

Integrating Faith, Science, and Logical Framework Matrix in Senior High School Research Preparation

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ABSTRACT

This paper documents and analyzes the dual-lecture academic event titled “Faith Meets Framework: A Dual Lecture on Integrative Research and Final Project Logic,” held on August 11, 2025, at the CONPEREY Integrated Learning School in Malay, Aklan, Philippines. The activity aimed to strengthen secondary school students’ conceptual and practical understanding of research by integrating faith-based perspectives with scientific inquiry and introducing the Logical Framework Approach (LFA) to develop final project proposals. The first lecture, delivered by Rev. Jayvee Delos Santos, focused on integrating faith and science as complementary domains of knowledge. The second lecture, delivered by Raymond J. Sucgang, discussed the fundamentals of preparing final project research proposals using structured logic and the Logical Framework Approach. The event was attended by over 35 secondary school students, along with their subject teachers and school administrators. Using a descriptive qualitative approach based on activity documentation, participant observation, and post-class discussions, this article highlights the value of integrative classroom education in enhancing research readiness, critical thinking, and ethical reflection among secondary school students.

Keywords: science communication, faith and science, capstone research, logical framework approach, senior high school education

INTRODUCTION

Research training at the secondary level plays an important role in developing students’ analytical skills, ethical awareness, and preparation for higher education. However, students often have difficulty understanding abstract research concepts, the logic of research proposals, and the relationship between values and scientific research. In a faith-based and value-oriented educational setting, an additional challenge lies in helping students understand that faith and science are not opposing realms, but rather complementary ways of understanding reality.

To address these concerns, the CONPEREY Integrated Learning School organized an academic enrichment activity entitled “Faith Meets Science: A Double Lecture on Integrative Research and the Logic of Final Projects.” The event featured two complementary lectures: one emphasizing the harmony between faith and science, and the other providing a practical framework for developing a final project research proposal. This document aims to document the activity, describe its content and implementation, and analyze its educational implications for research training at the secondary level.

Objectives of the Study

This double lecture is designed to achieve the following objectives:

1. To deepen students' understanding of the relationship between faith and scientific research.
2. To promote ethical reflection and value formation in research.
3. To introduce secondary school students to the basic principles of developing a final research proposal.
4. To familiarize participants with the Logical Framework Approach as a tool for organizing research problems, objectives, and expected outcomes.
5. To strengthen students' confidence and readiness to undertake independent or group research projects.

RELATED LITERATURE REVIEW

Integrating Faith and Science in Education

Studies on the integration of faith and science emphasize that these domains can be complementary rather than contradictory, especially in educational settings where values and meaning contribute to the holistic development of students. Polkinghorne (2000), a theologian and physicist, argues for the unity of knowledge, suggesting that both faith and science contribute to truth and understanding when appropriately placed within a framework of meaning and purpose (Polkinghorne, 2000).

Contemporary educational research supports this perspective by demonstrating how integrative models of science and religion can make learning more meaningful and morally grounded. For example, Tutuk Ningsih et al. (2022) show that combining scientific content with religious values improves learning outcomes and student-teacher interactions, helping students connect abstract concepts to their beliefs and everyday lives.

The integration of faith and learning has also been studied in the context of classroom practice. Siahaan (2021) documents how teachers integrate faith into science and mathematics teaching, emphasizing that integration goes beyond the delivery of knowledge and encompasses the development of ethical understanding and spiritual awareness.

While not specifically addressing research training, this literature highlights pedagogical imperatives for the integration of faith and science that align with the first theme of the CONPEREY conference: emphasizing ethical reflection on the meaning and purpose of scientific inquiry.

Logical Framework Approach and Research Design

The Logical Framework Approach (LFA) is a structured methodology originally developed for project planning, monitoring, and evaluation (USAID, 1970s). Although its origins lie in international development, its methodological clarity, particularly its emphasis on linking objectives to measurable outcomes, is relevant to the development of educational research proposals.

Research in project management has emphasized that LFA enhances clarity and accountability by requiring clear objectives and verifiable indicators, which help researchers articulate their problem statements and research logic more coherently (Gasper, 2000). More recent studies have adapted this methodology to project design in a broader context, highlighting how structured logical frameworks can help break down complex problems into systematically aligned solutions and evaluation mechanisms (Rodríguez-Rivero & Ortiz-Marcos, 2022; MDPI).

In the context of educational research, the Logical Framework Approach (LFA) has been used as a conceptual framework to align research questions, objectives, activities, and expected outcomes. Although not yet common in the secondary school research literature, the structured approach of LFA helps students move from general ideas to clear and practical research plans, which is in line with the contemporary literature on conceptual frameworks in research design (Philscholar, 2025).

Final Projects and Research Internships in Secondary Schools

Research internships in secondary schools serve as a bridge between subject-based learning and academic inquiry, requiring students to synthesize knowledge, apply methodologies, and develop cognitive and metacognitive skills. Gopez et al. (2025) examined the structure of secondary school research programs, showing that connected and systematic curricula, particularly those that emphasize outcomes and interactions, enhance students' experiences and their readiness for higher-level research work.

Although they do not focus on the integration of beliefs, educational models that emphasize inquiry-based teaching (Njofuni et al., 2025) reveal the value of structured learning processes in fostering conceptual understanding and scientific thinking among secondary school students.

METHODOLOGY

This study used a descriptive qualitative design that focused on documenting activities. Data sources included formal programs, classroom materials, participant observations during the event, and informal feedback collected through open discussions with students and teachers after the lecture. No formal survey instruments were used. The analysis focused on describing the content, flow, and perceived educational value of the activity, rather than measuring learning outcomes quantitatively.

Event Description

Location and Participants

The activity took place on August 11, 2025, at the CONPEREY Integrated Learning School in Malay, Aklan. More than 35 secondary school students from various academic disciplines participated. Teachers from their subject areas and school administrators were also present, acting as facilitators and observers. See Figure 1.



Figure 1. Photo documentation of the event

Program Overview

The program consists of two main lectures delivered sequentially, followed by an open forum. This structure allows students to reflect on the philosophical and ethical foundations of research first before addressing the technical and methodological aspects of developing their final project proposal.

Lesson 1: Integrating Faith and Science

The first lesson, taught by Fr. Jayvee Delos Santos, focuses on the integration of faith and science (Figure 2). This lesson emphasizes that faith and scientific inquiry are not contradictory but rather address different dimensions of truth. Faith provides meaning, value, and ethical direction, while science offers a systematic method for understanding the natural and social world.



Figure 2. Lesson on the amalgamation of faith and science

Key points discussed include the historical contributions of religious scholars to scientific development, the ethical responsibilities of researchers, and the importance of humility and integrity in the pursuit of knowledge. This lesson encourages students to consider research not only as an academic necessity but also as a profession that can benefit the common good. Through examples and reflective questions, students are guided to appreciate how personal beliefs and values can positively influence scientific practice without compromising rigor.

Lesson 2: Final Research and the Logical Framework Approach

The second lesson, taught by Raymond J. Sugang, focuses on preparing a final research proposal using clear logic and structure. This lecture presents the basic components of a final project proposal, including problem identification, objectives, research relevance, and expected outcomes.

The main focus of this lecture is the Logical Framework Approach (LFA). Students are introduced to the logical flow from problem to objectives, outcomes, activities, and indicators. LFA is presented as a practical tool for ensuring coherence and consistency in research design. Examples relevant to the context of high school research are used to demonstrate how vague ideas can be transformed into clear, testable proposals.

This lecture emphasizes that good research begins with clear thinking and a logical structure helps researchers effectively communicate their ideas to teachers, panels, and stakeholders.

RESULTS AND DISCUSSION

Results

The implementation of the dual lecture activity, “Faith Meet Frameworks: A Dual Lecture on Integrative Research and the Logic of Final Projects,” yielded several important results based on participant observations, levels of engagement during the session, and informal feedback from students and faculty.

First, students demonstrated greater conceptual clarity about the nature and purpose of research. During open forums and post-lecture interactions, many participants were able to articulate research not only as a school requirement, but as a systematic and ethical pursuit of knowledge. This shift in perspective was particularly evident after the first lecture, where students reflected on how beliefs, values, and scientific inquiry can coexist and enrich each other.

Second, the lecture on final project research and the Logical Framework Approach (LFA) resulted in significant improvements in students' ability to logically organize research ideas. When discussing example research problems, students demonstrated greater confidence in identifying clear problem statements, formulating aligned objectives, and distinguishing between inputs, activities, and expected outcomes. The teacher observed that students formulated more specific and technically relevant questions than in a typical research orientation session.

Third, this activity fostered active participation and engagement. The presence of over 35 high school students from various academic backgrounds contributed to the diversity of perspectives during the discussions. Students were highly engaged when real-life and school examples were used to illustrate faith-science integration and the construction of logical frameworks. This suggests that contextual examples enhance understanding and retention of research concepts.

Discussion

The findings of the dual-lecture activity underscore the pedagogical value of integrating ethical reflection, conceptual understanding, and methodological structure in secondary-level research training. Consistent with the literature on faith-science integration (Polkinghorne, 2000; Siahaan, 2021; Tutuk Ningsih et al., 2022), the first lecture helped reposition scientific inquiry as a value-laden and ethically guided endeavor rather than a purely technical academic requirement. This reframing appears to have contributed to students' increased appreciation of research as a meaningful and socially responsible practice.

Similarly, the introduction of the Logical Framework Approach (LFA) provided students with a concrete cognitive scaffold for organizing research ideas. Prior studies have emphasized that structured planning tools enhance coherence and clarity in research design (Gasper, 2000; Rodríguez-Rivero & Ortiz-Marcos, 2022). In this activity, students' improved ability to articulate problem statements, align objectives, and identify expected outcomes suggests that adapting LFA to the secondary school context can effectively support novice researchers who are still developing abstract reasoning and methodological skills.

However, the interpretation of these outcomes must be situated within several methodological limitations. Learning gains were inferred primarily through qualitative indicators such as participant engagement, observed changes in discourse during discussions, and informal feedback from students and teachers. The absence of pre- and post-intervention assessment instruments limits the ability to establish causal claims regarding learning improvement. As such, the reported outcomes should be understood as indicative rather than conclusive, reflecting perceived educational value rather than statistically measured impact.

Another challenge lies in the short duration of the intervention. As a one-day academic enrichment activity, the lectures provided foundational exposure rather than sustained skill development. While students demonstrated immediate conceptual gains, long-term retention and application of integrative thinking and logical framework skills were not assessed. This highlights the need for follow-through activities, such as guided proposal writing workshops or classroom-based application exercises, to reinforce and deepen learning.

From a pedagogical perspective, the sequencing of the lectures—from values-oriented reflection to technical instruction—appears to be a strength of the program. This structure aligns with holistic and inquiry-based educational models that integrate affective, cognitive, and practical learning domains. Nonetheless, future iterations could further refine this approach by explicitly linking ethical reflection to specific research decision points, such as topic selection, data collection, and interpretation, thereby making values integration more operational rather than conceptual alone.

Finally, while the Logical Framework Approach proved accessible and effective, careful scaffolding is required to prevent oversimplification of research complexity. Educators should emphasize that LFA is a guiding tool rather than a rigid template, encouraging flexibility and critical judgment as students' research competencies mature.

Overall, the discussion affirms that integrative, structured, and value-oriented pedagogies can meaningfully enhance research readiness among secondary school students. At the same time, it highlights the importance of methodological transparency, sustained instructional support, and systematic assessment in strengthening the academic rigor and replicability of similar educational interventions.

CONCLUSION AND RECOMMENDATIONS

The dual lecture academic activity titled "Faith Meets Framework: A Dual Lecture on Integrative Research and the Logic of Final Projects" successfully addressed a key challenge in research preparation in high schools by integrating ethical reflection with methodological clarity. The first lecture effectively demonstrated that faith and science are not opposing realms, but rather complementary sources of meaning and inquiry, fostering ethical awareness and appreciation of research among students as a value-based activity. This is consistent with existing literature emphasizing the role of values and belief systems in holistic education and scientific responsibility.

The second lecture provided students with a practical and structured approach to developing research proposals using the Logical Framework Approach (LFA). Observations and informal feedback indicated increased student confidence in framing research problems, objectives, and expected outcomes. The use of real-life and school-based examples increased participation and understanding, reinforcing the importance of contextual instruction in research training.

Despite the lack of quantitative assessment tools, qualitative indicators such as active participation, improved articulation of research concepts, and positive feedback from faculty indicated that the activity contributed significantly to students' research readiness. Overall, the program demonstrates the effectiveness of combining philosophical foundations with technical frameworks to strengthen research competencies among high school students.

Future implementations could incorporate pre- and post-assessment tools to quantitatively measure learning progress. It is also recommended that a similar integrative lecture format be institutionalized in high school research curricula to continuously strengthen ethical reflection and logical research design.

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