Comprehensive Organizational Analysis

Michael Crawford, *Indiana Wesleyan University*

A comprehensive assessment and understanding of an organization is an important basis for any firm's strategic planning process. This session will provide an overview and discussion of a semester-long project for students to complete an organizational assessment of small local businesses to include the preparation and presentation of the assessment findings, as well as proposals for future growth of the business.

Teaching – Traditional Undergraduates

Gather Little by Little with Compound Interest and Coding

Michael Kolta, *Palm Beach Atlantic University*

I will share an assignment in which students write their own compound interest with recurring contributions calculator in Python. Participants can follow along and type the code on their device. The complete code will also be available for download. This teaches important personal finance and computers science concepts in a synergistic way. It aligns with Proverbs 13:11 "Wealth gained hastily will dwindle, but whoever gathers little by little will increase it."

Multimodal Mastery: Case Studies, Podcasts, and In-Class Synthesis

Nicole Iman, *John Brown University*

In many courses, a case study stops at discussion or written debrief. This Teaching Talk demonstrates a portable, multi-modal module that moves students from "what happened" to "how it happened." Through integration of reading, auditory learning, discussion, research, and presentations, this instructional design guides students to deeper comprehension of key concepts and effectively incorporates AI tools to enhance learning.

Using AI to Create Customized Case Studies

Emily Eaton, *Palm Beach Atlantic University*

Have you ever struggled to find a case study that fits your course content or spent hours creating one from scratch? Generative AI offers an alternative. This Teaching Talk explores strategies for using AI to develop customized case studies that align with course content, save preparation time, and reflect contemporary business challenges. Examples will focus on applications in ethics and management courses.

Accounting that Fits in the Palm of Your Hand

Kirk Jackson, *Southern Nazarene University*

Getting students to remember the basic framework for accounting can be difficult. They struggle with the categories and concepts of the discipline. However, what if students knew that the basic framework for accounting fits in the palm of their hand? By using the five fingers on your hand, you can teach the important concepts of the categories of accounts, the normal balance of assets, and the structure of the simple balance sheet and income statement. However, this does not stop with teaching the temporal truth about accounting; it creates an opportunity to teach students about the eternal truths of God.

Beyond the Lecture/Running a College Course Like a Fortune 500 Company

Michelle Smith, *Asbury University*

Beyond lectures. Beyond case studies. Beyond group projects. Discover how an entire semester was transformed into a functioning Fortune 500 company where students became employees, assumed departmental roles, tackled authentic workplace challenges, and were assessed through real-world experiences. Learn a practical model for developing workplace-ready graduates through experiential learning and Christian business education.

Building Better Lecture Videos with a Three-Bot AI Workflow

Lonnie Leeper, *Taylor University*

Learn how to cut lecture video production time in half using a three-bot AI workflow. This Teaching Talk demonstrates a practical system built on Claude Sonnet and ChatGPT that generates, audits, and finalizes recording-ready scripts while preserving your instructor voice. Tested in undergraduate finance courses, the workflow reduces a typical 10–15-minute video from 2+ hours of work to under one hour. Ideal for business faculty teaching flipped or online courses.

Ethical Perspectives and Social Impact (EPSI): Connecting Institutional Outcomes & Course Objectives

Dawn Shearrow, *Loras College*

The purpose of this assignment is to incorporate Institutional Learning Outcomes with specific course objectives, while facilitating active student participation. Facilitating active participation and student engagement is an ongoing effort that requires innovative thought entwined with a pedagogical design. This assessment ensures that institutional learning outcomes (ILO) and course objectives (CO) are incorporated and balanced appropriately throughout assessments and instructional design. The integration of EPSI assignment provides a framework for connecting the prior mentioned objectives.

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