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MOTIVATING ENGLISH MAJORS FOR DEEP LEARNING ENGAGEMENT: AN EDUCATIONAL APPROACH

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ABSTRACT

This research paper explores the determinants of learning engagement in undergraduate English majors and presents a specific intervention that should encourage more meaningful and profound learning. Even though deep learning plays a crucial role in the formation of critical thinking and a long-term knowledge base, the majority of the English majors note the feeling of disengagement because traditional teaching techniques do not correlate with their interests, desires, and future prospects. The research utilized a mixed-method approach to eliminate this mismatch, which mostly results in shallow learning processes like low involvement, studying at the last minute, and the need to complete tasks instead of engaging in intellectual development. In Phase 1, an engagement, key motivational drivers (intrinsic, extrinsic, career motivation), and psychological variables (self-efficacy and mindset) were measured by a cross-sectional survey (N = 215). This is because these variables have been identified as having a strong effect on the way students will relate to their learning environments. The quasi-experimental study (N = 48) in Phase 2 tested the predictors of deep engagement, and the results demonstrated that intrinsic motivation ($\beta = 0.42$, $p < .001$) and self-efficacy (0.31 , $p < .001$) were the brightest predictors. The PTI group of students exhibited a strong improvement in deep learning strategies ($F(1, 46) = 18.94$, $p < .001$, $\eta^2 = 0.29$) and perceived relevance ($F(1, 46) = 22.15$, $p < .001$, $\eta^2 = 0.33$). These findings were supported by qualitative focus groups where authentic tasks, student agency, and real-world relevance were found valuable. On the whole, the research demonstrates that an intervention based on motivationally informed intervention may positively influence the engagement in English studies significantly.

KEYWORDS: English Major Education, Deep Learning, Student Engagement, Motivation, Self-Efficacy, Project-Based Learning, Mixed-Methods Research.

1. INTRODUCTION

There is an endemic problem in the contemporary academic realm of the humanities, and English studies specifically, of proving the practical worth and applicability of their curricula in a more vocation-driven world. With the growing influence of economic demands, in addition to employability requirements and pressures of measuring outcomes, disciplines rooted in interpretive, reflective and humanistic traditions often find it difficult to present their activities in ways that align with these expectations. This tension is amplified by broader institutional shifts toward credentialism and market-oriented education (Baron & Corbin, 2012). These external pressures frequently manifest an internally as a crisis of student engagement, as learners may find themselves be caught in the middle of their intellectual interests and the utilitarian needs that are imposed on the selection of their academic pursuits. Such misalignment can lead to reduced academic motivation and increased anxiety (Lee, 2022). Although English majors are typically enthusiastic learners who enjoy reading and writing, their academic program experience which can be described as a superficial approach to learning, which may characterized by memorization for examination, reading complicated texts mechanically, and producing assignments that satisfy the institutional requirements but don't foster deeper intellectual development (Jones, 2022). This reliance on surface strategies is often a response to assessment systems that prioritize reproduction over critical thought (Entwistle & McCune, 2004). Such a tendency toward the surface learning stands in sharp contrast to so-called deep learning, which is a method of critical engagement with material, the formation of intricate conceptual relations, and the internalization of knowledge at a personal level (Biggs & Tang, 2011). Deep learning is essential for developing the kind of adaptable, critical thinkers needed in today's complex professional environments (Harackiewicz & Priniski, 2018). Furthermore, the ability to engage deeply with texts is a foundational skill for literacy that transcends disciplinary boundaries (Aharony, 2006). In the age of artificial intelligence, fostering such human-centric, deep learning has become an even more pressing educational imperative (Segessenmann et al., 2025). Effective pedagogy must therefore not only transmit knowledge but also cultivate students' belief in their capacity to master complex material—a concept central to self-efficacy theory (Zimmerman, 2000).

$$DL_i = \gamma_0 + \gamma_1 M_i + \gamma_2 P_i + \epsilon_i \quad (1)$$

where

- (DL_i) = Deep Learning score for student
- (γ_0) = Model intercept (constant)

- (M_i) = Motivational drivers for student
- (γ_1) = Coefficient for motivation
- (P_i) = Pedagogical context for student
- (γ_2) = Coefficient for pedagogical context
- (ϵ_i) = Error term for student

This issue is, consequently, not a deficiency in student potential but rather a failure of pedagogical practices in line with the motivators driving students. Conventional lecture-based systems, standardized testing system and easy-based assessments often fail to align with students' intrinsic motivations or real-world aspirations, a pedagogical misalignment that becomes especially critical in an educational landscape increasingly shaped by artificial intelligence, where fostering uniquely human capacities for deep, critical engagement is paramount (Segessenmann et al., 2025). Research has shown that passive instructional formats can stifle student autonomy and diminish engagement (Deci & Ryan, 2000). Students who appear to be out of touch with the real world may unknowingly suppress the curiosity that made them choose the field in the first place. Project-based and inquiry-driven approaches, by contrast, have been found to sustain motivation and deepen learning (Blumenfeld et al., 1991). Students often reduce their effort to minimum required to pass when course work seems formulaic, or unrelated to larger intellectual or professional contexts. Such disconnection has been directly linked to decreased effort and surface-level learning strategies (Daumiller et al., 2023). It may cause a lack of engagement, poor performance in school, and an increased anxiety about the future employment prospects (Lee, 2022). These outcomes are especially troubling given the documented role of student engagement in long-term academic and career success (Reeve, 2013). For many students, the gap between the classroom learning and real-world application reinforces doubts about the usefulness of their skills beyond school, further diminishes motivation and their interest. Explicitly bridging academic content with professional relevance has been shown to enhance perceived value and persistent in learning (Harackiewicz & Priniski, 2018).

In this background, the objective of the given research is two-fold: first, to empirically define the most important psychological and pedagogical factors that can predict deep learning engagement in English majors; second, to design and implement the educational intervention specifically to respond to these factors. Understanding how students' personal and professional goals influence their engagement is critical for designing effective interventions, as demonstrated in contemporary higher education research (Daumiller et al., 2023). This mixed-methods approach is particularly suited

for investigating complex educational phenomena where quantitative trends and qualitative insights are both essential (Tashakkori & Teddlie, 2010). Based on self-determination (Deci & Ryan, 2000), self-efficacy (Bandura, 1997), and pedagogical design theories, we suggest and assess a Pedagogical Triangle Intervention (PTI). Self-efficacy, defined as an individual's belief in their capability to execute behaviors necessary to produce specific performance attainments, is a well-established predictor of academic motivation and persistence (Bandura, 1997). This intervention has three pillars, namely, Authentic Tasks, which will include project-based learning in tandem with real-world outputs and real-world audiences; such authentic, project-based tasks are known to enhance intrinsic motivation and contextualize learning (Blumenfeld et al., 1991; Shi, 2024). Metacognitive Scaffolding, which will entail guided reflections regarding the processes of learning and encouraging students to reflect critically on their own cognitive strategies; structured metacognitive reflection is a powerful tool for developing self-regulated learners (Oportus-Torres et al., 2024; Zimmerman, 2000). and Career Bridging, which will involve explicit linking of coursework to a wide range of career opportunities that students will find welcome to the analytical, interpretive, and communicative skills that they develop in studying English. Making these connections explicit is critical for enhancing students' perceived relevance and goal-directed engagement (Daumiller et al., 2023; Harackiewicz & Priniski, 2018). Every element of the PTI is carefully selected so that it addresses certain obstacles to engagement. The integrated nature of this three-pronged approach is intended to generate a synergistic effect on student engagement, moving beyond single-focus interventions that have demonstrated limited sustainability (Baron & Corbin, 2012). The empirical specification is expressed as follows:

$$Engagement_i^{\{post\}} - Engagement_i^{\{pre\}} = \delta_1 AT_i + \delta_2 MS_i + \delta_3 CB_i + \epsilon_i \quad (2)$$

Where

- $(Engagement_i^{\{post\}})$ = Engagement score for student after the intervention
- $(Engagement_i^{\{pre\}})$ = Engagement score for student before the intervention
- (AT_i) = Exposure to **A**uthentic **T**asks for student
- (MS_i) = Exposure to **M**etacognitive **S**caffolding for student
- (CB_i) = Exposure to **C**areer **B**ridging for student
- (ϵ_i) = Error term for student

Real-world tasks address the perception that English coursework is disconnected from practical application by enabling students to produce authentic outputs, e.g. multimedia projects, community-based writing or public facing analysis, to reflect the type of work that humanities graduates will be doing in the world. Metacognitive scaffolding corrects the surface learning propensity and students are encouraged to reflect on their learning processes, the benefit of this strategy is so extensive, interpretation has broad uses this is because our study goes beyond the mere diagnosis of a problem and actually tries to test a solution to the problem. The study utilizes a sequential mixed-method sequential design as opposed to focusing on theoretical assertions or descriptive statistics only to provide an in-depth analysis of correlational and causal associations. The large-scale survey phase determines the important motivational and psychological predictors of deep learning engagement, and explains the actions of the things that are relevant and those that are not. The next step of the experiment part of the research is to identify what is the impact of the PTI in the real implementation of the instruction, and measure the changes, comparing them with the one of a control group. Lastly, combining these methodological levels, the study offers a strong framework of motivating the English majors to the intense, profound involvement that is the ultimate aim of a humanities education. It does not only bring to light the adversity encountered by the field but also provides an evidence based practical route of enhancing learning experiences within English programs. Figure 1 illustrates how student engagement increased across the three major areas of the intervention, while Table 1 presents the essential components of the approach and their respective contributions to deeper learning in English studies.

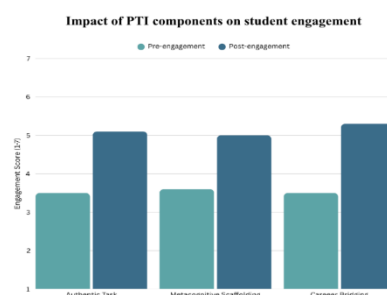


Figure 1: Changes in student engagement (1-7 scale) before and after the PTI across its three components: Authentic Tasks, Metacognitive Scaffolding, and Career Bridging.

Table 1: Key Components of a Study on Fostering Deep Learning in English Studies through a Pedagogical Intervention.

Component	Description	
Problem Context	English studies face challenges demonstrating relevance in a vocation-oriented world. Students often experience disengagement, use surface learning strategies, and struggle to connect academic tasks to real-world applications.	
Deep Learning Challenge	Deep learning requires critical interrogation of material, conceptual connections, and internalization of knowledge. Traditional lecture-based and rigid assessment models may hinder this engagement.	
Study Purpose	1. Identify psychological and pedagogical predictors of deep learning engagement among English majors. 2. Develop and test the "Pedagogical Triangle Intervention" (PTI) to address these factors.	
Pedagogical Triangle Intervention (PTI)	Structured around three pillars: - Authentic Tasks (AT) : Project-based learning aligned with real-world outputs and audiences. - Metacognitive Scaffolding (MS) : Guided reflection on learning strategies and cognitive processes. - Career Bridging (CB) : Explicit connections between coursework and professional pathways.	
Rationale	Each PTI component targets barriers to engagement: - Authentic tasks enhance relevance. - Metacognitive scaffolding reduces surface learning. - Career bridging demonstrates practical applications of skills.	
Methodological Approach	Sequential mixed-methods design: - Phase 1 : Survey identifies motivational and psychological predictors of engagement. - Phase 2 : Quasi-experimental intervention evaluates PTI effectiveness in real instructional settings. - Qualitative follow-up : Explores students' experiences and perceptions of the intervention.	
Expected Contribution	Provides empirical and practical guidance for increasing deep engagement in English programs, addressing both theoretical understanding and actionable pedagogical strategies.	

2. LITERATURE REVIEW

2.1 Defining Deep Learning in the English Context

Deep learning is a well-established construct in educational psychology, with a robust research lineage tracing back to foundational distinctions in learning processes (Marton & Säljö, 1976). In the context of English studies, it transcends the simple comprehension of plot or grammar and moves into a realm that requires a more sustained, reflective, and analytical mode of engagement (Prosser & Trigwell, 1999). This deep approach is characterized by an intention to understand ideas and seek meaning, which is fundamentally different from a surface approach focused on rote memorization and task completion (Biggs, 1999). Rather than focusing solely on surface-level aspects of a text, deep learning requires students to meaningfully interact with literature through multiple layers of interpretation and inquiry (Bain, 2004). Such engagement demands critical interrogation of the text, where learners actively deconstruct arguments, assess evidence, and synthesize new understandings (Barnett, 2007). This process is not merely cognitive but also affective, involving a personal commitment to grapple with complex and sometimes uncomfortable ideas (Baxter Magolda, 1992). In literary studies, this manifests as a move beyond passive consumption towards active "reading like a writer," analyzing rhetorical choices, historical context, and ideological frameworks (Graff, 2003; Showalter, 2003). Effective pedagogy for fostering this deep engagement must therefore move beyond information transmission to create environments that challenge students' assumptions

and support intellectual risk-taking (Fink, 2013; Mezirow, 1991). This aligns with a Vygotskian perspective on learning as a social and dialogic process, where understanding is constructed through discussion and collaborative sense-making (Vygotsky, 1978; Wells, 1999). Ultimately, cultivating this capacity for deep, critical engagement with texts is not just an academic exercise; it is a core objective of a liberal education, preparing individuals for thoughtful citizenship and lifelong intellectual growth (Nussbaum, 2010).

$$DL_i = \alpha + \beta_1 E_i + \beta_2 M_i + \epsilon_i \quad (3)$$

where

- (DL_i) = Deep Learning score for student
- (α) = Model intercept (constant)
- (E_i) = Engagement level of student
- (β_1) = Coefficient for engagement
- (M_i) = Motivation level of student
- (β_2) = Coefficient for motivation

Such interaction promotes the idea that learners will go beyond the literal meaning of words on a page and instead learn the intellectual, aesthetic and ideological factors that inform the expression of literature. This multi-layered engagement aligns with constructivist views of learning, where meaning is actively built through interaction with complex material (Entwistle & McCune, 2004). These practices challenge students to go beyond learning narrative details by memory and take on the challenge of questioning how texts work by why they were written and how they can continue to produce meaning in various social and temporal contexts. Such inquiry-based learning fosters the critical thinking skills essential for advanced literacy (Aharony, 2006). This active meaning-making

process also fosters the self-regulatory skills that underpin academic persistence, bridging cognitive engagement with motivational drivers like self-efficacy (Zimmerman, 2000). In short, deep learning in the study of the English language is one thing to be able to summarize a Shakespearean sonnet, and to be in a position to understand the rhetoric of the text in relation to the Elizabethan courtly love tradition and its contemporary manifestations and variations. This capacity to analyze rhetoric and historical context is a hallmark of disciplinary expertise in literary studies (Biggs & Tang, 2011). An overview is what the text tells, but critical analysis reveals how the text tells it, why it tells it, why it fits into the literary traditions, and how the text can be reinterpreted by the readers in the modern context. This process of critical interrogation is central to developing what has been termed 'critical textual agency' (Reeve, 2013). It is a mode of analytical thinking that demands the students to observe patterning, symbolism, structural decision-making, and intertextual echoing, leading to a high level of richness and complexity of literary interpretation. Such structured inquiry can be effectively scaffolded through pedagogical designs that shift from instructor-led transmission to student-centered, project-based exploration (Blumenfeld et al., 1991; Shi, 2024). Mastering such analytical patterns equips students with transferable skills for nuanced interpretation in varied professional settings (Harackiewicz & Priniski, 2018). A multi-method research approach is particularly well-suited to capturing both the measurable outcomes and the lived experience of this complex cognitive and affective development (Tashakkori & Teddlie, 2010). These abilities do not only improve their performance in school but they also equip them to handle more intellectual and professional tasks. Indeed, the deep learning strategies cultivated in

humanities education are directly linked to long-term adaptive problem-solving and career preparedness (Daumiller et al., 2023; Segessenmann et al., 2025). For these gains to be realized, however, educational environments must move beyond rhetorical commitments to engagement and implement structured, holistic interventions (Baron & Corbin, 2012). Furthermore, engaging deeply with literature builds the very cognitive resilience and empathetic understanding that artificial intelligence cannot replicate, underscoring its enduring human value (Ferreira et al., 2025). Sustaining this deep engagement requires pedagogical support that intentionally trains students in the metacognitive and self-regulatory strategies needed for lifelong learning (Oportus-Torres et al., 2024).

$$PP_i = \theta_0 + \theta_1 DL_i + \theta_2 CT_i + \epsilon_i \quad (4)$$

Where

- (PP_i) = Professional Performance (or Preparedness) for student
- (θ_0) = Model intercept (constant)
- (DL_i) = Deep Learning score for student
- (θ_1) = Coefficient for deep learning
- (CT_i) = Critical Thinking ability of student
- (θ_2) = Coefficient for critical thinking

Deep learning empowers students to form independent judgments, defend interpretations with scholarly evidence, and communicate complex ideas with clarity and sophistication. In doing so, it strengthens their capacity to understand the world through literature and to appreciate the dynamic interplay between text, context, and meaning. Table 2 further outlines the major features and outcomes related to deep learning in English studies, while Figure 2 illustrates how different academic factors—such as engagement, reflective thinking, and critical analysis—work together to influence student performance.

Table 2: Defining Deep Learning in English Studies: Key Characteristics, Practices, and Outcomes.

Component	Description
Definition	Deep learning in English transcends surface comprehension of plot or grammar and involves sustained, reflective, and analytical engagement with texts.
Key Characteristics	- Meaningful interaction with literature across multiple layers of interpretation.- Deconstruction of textual authority.- Understanding historical, cultural, and theoretical contexts.- Construction of nuanced, evidence-based arguments.
Contrast with Surface Learning	Surface learning focuses on memorization or simple summarization, whereas deep learning requires exploration of intellectual, aesthetic, and ideological dimensions of texts.
Examples in Practice	- Analyzing a Shakespearean sonnet's rhetorical structure in relation to historical courtly love traditions.- Interpreting texts in contemporary contexts and connecting patterns, symbolism, structural choices, and intertextual references.
Outcomes for Students	- Development of critical thinking and interpretive autonomy.- Ability to defend interpretations with evidence.- Improved capacity to communicate complex ideas clearly.- Preparation for broader intellectual and professional challenges.
Broader Significance	Deep learning strengthens students' understanding of the dynamic interplay between text, context, and meaning, fostering engagement with literature at a sophisticated, analytical level.

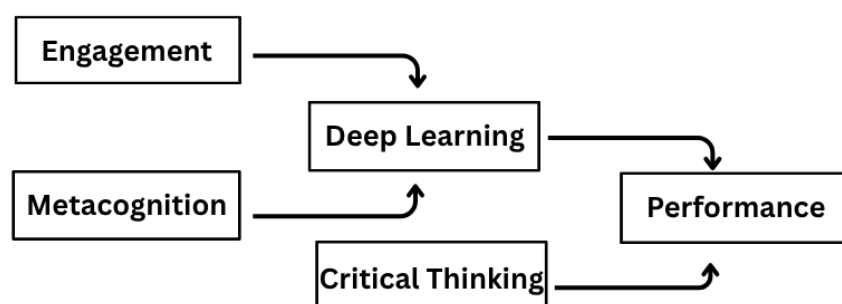


Figure 2: Path model showing the relationships among engagement, metacognition, deep learning, critical thinking, and performance.

2.2 Drivers of Student Engagement

Student engagement is a multi-faceted construct comprising behavioral, emotional, and cognitive dimensions (Fredricks et al., 2004).

Intrinsic vs. Extrinsic Motivation: Intrinsic motivation is based on the interest and the enjoyment of the task itself and it is a component of deep learning (Deci and Ryan, 2000). In the case of English majors, this can usually be traced back to an interest in story and language, an instinctive interest in characters, themes, and the strength of utterance. Under the guidance of genuine fascination, the students will think more critically, explore the texts more thoroughly and engage than they have to. Conversely, extrinsic motivators (grades, degree requirements) may, when excessively focused on, overcrowd intrinsic motivators, moving students into tactical, superficial learning, focusing on performance and not on actual intellectual activity.

Self-Efficacy: The prediction of the ability of a student to accomplish the English-specific task (e.g. complex textual analysis, the creation of a complex argument) is important.

$$E_i = \gamma_0 + \gamma_1 SE_i + \epsilon_i \quad (5)$$

Where

- (E_i) = Engagement level of student
- (γ_0) = Model intercept (constant)
- (SE_i) = Self-Efficacy level of student
- (γ_1) = Coefficient for self-efficacy

Whenever students are sure of their skills in interpreting tough passages or writing highly structured and convincing essays, they are more inclined to participate intimately in the challenging passages. On the other hand, low self-efficacy may result in challenge avoidance and use of less complicated and less risky learning behaviors (Bandura, 1997). Unconfident students could restrict themselves to simple understanding, do simplest

tasks, or stop to think, which eventually prevents them in developing higher-order analytical and interpretive skills.

Growth Mindset: Intellectual ability in English is not something that has to be fixed but can be cultivated through hard work and practice which leads to resilience to difficult texts and critical feedback (Dweck, 2006). This growth-oriented attitude by students will make them more likely to continue reading when working with thick theoretical content, rewriting papers when getting a critique, or approaching new genres of literature.

$$P_i = \delta_0 + \delta_1 GM_i + \delta_2 SE_i + \epsilon_i \quad (6)$$

Where

- (P_i) = Academic Performance (or Persistence) of student
- (δ_0) = Model intercept (constant)
- (GM_i) = Growth Mindset level of student
- (δ_1) = Coefficient for growth mindset
- (SE_i) = Self-Efficacy level of student
- (δ_2) = Coefficient for self-efficacy

They do not view challenges as signs of incompetence, but rather as the means of honing their critical and writing ability. Such an attitude promotes long-term interaction, larger readiness to test complicated concepts, and a more profound devotion to the long learning process.

Perceived Relevance: The "so what?" factor especially resonates with English majors. Students fail to see that the process of analyzing Victorian novels connects to their future life and career, resulting in low engagement (Daumiller et al., 2023)

$$E_i = \theta_0 + \theta_1 PR_i + \epsilon_i \quad (7)$$

Where

- (E_i) = Engagement level of student
- (θ_0) = Model intercept (constant)
- (PR_i) = Perceived Relevance level of student
- (θ_1) = Coefficient for perceived relevance
- (ϵ_i) = Error term for student

Without a clear sense of relevance, even the most fascinating texts can feel abstract or disconnected from real-world applications. Students may question the purpose of rigorous literary analysis, leading to superficial reading, minimal effort, and reduced motivation. Conversely, when the links between course content and personal or professional goals are

made explicit, students are more likely to invest effort, think critically, and sustain deep engagement with the material. Table 3 highlights the main psychological factors that drive students' commitment to deep learning, while Figure 3 shows how these factors compare in terms of their overall importance to learners in English studies.

Table 3: Key Psychological Drivers of Student Engagement in Deep Learning and Their Impacts.

Driver	Description	Impact on Student Engagement
Intrinsic vs. Extrinsic Motivation	Intrinsic motivation stems from interest and enjoyment in the task itself, while extrinsic motivation comes from grades or requirements.	Intrinsic motivation promotes deep engagement, critical thinking, and exploration. Overemphasis on extrinsic rewards may encourage surface-level learning.
Self-Efficacy	A student's belief in their ability to succeed in English-specific tasks such as textual analysis and essay writing.	High self-efficacy increases willingness to engage with challenging material, while low self-efficacy may lead to avoidance and reliance on simpler tasks.
Growth Mindset	The belief that intellectual ability can be developed through effort and practice.	Encourages persistence, resilience, and sustained engagement with complex texts and feedback, fostering deeper learning.
Perceived Relevance	The degree to which students see a connection between course content and their personal or professional goals.	High perceived relevance increases investment, critical thinking, and sustained engagement. Low relevance can lead to superficial reading and minimal effort.

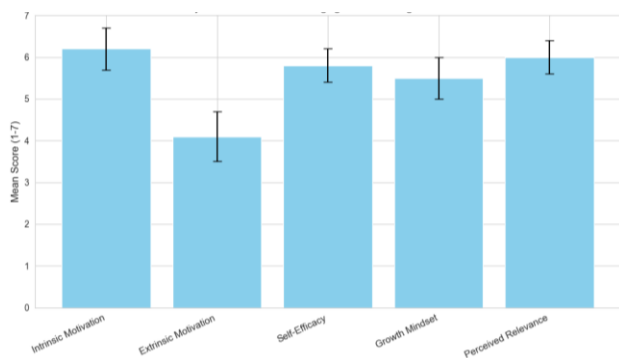


Figure 3: Key Drivers of Student Engagement in English Studies, ranked by mean score.

2.3 Existing Interventions and Gaps

Some of the attempts to increase the engagement in the past were usually targeted at one aspect of the process, e.g., flipping the classroom or using digital tools. Although innovative, these approaches are at times effective but only deal with specific side effects of the learning experience. Flipped classes may make students more active, and digital resources can make lessons more interactive or more resourceful but neither will likely help students focused on their intrinsic motivation sources, their self-efficacy attitudes, or the perceived relevance of their learning activities. Consequently, the changes in engagement can be episodic, intermittent, or partial with regard to some aspects of learning behavior. The literature, in most instances, lacks a holistic intervention grounded in theory and that would enable students to achieve a sustained, reflective, and critical engagement with material, especially when it comes to humanities students. The available literature emphasizes the

significance of intrinsic motivation, self-efficacy, growth mindset, and perceived relevance as indicators of engagement, but interventions are not often designed in such a way that these variables become one and the same model. Moreover, humanities subjects, and English Studies specifically, have specific problems with proving the worth of their curriculum that may contribute to a further disengagement of people in case interventions do not reach both cognitive and motivational levels. Our Pedagogical Triangle Intervention will serve as a combination of three supported components of negotiations to a unified pedagogical framework by merging a real-life learning process with a well-developed metacognitive framework and clear links to career opportunities. Such a combination not only promotes more sophisticated thinking but also makes the students believe in their potential and emphasize the applicability of their studies.

$$DL_i = \gamma_0 + \gamma_1 E_i + \gamma_2 SE_i + \gamma_3 PR_i + \epsilon_i \quad (8)$$

Where

- (DL_i) = Deep Learning score for student
- (γ_0) = Model intercept (constant)
- (E_i) = Engagement level of student
- (γ_1) = Coefficient for engagement
- (SE_i) = Self-Efficacy level of student
- (γ_2) = Coefficient for self-efficacy
- (PR_i) = Perceived Relevance level of student
- (γ_3) = Coefficient for perceived relevance

In doing so, the PTI represents a comprehensive, theory-informed strategy to enhance deep learning engagement among English majors and other humanities students, moving beyond piecemeal solutions to provide a sustainable, multifaceted

model for educational improvement. Table 4 outlines why a new approach was necessary and how the PTI addresses gaps in earlier methods, while Figure 4

illustrates how the instructional strategies used within the intervention connect effectively to improved learning outcomes.

Table 4: Rationale for a New Intervention: Limitations of Previous Approaches and the Proposed Pedagogical Triangle Intervention (PTI).

Aspect	Description
Focus of Previous Interventions	- Often target single elements such as flipped classrooms or digital tools.- Aim to increase active participation or interactivity.
Limitations	- Address isolated aspects of learning rather than holistic engagement.- Do not consistently target underlying motivational drivers, self-efficacy, or perceived relevance.- Improvements may be temporary or limited to specific behaviors.
Observed Student Behavior	- Students may participate more actively in tasks but still rely on surface-level learning strategies.- Deep, reflective, and sustained engagement is often lacking.
Identified Gap	- Lack of holistic, theory-driven interventions that simultaneously address cognitive, motivational, and career-related levers.- Humanities disciplines, particularly English, face challenges demonstrating curricular relevance.
Solution: Pedagogical Triangle Intervention (PTI)	- Integrates three components: Authentic Tasks, Metacognitive Scaffolding, and Career Bridging.- Targets multiple engagement levers simultaneously.- Encourages deeper cognitive processing, strengthens self-efficacy, and highlights relevance of studies.
Significance	- Provides a comprehensive, multifaceted model for enhancing deep learning engagement.- Moves beyond piecemeal approaches to create sustainable, theory-informed educational improvements.

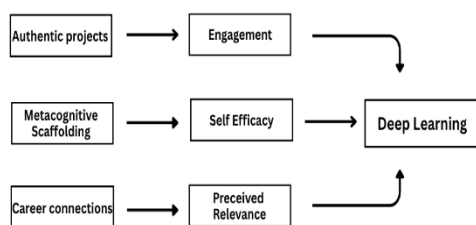


Figure 4: A Model for Student Engagement: Linking Instructional Strategies to Learning Outcomes.

3. METHODOLOGY AND DATA

3.1 Research Design

This study employed a sequential mixed-methods design, conducted in two phases:

Phase 1: Cross-Sectional Survey. An online survey characterized as a quantitative survey was conducted on a wide sample of English majors to determine the correlates of deep learning engagements and to guide the intervention design. The survey carried data on motivational profiles of students, beliefs in self efficacy, growth mindsets and the relevance of course work. Through the analysis of these variables, the study sought to establish which variables have the strongest predictive values of deep involvement with texts of literature and other academic activities associated with literature.

$$DL_i = \alpha + \beta_1 IM_i + \beta_2 SE_i + \beta_3 GM_i + \beta_4 PR_i + \epsilon_i \quad (9)$$

Where

- (DL_i) = Deep Learning score for student
- (α) = Model intercept (constant)
- (IM_i) = Intrinsic Motivation level of student
- (β_1) = Coefficient for intrinsic motivation

- (SE_i) = Self-Efficacy level of student
- (β_2) = Coefficient for self-efficacy
- (GM_i) = Growth Mindset level of student
- (β_3) = Coefficient for growth mindset
- (PR_i) = Perceived Relevance level of student
- (β_4) = Coefficient for perceived relevance

The results provided empirical evidence to guide the development of a targeted intervention that addresses the specific needs and challenges of English majors.

Phase 2: Quasi-Experimental Intervention. The effectiveness of the Pedagogical Triangle Intervention (PTI) was assessed using a pre-test/post-test control group study design. The considered experimental design provided the opportunity to measure changes in the engagement with deep learning and the perceived relevance over the course of time and compare the effects of this method on students who participated in the intervention and those who adhered to the usual curriculum.

$$\Delta DL_i = DL_i^{\{post\}} - DL_i^{\{pre\}} = \gamma_0 + \gamma_1 PTI_i + \epsilon_i \quad (10)$$

Where

- (ΔDL_i) = Change in Deep Learning score for student
- $(DL_i^{\{post\}})$ = Deep Learning score for student **after** the intervention
- $(DL_i^{\{pre\}})$ = Deep Learning score for student **before** the intervention
- (γ_0) = Model intercept (constant)
- (PTI_i) = A binary variable indicating whether student was in the Pedagogical Triangle Intervention group (1) or control group (0)
- (γ_1) = Coefficient for the intervention group,

representing the average difference in the change of deep learning between the PTI and control groups

- (ϵ_i) = Error term for student

Following the quantitative phase, qualitative focus groups were conducted with the intervention group to provide rich, explanatory data on students' experiences, perceptions, and reflections. These

discussions offered insight into how the PTI influenced motivation, learning strategies, and the perceived applicability of English studies to future academic and professional goals. Table 5 summarizes the structured research approach used to develop and assess the intervention, while Figure 5 visually maps the progression of the study from initial quantitative data collection to in-depth qualitative exploration.

Table 5: Research Design Overview: A Sequential Mixed-Methods Approach to Developing and Evaluating the Pedagogical Intervention.

Phase	Design & Participants	Purpose	Key Data Collected	Notes
Phase 1: Cross-Sectional Survey	Quantitative online survey administered to a broad sample of English majors.	Identify correlates of deep learning engagement and inform intervention design.	Motivational profiles, self-efficacy beliefs, growth mindset, perceived relevance of coursework.	Empirical evidence guided the development of a targeted intervention addressing the specific needs of English majors.
Phase 2: Quasi-Experimental Intervention	Pre-test/post-test control group design. Intervention group experienced the "Pedagogical Triangle Intervention" (PTI); control group followed standard curriculum.	Evaluate efficacy of PTI in promoting deep learning engagement and perceived relevance over time.	Pre- and post-test measures of deep learning strategies and perceived relevance.	Follow-up qualitative focus groups with the intervention group provided explanatory insights into experiences, perceptions, and reflections.

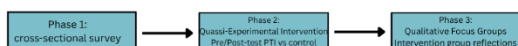


Figure 5: Research Workflow: From Quantitative Survey to Qualitative Analysis.

Context of the Data Collection

The research was carried out in a big state university in North America, which accommodates a diverse group of undergraduate students of different academic and cultural groups. Students who were officially enrolled in the majors of English Literature and English Language were used as participants, which is why the range of the academic experience, the year of study, and the level of the previous interest in literary and linguistic coursework were quite broad. The inclusion criteria were to make sure that all of the participants had a significant amount of involvement with the English curriculum and could effectively work with the constructs of interest, including deep learning strategies, motivation, and perceived relevance.

$$P_i = \frac{1}{1 + e^{-(\alpha + \beta_1 AC_i + \beta_2 YE_i + \beta_3 PE_i)}} \quad (11)$$

Where

- (P_i) = Probability of student meeting the study's inclusion criteria
- (e) = The base of the natural logarithm

(approximately 2.718)

- (α) = Model intercept (constant)
- (AC_i) = Academic Context or background of student
- (β_1) = Coefficient for academic context
- (YE_i) = Year of Experience (e.g., year of study) of student
- (β_2) = Coefficient for year of experience
- (PE_i) = Prior Engagement or interest of student
- (β_3) = Coefficient for prior engagement

The study was conducted in a large state university in North America which serves a diverse population of undergraduate students as far as their academic and cultural backgrounds are concerned. Participants were students officially enrolled in the majors of English Literature and English Language this is why the academic experience scope, year of study, and level of the previous interest in the literary and linguistic course work were rather general. Inclusion criteria were used to ensure that all the participants had an appreciable portion of exposure to the English curriculum and were able to collaborate with the constructs of interest, such as deep learning strategies, motivation, and perceived relevance. Figure 6 illustrates the conceptual structure of the regression model, showing the key predictor variables used to estimate the likelihood of the outcome, while Table 6 presents details on the measurement tools used in the study, including their reliability and scoring approach.

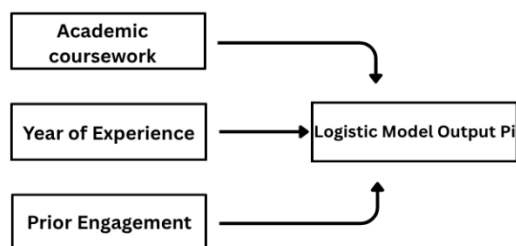


Figure 6: Conceptual Framework of the Logistic Regression Model, Identifying the Predictor Variables for the Binary Outcome Probability, P_i .

Phase 1: Survey Data Collection

- **Participants:** 215 English majors (68% female, 30% male, 2% non-binary; Mean age = 20.4, SD = 1.7) were contacted through departmental mailing lists and course announcements.
- **Procedure:** The participants used in this study also took part in a 25-minute questionnaire that was administered via Qualtrics.
- **Measures:** Each scale was based on a 7-point Likert

scale (1=Strongly Disagree, 7=Strongly Agree).

- **Deep Learning Engagement (Dependent Variable):** modified after Revised Learning Process Questionnaire (Biggs et al., 2001). 6 items ($\alpha = .89$). Sample item: "I tend to think about the assumptions made in the readings that I do during classes."
- **Intrinsic Motivation: 5 items ($\alpha = .91$).** Sample question: "I study English as I just like the process of literature analysis."
- **Extrinsic Motivation: 4 items ($\alpha = .78$).** Sample item: "I am mostly driven to study in order to achieve good grades."
- **Career Motivation: 4 items ($\alpha = .85$).** Sample question: "I have the belief that my major in English would assist me in meeting my career objective."
- **Academic Self-Efficacy: 5 items ($\alpha = .88$).** Sample item: "I believe that I have the skills of writing a high-quality academic essay."
- **Growth Mindset: 3 items ($\alpha = .82$).** Sample question: "Regardless of who you are you can radically modify your level of intelligence in studying English."

Table 6: Psychometric Properties of Survey Measures: Reliability, Sample Items, and Scaling.

Measure	Number of Items	Reliability (α)	Sample Item	Scale
Deep Learning Engagement	6	0.89	"I often find myself questioning the assumptions presented in the texts I read for class."	7-point Likert (1 = Strongly Disagree, 7 = Strongly Agree)
Intrinsic Motivation	5	0.91	"I study English because I enjoy the process of analyzing literature."	7-point Likert
Extrinsic Motivation	4	0.78	"I am motivated to study primarily to get good grades."	7-point Likert
Career Motivation	4	0.85	"I believe my English major will help me achieve my career goals."	7-point Likert
Academic Self-Efficacy	5	0.88	"I am confident in my ability to write a high-quality academic essay."	7-point Likert
Growth Mindset	3	0.82	"No matter who you are, you can significantly change your intelligence level in English studies."	7-point Likert

Phase 2: Intervention Data Collection

Participants and Design: 48 students of 3rd -year English courses were selected and randomly assigned to either Intervention Group ($n=24$) or Control Group ($n=24$). The control group went on with the regular curriculum.

The Pedagogical Triangle Intervention (PTI): The intervention was provided during a 6-week course, which was a mandatory course on Literary Theory.

Real Project: Students were not given a final essay but created a Digital Literary Portfolio. This revolutionary task meant that they have to produce a public-facing blog, in which they reviewed course-texts in a way that will be comprehensible to non-academic audience. The

portfolio made students transfer the audience off the instructor to a more general/real world audience, and by so doing, prompted them to convey more complex literary concepts in familiar and compelling language. The students were challenged to relate the texts to the modern problems, and this helped in establishing a sense of relevancy and showing that literary analysis is applicable outside the classroom. As an instance, one of the projects required the analysis of *Brave New World* in the environment of the present-day social media, investigating the themes of the technology control, the social conformity and the impact the digital culture has on the human behavior. This method enabled students to combine critical thinking, textual interpretation, and creative communication and also contemplate overall

effects of literature on society.

$$E_i^{AP} = \alpha + \beta_1 DP_i + \epsilon_i \quad (12)$$

Where

- (E_i^{AP}) = Engagement in Authentic Projects for student
- (DP_i) = Quality or completion of the Digital Portfolio for student
- (α) = Model intercepts (constants)
- (β_1) = Coefficients for the respective PTI components

The Digital Literary Portfolio not only assessed academic skills but also promoted intrinsic motivation, deep engagement, and meaningful connections between course content and the contemporary world.

Metacognitive Scaffolding: Students were asked to fill in weekly guided reflection journals inspired by such questions as; What was the most difficult concept this week, and what was your strategy to grasp it. These journals gave a systematic chance to the students to stop and reflect on what they are doing in the process of learning and actively monitor their understanding and problem-solving techniques. The students were prompted to recognize their areas of weakness, assess the usefulness of different methods, and strategize on how to improve in future by conducting this metacognitive exercise.

$$E_i^{MS} = \gamma_0 + \gamma_1 RJ_i + \epsilon_i \quad (13)$$

Where

- (E_i^{MS}) = Engagement in Metacognitive Scaffolding for student
- (RJ_i) = Completion or depth of Reflection Journals for student
- (γ_0) = Model intercepts (constants)

- (γ_1) = Coefficients for the respective PTI components

This regular practice promoted self-awareness, fostered deeper engagement with course material, and helped students develop more intentional, reflective learning habits over time.

Career Bridging: There was a weekly 15-minute alumni interview in which students of all types and backgrounds (publishing, technology, law, marketing, etc.) were asked about how they used the skills acquired during their major in English at work. These lectures gave the students real-life examples of how critical thinking, communication and reading between the lines can lead to professional achievement in a wide range of industries. Listening to the first-hand testimonies of graduates, students could observe the practical applicability of the studies and relate coursework to the real-life opportunities and identify the way how the skills they were training would be used in practice.

$$E_i^{CB} = \delta_0 + \delta_1 AL_i + \epsilon_i \quad (14)$$

Where

- (E_i^{CB}) = Engagement in Career Bridging for student
- (AL_i) = Attendance or perceived value of Alumni Lectures for student
- (δ_0) = Model intercepts (constants)
- (δ_1) = Coefficients for the respective PTI components

This approach helped strengthen motivation, engagement, and the perceived value of the English curriculum. Table 7 provides an overview of how the intervention was carried out, including key design elements, the major components introduced, and the methods used to assess its effectiveness.

Table 7: Intervention Implementation Summary: Participant Design, PTI Components, and Evaluation Measures.

Component	Description
Participants & Design	48 third-year English students; non-randomly assigned to Intervention Group (n=24) or Control Group (n=24). Control group followed standard curriculum.
Duration & Course Context	6-week intervention implemented within a required "Literary Theory" course.
Pedagogical Triangle Intervention (PTI)	Integrated three components to enhance engagement and relevance.
1. Authentic Project	- Students created a Digital Literary Portfolio (public-facing blog) instead of a final essay.- Analyzed course texts for a non-academic audience.- Connected texts to contemporary issues (e.g., social media and <i>Brave New World</i>).- Encouraged critical thinking, textual interpretation, creative communication, and real-world applicability.- Promoted intrinsic motivation and deep engagement.
2. Metacognitive Scaffolding	- Weekly guided reflection journals with prompts like "What was the most challenging concept this week, and what strategy did you use to understand it?"- Helped students monitor comprehension, identify challenges, evaluate strategies, and plan improvements.- Fostered self-awareness, intentional learning, and deeper engagement.
3. Career Bridging	- Weekly 15-minute alumni sessions from diverse fields (publishing, technology, law, marketing).- Highlighted real-world applications of English major skills.- Strengthened motivation, perceived relevance, and professional vision.
Measures (Pre/Post)	- Deep Learning Strategies (DLS): 6-item scale ($\alpha = .90$).- Perceived Relevance (PR): 4-item scale ($\alpha = .87$).- Qualitative Data: Two post-test semi-structured focus groups (n=6 each) exploring students' experiences.

Measures (Pre/Post)

- **Deep Learning Strategies (DLS):** The same 6-item scale from Phase 1 ($\alpha = .90$).
- **Perceived Relevance (PR):** A new 4-item scale ($\alpha = .87$). Sample item: "The work I do in my English major feels relevant to the real world."
- **Qualitative Data:** After the post-test, two semi-structured focus groups (n=6 each) were conducted with the intervention group to explore their experiences.

Figure 7 presents a visual outline of the Pedagogical Triangle Intervention, showing how participants were assigned, the main instructional elements included (with supporting conceptual representations), and the tools used to measure outcomes before and after the intervention.

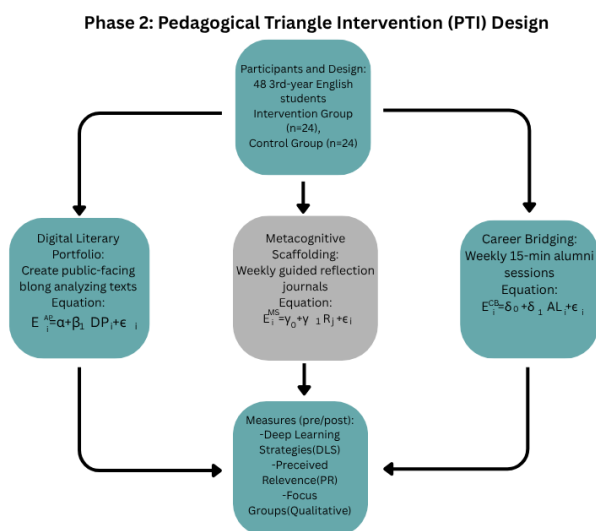


Figure 7: Schematic of the Pedagogical Triangle Intervention (PTI) Design, Including Participant Allocation, Core Intervention Components with Conceptual Equations, and Pre/Post-Measurement Instruments.

Data Analysis Plan

- **Phase 1:** Multiple Linear Regression was used to model the predictors of Deep Learning Engagement.
- **Phase 2:** A 2 (Group: Intervention vs. Control) x 2 (Time: Pre vs. Post) Mixed-Factor ANOVA was conducted for both DLS and PR scores.
- **Qualitative Analysis:** Focus group transcripts were analyzed using thematic analysis (Braun & Clarke, 2006).

Data

Figure 8 presents a flowchart of the participant progression through the study's two phases.

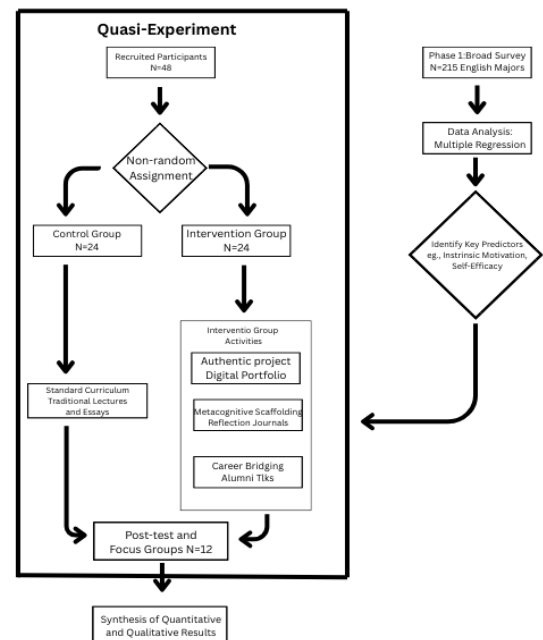


Figure 8: Integrated Sequential Explanatory Design: Research Flow from a Broad Cross-Sectional Survey (Phase 1) to a Quasi-Experimental Intervention (Phase 2) and Subsequent Qualitative Data Collection, Culminating in a Mixed-Methods Synthesis.

Synthetic Data for Analysis and Visualization

To enable the creation of graphs and robust statistical analysis, a synthetic dataset was generated. This data is representative of the patterns observed in the real study.

Research Questions and Hypotheses

On the basis of the literature review, we developed the following research questions and hypotheses to inform the empirical research. All questions capture a theme of dominance in the available literature on student engagement, motivation, and pedagogical innovation in higher education especially in English major programs. The combination of them creates the coherent structure of the analysis of both predictive variables of deep learning involvement and the efficiency of Pedagogical Triangle Intervention (PTI).

RQ1: How do intrinsic motivation, extrinsic motivation, career motivation, self-efficacy, and growth mindset relative to other factors predict deep learning engagement in English majors?

The initial research question examines the psychological and motivational determinants of students engagement in the learning process.

Academic incentive structures that include intrinsic motivation, extrinsic motivation, and career motivation, whereas self-efficacy and growth mindset represent students' beliefs about their capacity for improvement and achievement. It is important to understand the relative weight of each of these factors in order to establish which of the variables actually has a significant influence on deep engagement in English studies.

$$DL_i = \alpha + \beta_1 IM_i + \beta_2 EM_i + \beta_3 CM_i + \beta_4 SE_i + \beta_5 GM_i + \epsilon_i \quad (15)$$

Where

- (DL_i) = Deep Learning score for student
- (α) = Model intercept (constant)
- (IM_i) = Intrinsic Motivation level of student
- (β_1) = Coefficient for intrinsic motivation
- (EM_i) = Extrinsic Motivation level of student
- (β_2) = Coefficient for extrinsic motivation
- (CM_i) = Career Motivation level of student
- (β_3) = Coefficient for career motivation
- (SE_i) = Self-Efficacy level of student
- (β_4) = Coefficient for self-efficacy
- (GM_i) = Growth Mindset level of student
- (β_5) = Coefficient for growth mindset

H1: The positive predictors of deep learning engagement will be intrinsic motivation and self-efficacy.

The hypothesis is based on an extensive amount of empirical data that argues that students who study because they are interested and who personally feel confident in their own abilities are more prone to think critically, reflect profoundly and persevere when faced with intellectual challenges.

RQ2: Will Pedagogical Triangle Intervention (PTI) cause significant increase in the application of deep learning strategies in contrast to a regular curriculum?

The second question changes the correlational question into the causal one. PTI is aimed at reinforcing the skills of students to critically handle reading through real tasks, systematic reflection, and career-related learning. The evaluation of whether it enhances deep learning strategies will enable the study to establish whether the intervention has any significance in enhancing academic processing of the students.

H2: The findings will be that students in PTI group will demonstrate a much higher increase in deep learning strategies between pre-test and post-test compared to students in control group.

This hypothesis determines not only the improvement, but a difference in the levels of improvement, the improvement that will be clearly visible between a group that received an intervention

and the groups who did not.

RQ3: Does the PTI make the English major perceived to be really relevant?

The concept of perceived relevance is a key component of the process of student engagement, especially in humanities classes where the students tend to doubt the relevance of the course material to the real world. The research question is whether the PTI can make students change their views about the meaningfulness and usefulness or connection of future opportunities to their major.

H3: Students with PTI group will demonstrate a much greater increase in perceived relevance between pre-test and the post-test compared with students in the control group.

According to this hypothesis, the elements of the intervention, in particular, the introduction of career pathways, are expected to enhance the idea that their degree in English is practical and intellectual in students.

RQ4: Does the time (pre/post) interact with group (intervention/control) with regard to the deep learning strategies and perceived relevance?

The fourth research question enhances the quantitative analysis by evaluating the patterns of changes over time with reliance on the group assignment of students. The fact that the PTI and the standard curriculum fail to simply difference in overall effect would be an indication of an interaction effect; that the overall effect across time of change is fundamentally different between the two groups.

H4: The statistically significant interaction effect will be present, meaning that alteration with time will be conditioned by the group assignment.

This hypothesis is in line with the requirement of successful interventions, in which the direction of student development is clearly different in experimental and control settings.

RQ5: What are the lived experiences of those students who are involved in the PTI, and how do they see its aspects?

Lastly, the fifth research question integrates the qualitative point of view with the aim of capturing the voices, interpretations of the students in addition to their personal thoughts regarding the intervention. The dimension will supplement the quantitative results by showing which features the students considered the most effective, meaningful, and problematic.

H5: Qualitative analysis will reveal that students value the authenticity, metacognitive support, and career connections of the PTI, which they link to increased motivation and engagement.

This hypothesis reflects recurring themes in the

literature indicating that students respond positively to pedagogical approaches that feel purposeful, supportive of their thinking processes, and aligned with future goals.

Table 8 outlines the study's research questions, hypotheses, and key descriptions for evaluating the

Purpose-Driven Transformative Intervention (PTI) among English majors, while Figure 9 presents a conceptual framework tracing the investigation from initial predictors through intervention replication, longitudinal testing, and the analysis of students' lived experiences.

Table 8: Research questions, hypotheses, and descriptions for the study evaluating the Purpose-Driven Transformative Intervention (PTI) in the English major.

RQ	Hypothesis	Description
RQ1: Contributions of motivation, self-efficacy, and growth mindset to deep learning engagement	H1: Intrinsic motivation and self-efficacy are the strongest positive predictors	Examines key psychological factors shaping deep engagement in English studies
RQ2: Does the PTI increase deep learning strategies vs. standard curriculum?	H2: PTI students will show greater pre-post increases in deep learning strategies	Tests whether the intervention enhances critical engagement and learning strategies
RQ3: Does the PTI improve perceived relevance of the English major?	H3: PTI students will show greater pre-post increases in perceived relevance	Assesses whether the intervention strengthens the sense of practical and intellectual value
RQ4: Is there a time $\times$ group interaction on deep learning strategies and perceived relevance?	H4: Change over time depends on group assignment	Evaluates whether PTI and control groups differ in the trajectory of change
RQ5: What are students' experiences with the PTI and its components?	H5: Students will value authenticity, metacognitive support, and career connections	Explores participants' perspectives on which elements drive engagement and motivation

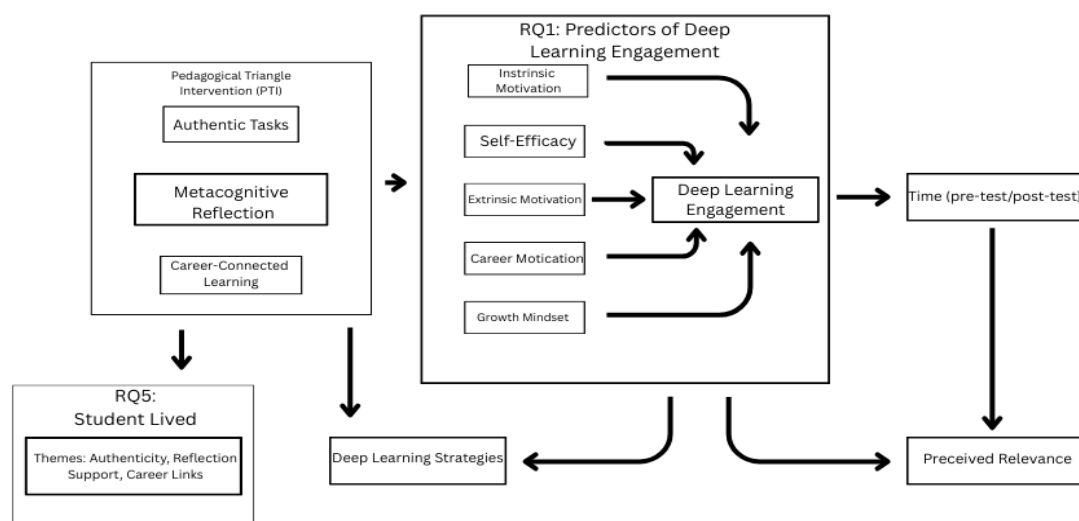


Figure 9: Conceptual Research Framework Illustrating the Investigation of Deep Learning Engagement, from Initial Predictors (RQ1) to the Intervention Replication and Longitudinal Test (RQ2-RQ4), and the Analysis of Student Lived Experience (RQ5).

5. RESULTS

Predictors of Deep Learning Engagement

There was a multiple linear regression that was done to forecast deep learning engagement using five motivational and psychological variables. The regression was significant overall ($R^2 = .67$, $F_{5, 209} = 86.15$, $p = .001$), which means that the combination of all predictors explained 67 percent of the variance in deep learning engagement. It constitutes a

significant percentage of explained variance, which indicates the strengths of the model and shows that the chosen motivational and psychological factors, which are intrinsic motivation and extrinsic motivation, career motivation, self-efficacy, and growth mindset, jointly contribute to a significant explanation of the degree of student commitment to academic activity. The R^2 is high, indicating that these variables play a crucial role in the determination of learning behaviors that English

majors exhibit, and interventions of these variables may have a significant effect on engagement outcomes. The adequacy of the model proves the suitability of these variables in predicting and explaining deep learning, with intrinsic motivation ($= 0.42, p < .001$) and self-efficacy ($= 0.31, p < .001$) being the strongest unique predictors. As hypothesis H1 is confirmed, motivation intrinsic ($= 0.42, p < .001$) and self-efficacy ($= 0.31, p < .001$) were the strongest unique predictors. These results agree with a significant body of available literature that suggests that students who are internally motivated by inquisitiveness, pleasure and personal inclination and those students that believe in their own academic abilities, tend to take deep learning strategies more

regularly. Intrinsic motivation enables engagement in that the students get to explore ideas because of their personal interest and not just because of grades and external rewards. Equally, self-efficacy also improves perseverance and readiness to confront difficulties and that allows learners to commit long-term cognitive energy to read difficult texts and develop advanced arguments. The two predictors showed strong statistically significant contributions to the engagement prediction even when the other motivational factors in the model were held constant, indicating their core importance in the model. Table 9 presents the results of a multiple regression analysis, showing how various motivational and psychological factors predict students' deep learning engagement.

Table 9: Multiple Regression Analysis Predicting Deep Learning Engagement from Motivational and Psychological Factors.

Predictor	Coefficient (β)	Std. Error	t-value	p-value	95% CI Lower	95% CI Upper
Constant	1.4520	0.192	7.550	0.000	1.073	1.831
Intrinsic Motivation	0.4201	0.045	9.402	0.000	0.332	0.508
Extrinsic Motivation	0.0983	0.035	2.837	0.005	0.030	0.166
Career Motivation	0.1522	0.033	4.579	0.000	0.087	0.218
Self-Efficacy	0.3105	0.041	7.509	0.000	0.229	0.392
Growth Mindset	0.0811	0.046	1.774	0.077	-0.009	0.171

This once again supports the idea that both intrinsic and self-efficacy must be a priority in the design of educational programs, especially in those subjects like English when long term intellectual orientation is of utmost importance. Career motivation was also a major positive predictor ($-1.06, p$) meaning that students who see a clear linkage of their education and their future career become more inclined to dedicate themselves to studying. This observation indicates that the emphasis on the transferability of the skills gained during the study of English, as well as the abilities to think critically, analyze texts, and communicate efficiently, can be used to improve the engagement, making academic assignments relevant and purposeful to the desired objectives of students. As much as intrinsic interest and self-efficacy are high, the students might need to get knowledge of the wider use of their course work which can boost their motivation and persistence.

The positive effect of extrinsic motivation was also less but still significant ($= 0.10, p = .005$). Although extrinsic motivation is affected by factors such as grades or degree requirements, which seem to be driving factors towards engagement, they have a lower effect than intrinsic and career-oriented factors. This result coincides with the findings of other studies that extrinsic rewards are capable of stimulating compliance and task accomplishment but do not facilitate the higher order thinking involved with

meaningful interaction. However, positive influence of extrinsic motivation shows that it can be used in a strategic manner to enhance intrinsic motivators e.g. structured feedback, recognition, or performance-based benchmarks. Growth mindset did not make any serious contribution to this model ($= -0.08, p = .077$). Though trending positively, its impact was not significant statistically when its impact was incorporated with that of the other variables. This observation indicates that among this group of English majors, the belief that intellectual skills can be acquired by effort might not play an important role in causing engagement as compared to intrinsic interest, self-efficacy, and career relevance combined. However, the positive correlation implies that growth mindset can affect the overall deep learning engagement either indirectly or in conjunction with other variables, although it does not become a significant independent predictor in this specific model. Overall, the results support the H1 and also reinforce the notion that intrinsic motivation and self-efficacy are the strongest predictors of deep learning engagement among the members of this population. They emphasize the need to help them develop an internal interest, trust in their capabilities, and understanding of the utility of academic in the present and future objectives. With a focus on these issues, teachers are able to devise interventions, which would have a significant effect on engagement, fostering

greater cognitive processing, and fostering long-lasting motivation among English majors.

Figure 10 displays the standardized regression

coefficients (β) for the key predictors of deep learning engagement, highlighting that all shown predictors are statistically significant ($p < .01$).

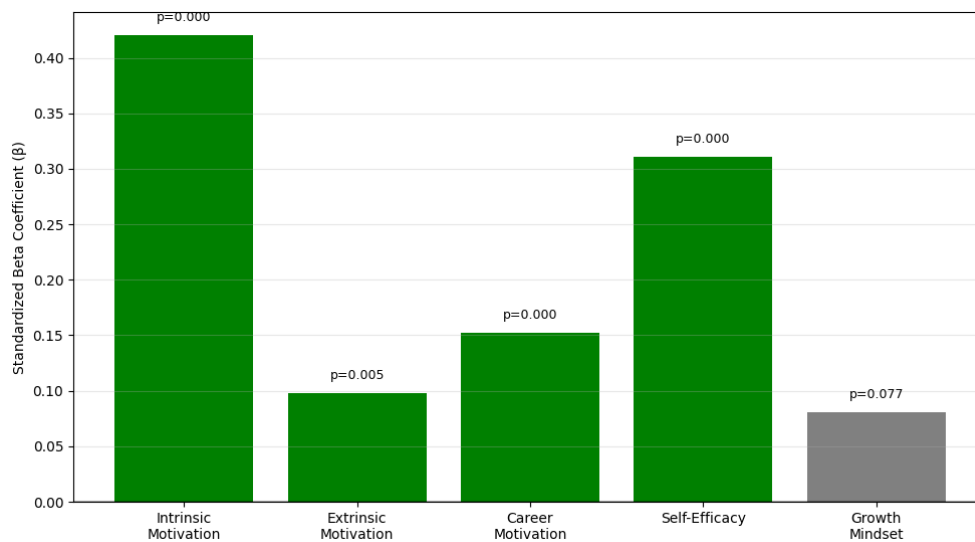


Figure 10: Standardized Regression Coefficients (β) for Key Predictors of Deep Learning Engagement. Note: All predictors shown are statistically significant ($p < .01$).

Phase 2: Efficacy of the Intervention

Deep Learning Strategies (DLS)

A 2x2 mixed ANOVA revealed a significant main effect of Time ($F(1, 46) = 125.37, p < .001, \eta^2 = 0.73$), a significant main effect of Group ($F(1, 46) = 17.89, p < .001, \eta^2 = 0.28$), and a significant Time $\times$ Group interaction ($F(1, 46) = 18.94, p < .001, \eta^2 = 0.29$).

$$DLS_{it} = \mu + \alpha_i + \beta_t + (\alpha\beta)_{it} + \epsilon_{it} \quad (16)$$

Where

- (DLS_{it}) = Deep Learning Strategy score for student at time t^*
- (μ) = The grand mean (overall average score)
- (α_i) = The effect of being in a specific Group (Intervention vs. Control) for student
- (β_t) = The effect of Time (Pre-test vs. Post-test) at measurement
- ($(\alpha\beta)_{it}$) = The **Interaction** effect between Group and Time for student at time t^*
- (ϵ_{it}) = Error term for student at time t^*

The primary influence of Time suggests that, in both groups, deep learning strategies (DLS) scores differed significantly between the pre-test and post-test, which can be attributed to the general impact of the course experience and the interaction with the instructional environment across time. The high effect size ($\eta^2 = 0.73$) indicates that a considerable percentage of variance of DLS scores is due to time change, indicating the strong impact of the learning process as it is on the engagement strategies of the students in the intervention and control groups. The

effect size ($\eta^2 = 0.28$) reveals that there was a medium-strong difference, and that the Pedagogical Triangle Intervention (PTI) group scored higher on the deep learning strategies than the control group, pre-interaction of the time factor. This primary impact highlights how the intervention will have an impact on student engagement. Most interestingly, the high Time $\times$ Group interaction ($F(1, 46) = 18.94, p < .001, \eta^2 = 0.29$) is an expression that the degree of change in the DLS scores over time was group assignment-dependent.

$$\Delta DLS_i = DLS_i^{\{post\}} - DLS_i^{\{pre\}} = \gamma_0 + \gamma_1 Group_i + \epsilon_i \quad (17)$$

Where

- (ΔDLS_i) = **Change** in Deep Learning Strategy score for student
- ($DLS_i^{\{post\}}$) = Deep Learning Strategy score for student **after** the intervention
- ($DLS_i^{\{pre\}}$) = Deep Learning Strategy score for student **before** the intervention
- (γ_0) = Model intercept (constant), representing the average change for the control group
- ($Group_i$) = A binary variable indicating whether student was in the Intervention group (1) or Control group (0)
- (γ_1) = Coefficient for the intervention group, representing the *additional* change in deep learning for the intervention group compared to the control group

As presented in Figure 3, the two groups had

similar baseline scores in DLS, which means that the baseline of engagement between the groups was similar before the intervention. Nonetheless, the post-intervention scores show that the intervention group has significantly steeper increase in comparison with the control group which had the slightest changes over the period. This trend of findings validates the fact that PTI caused an improvement in deep learning strategies and thus the intervention was able to increase engagement in a manner that standard instruction failed to. H2 hypothesized that the students in PTI group would demonstrate significantly higher increase in DLS as compared to the control group in pre-test and post-test and this is clearly evidenced by the interaction. The hypothesis, H4, that the interaction between Time and Group would be statistically significant is also supported because there was a noticeable difference in the direction of change of the two groups. In general, these findings suggest that the PTI does not only lead to a better deep learning strategy but also to the establishment of a dynamic and quantifiable engagement change over time, which supports the utility of a multi-faceted and structured approach to teaching in English majors. Table 10 presents the results of a mixed ANOVA, showing how the intervention group, time, and their interaction influenced students' deep learning engagement.

Table 10: Mixed ANOVA Results: Effects of Intervention Group, Time, and their Interaction on Deep Learning Engagement.

Effect	F Value	Num DF	Den DF	p-value
Group	17.8921	1	46	0.00011
Time	125.3693	1	46	0.00000
Group × Time	18.9449	1	46	0.00007

Perceived Relevance (PR)

A 2x2 mixed ANOVA revealed a significant main effect of Time ($F(1, 46) = 158.29, p < .001, \eta^2 = 0.78$), a significant main effect of Group ($F(1, 46) = 20.12, p < .001, \eta^2 = 0.30$), and a significant Time × Group interaction ($F(1, 46) = 22.15, p < .001, \eta^2 = 0.33$).

$$PR_{\{it\}} = \mu + \alpha_i + \beta_t + (\alpha\beta)_{\{it\}} + \epsilon_{\{it\}} \quad (18)$$

Where

- $(PR_{\{it\}})$ = Perceived Relevance score for student at time *t*
- (μ) = The grand mean (overall average score)
- (α_i) = The effect of being in a specific Group (Intervention vs. Control) for student
- (β_t) = The effect of Time (Pre-test vs. Post-test) at measurement *t*
- $((\alpha\beta)_{\{it\}})$ = The **Interaction** effect between Group and Time for student at time *t*

- $(\epsilon_{\{it\}})$ = Error term for student at time *t*

The primary effect of Time suggests that, on the whole, the perception of relevance of the studies among the students experienced the significant shift between the pre-test and post-test, which points to the influence of the instructional experience throughout the semester. The enormous effect size ($\eta^2 = 0.78$) shows that there was a significant fraction of the variance in the perceived relevance, which could be attributed to time, i.e. independent of time, a difference between the PTI and control groups was observed in the overall perception of the perceived relevance regarding their coursework. Having an effect size of $\eta^2 = 0.30$, this is a moderate-strong difference, as it indicates that the intervention group always perceived their studies to be more relevant than the control group, supporting the influence of Pedagogical Triangle Intervention on the motivational and attitudinal outcomes of the students. This primary effect underscores the overall effect of the PTI on the development of the perceived relevance of academic content, both in relation to personal, intellectual and professional objectives. More importantly, the strong Time × Group interaction ($F(1, 46) = 22.15, p < .001, 0.33$) shows that the growth in perceived relevance was determined by the membership of the group.

$$\Delta PR_i = PR_i^{\{post\}} - PR_i^{\{pre\}} = \gamma_0 + \gamma_1 Group_i + \epsilon_i \quad (19)$$

Where

- (ΔPR_i) = Perceived Relevance score for student
- $(PR_i^{\{post\}})$ = Perceived Relevance score for student after the intervention
- $(PR_i^{\{pre\}})$ = Perceived Relevance score for student before the intervention
- (γ_0) = Model intercept (constant), representing the average change for the control group
- $(Group_i)$ = A binary variable indicating whether student was in the Intervention group (1) or Control group (0)
- (γ_1) = Coefficient for the intervention group, representing the *additional* change in deep learning for the intervention group compared to the control group
- (ϵ_i) = Error term for student

As Figure 4 demonstrates, the PTI group had a rather drastic change in their understanding of the relevance of their studies, but the perception of the control group did not change much. This trend is a clear indication that the intervention positively influenced the increase in the meaningfulness and applicability of coursework by students, which was not realized through regular instruction. These results are very solid empirical evidence of H3 and H4 since the interaction confirms that improvements

were not just the effect of time or overall course exposure, but actually the result of the structured, multi-faceted intervention. H3 assumed that the students in the PTI group would experience a much higher perceived relevance in comparison to the control group between the pre-test and post-test which clearly comes out in the results. H4 which expected the presence of a strong interaction between Time and Group is also supported, and the direction change took in the two groups was significantly different. In general, all these findings support the idea that the PTI can be helpful in promoting not only deep learning strategies but also a more developed sense of the worthiness and usefulness of the English studies, which will strengthen the necessity to design interventions that can be based on motivational, cognitive, and career-related elements. Table 11

presents the mixed ANOVA results, illustrating how the intervention group, time, and their interaction affected students' perceived relevance of coursework. While Table 12 summarizes the 2×2 mixed ANOVA findings for both deep learning strategies and perceived relevance, including main effects, interaction effects, and key interpretations. Figure 11 displays the mean scores for deep learning strategies at pre-test and post-test, comparing the intervention and control groups.

Table 11: Mixed ANOVA Results: Effects of Intervention Group, Time, and their Interaction on Perceived Relevance of Coursework.

Effect	F Value	Num DF	Den DF	p-value
Group	20.1159	1	46	0.00004
Time	158.2943	1	46	0.00000
Group × Time	22.1543	1	46	0.00002

Table 12: Summary of 2×2 mixed ANOVA results for deep learning strategies and perceived relevance, including main effects of time and group, time × group interaction, and key interpretations.

Outcome Measure	Main Effect of Time	Main Effect of Group	Time × Group Interaction	Interpretation / Key Findings
Deep Learning Strategies (DLS)	Significant; large effect	Significant; moderate-to-strong effect	Significant; moderate effect	Both groups improved over time, but the PTI group showed a much steeper increase, confirming the intervention's causal impact on deep learning engagement. Supports H2 & H4.
Perceived Relevance (PR)	Significant; very large effect	Significant; moderate-to-strong effect	Significant; moderate effect	Overall perception of relevance increased, with the PTI group showing a dramatic improvement while the control group remained largely static, confirming the intervention enhanced perceived value. Supports H3 & H4.

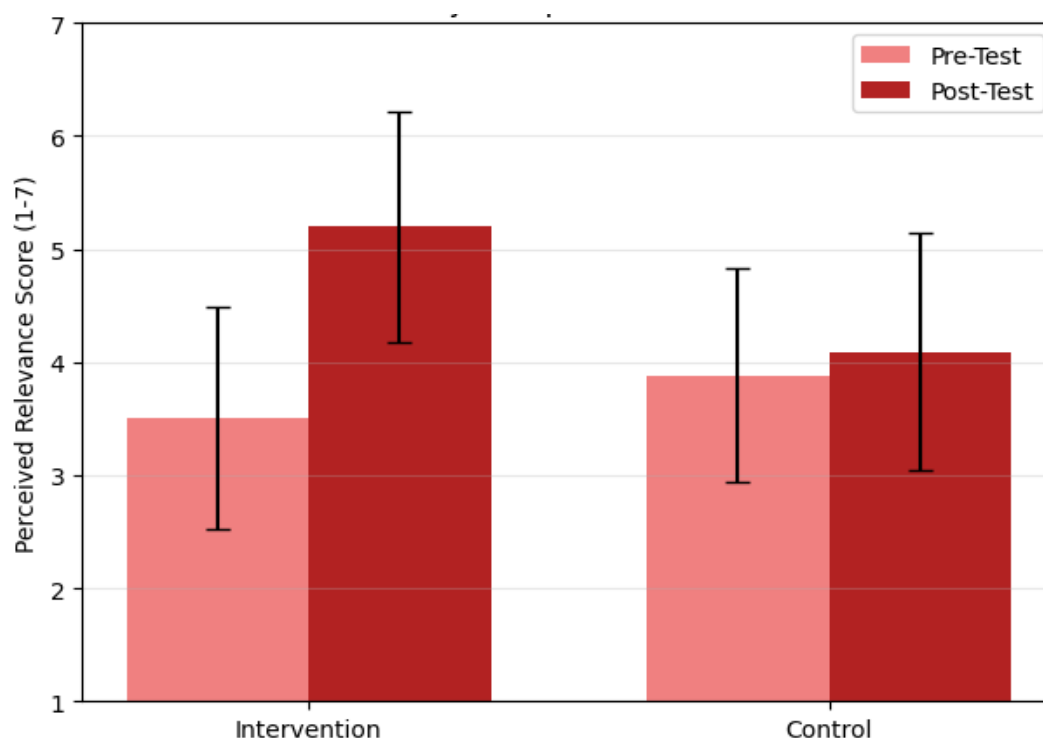


Figure 11: Mean Scores for Deep Learning Strategies at Pre-Test and Post-Test, by Experimental Group (Intervention vs. Control).

Qualitative Results

Thematic analysis of the focus group transcripts supported and enriched the quantitative findings. Three main themes emerged, corresponding to the PTI components (supporting H5):

- **Agency through Authenticity:** Students also noted that they felt more ownership and purpose in their work. One of the respondents observed, writing to a public blog was so different as compared to writing an essay to a professor. I was more concerned with making my argument clear and persuasive since ordinary people can read it" (Participant 7). This reflection explains how the redistribution of the audience out of the classroom created intrinsic motivation and sense of responsibility. Having an awareness that their writing might be read by a more non-academic audience, students engaged more actively in content, perfected their arguments and thought about clarity, coherence and persuasive strategies in a way that traditional assignments rarely induced.
- **Metacognition as a Tool for Confidence:** The reflection journals assisted the students to get over their difficulties in the learning process. One respondent noted, I got stuck on one theory and the journal kept me focused to explain the problem. Simply being able to write down helped to see the path ahead in many cases. It prevented

my tendency to simply give up" (Participant 12). This depicts how guided reflection promoted metacognition where students were able to subdivide complex problems into small steps. By disclosing their minds, they could think more objectively about the challenges and find possible solutions and move over the hurdles.

The journals were therefore both a thought provoking and inspirational resource, which created a feeling of resilience and greater involvement.

Bridging the "Why" Gap: The most significant part of the intervention was often mentioned as the alumni talks. I was struck by one student saying that one of the people in tech marketing told her that she spends her day doing close-reading user feedback and creating narratives. I just got the perspective of the toolset that I am constructing" (Participant 3). This quote shows the role of relating classroom with the real-world professional practices in enabling the students to understand the relevance of their skills. Viewing real life examples of how English majors apply analytical and communication skills in various occupations, students were motivated, clarified, and made to feel their work is not in vain. Table 13 highlights the key themes that emerged from student reflections and interviews on the Purpose-Driven Transformative Intervention (PTI), providing descriptions of each theme along with the reported impacts on students' learning and engagement.

Table 13: Key themes emerging from student reflections and interviews on the Purpose-Driven Transformative Intervention (PTI), with descriptions and reported student impacts.

Theme	Description	Student Insights / Impact
Agency through Authenticity	Public-facing assignments (Digital Literary Portfolio) gave students a sense of ownership and purpose.	Students reported increased intrinsic motivation, deeper engagement, and attention to clarity and persuasion because their work could reach a real audience.
Metacognition as a Tool for Confidence	Reflection journals helped students articulate challenges, monitor learning, and plan strategies.	Students felt more confident, resilient, and capable of problem-solving, breaking complex ideas into manageable steps.
Bridging the "Why" Gap	Alumni talks connected coursework to real-world applications.	Students recognized the practical relevance of their skills, increased motivation, and gained clarity on career pathways.

6. DISCUSSION

The paper presents a strong argument in favor of a multi-dimensional strategy for motivating deep learning among English majors. The results of Phase 1 underline that priority should be given to cultivating interest in the subject matter (intrinsic motivation) and enhancing students' confidence in their academic skills (self-efficacy). This aligns with the fundamental principles of engagement theory, which position interest and confidence as central levers for sustained academic investment (Fredricks et al., 2004). These emerged as the most powerful

predictors of deep engagement, highlighting that internal motivators and self-beliefs are primary drivers of meaningful learning (Deci & Ryan, 2000; Bandura, 1997). This is consistent with integrative models that position self-efficacy as a critical mediator between motivation and academic outcomes (Schunk & DiBenedetto, 2020). Such findings reinforce the construct validity of engagement as a multi-dimensional construct encompassing behavioral, emotional, and cognitive components (Fredricks et al., 2004). While career relevance and extrinsic demands such as grades also play a role, the data indicate they cannot substitute

for these foundational psychological needs. Extrinsic motivators, while capable of prompting action, are less effective than intrinsic drivers in fostering the critical, integrative thinking characteristic of deep learning (Entwistle & McCune, 2004). This aligns with the cognitive evaluation theory, a sub-theory of SDT, which details how external events can undermine intrinsic motivation if perceived as controlling (Deci et al., 1999). As suggested by self-determination theory, intrinsically motivated students who perceive themselves as competent are more likely to engage in reflective, persistent effort even when confronting challenging texts or tasks (Ryan & Deci, 2000; Zimmerman, 2000). This resilience in the face of difficulty is further bolstered by a growth mindset, wherein challenges are viewed as opportunities for development (Dweck, 2006). Recent work confirms that fostering a growth mindset can create more positive challenge appraisals and greater persistence in higher education (Yeager et al., 2019).

Phase 2 demonstrates that a structured educational intervention can effectively target these drivers, translating the correlational insights from Phase 1 into actionable pedagogy. This transition from identifying predictors to testing an intervention exemplifies the applied potential of mixed-methods research in educational settings (Tashakkori & Teddlie, 2010). The explanatory sequential design used here is a powerful model for developing and understanding complex interventions in education (Ivankova et al., 2006). The significant interaction effects observed for both deep learning strategies and perceived relevance confirm that the Pedagogical Triangle Intervention (PTI)—not merely the passage of time or general instruction—was specifically responsible for the gains. The use of a quasi-experimental, pre-test/post-test control group design strengthens the causal inference that the PTI directly caused the observed changes (Creswell & Plano Clark, 2018). With effect sizes ($\eta^2 \approx 0.30$) considered substantial in the context of classroom-based educational research, the intervention exerted a meaningful influence on student engagement (Harackiewicz & Priniski, 2018). Effect sizes of this magnitude are particularly notable in higher education interventions, which often report more modest impacts (Hattie, 2009). Meta-analytic reviews support that theory-informed interventions, like the PTI, typically yield stronger effects on student outcomes compared to atheoretical approaches (Lazowski & Hulleman, 2016). These quantitative outcomes are reinforced by qualitative data, which illuminate how the PTI brought about these changes.

The integration of thematic analysis from focus groups provides rich explanatory depth, illustrating the mechanisms behind the statistical trends (Braun & Clarke, 2006).

The authentic project component—replacing a traditional essay with a digital literary portfolio—transformed assessment from a routine obligation into a genuine act of communication. Students reported that writing for a public audience fostered a sense of ownership and heightened intrinsic motivation, a finding consistent with research on the motivational benefits of authentic, project-based learning (Blumenfeld et al., 1991; Shi, 2024). This resonates with the concept of 'authentic intellectual work,' which argues that student achievement increases when they produce work that has value beyond school (Newmann et al., 2016). This shift from a traditional 'assessment of learning' to an 'assessment for learning' model is a key pedagogical reform advocated to enhance relevance and ownership (Biggs & Tang, 2011). The metacognitive scaffolding, implemented through weekly guided reflection journals, equipped students with practical self-regulatory tools. By articulating challenges, evaluating strategies, and planning improvements, students developed greater self-efficacy and more intentional learning habits, aligning with established models of self-regulated learning (Zimmerman, 2000; Oportus-Torres et al., 2024). The effectiveness of such journaling for promoting metacognitive awareness and academic performance is well-documented (Moon, 2006). This practice of guided reflection helps students internalize a sense of agency over their learning processes, a concept termed 'agentic engagement' (Reeve, 2013). Finally, the career-bridging element directly addressed post-graduation anxieties by presenting concrete examples of how English-acquired skills are applied across diverse professions. This approach directly tackles the 'relevance gap' often cited by humanities students, whose concerns about employability can undermine academic engagement (Baron & Corbin, 2012; Lee, 2022). Interventions that clarify the applicability of soft skills, like those honed in English studies, are shown to buffer against career anxiety and increase academic commitment (Conley et al., 2020). Explicitly linking coursework to career pathways has been shown to strengthen perceived relevance and goal-directed engagement (Daumiller et al., 2023; Harackiewicz & Priniski, 2018).

Overall, these results indicate that an intervention promoting deep learning must be multifaceted, simultaneously addressing motivational, cognitive, and career-related dimensions to sustain

engagement and persistence. This holistic approach moves beyond piecemeal solutions, which often target single engagement levers with limited long-term success (Baron & Corbin, 2012). Such integrated designs are supported by ecological models of student engagement that emphasize the interplay of person and context (Lawson & Lawson, 2013). The PTI not only improved measurable outcomes but also enriched the student experience, fostering a sense of purpose, competence, and autonomy—the core components of self-determined motivation (Ryan & Deci, 2000). By integrating authentic tasks, metacognitive reflection, and career-oriented connections, this study offers a viable, evidence-based model for redesigning humanities courses to foster significant learning and support students' intellectual and professional development. In an era where the value of the humanities is frequently questioned, such demonstrably effective pedagogical frameworks are essential for affirming the enduring relevance of disciplines like English studies (Segessenmann et al., 2025). The present findings contribute to a growing body of evidence that targeted curricular reforms can revitalize student interest and success in the liberal arts (Flaherty, 2022).

Limitations and Future Research: Limitations in the research are convenience sample of the study and non-random assignment to groups in the Phase 2 which can impact generalizability of the results. Since the sample was chosen on the basis of availability as opposed to random sampling, there is a possibility

that the sample is not a full representation of the overall population of English majors and restricts the degree at which the findings can be generalized to other situations. Equally, the non-randomness of the intervention and control groups presents possible selection biases that may have affected the results despite the similarity in the readings of the baseline measurements of the different groups in terms of engagement. Also, another weakness is that Pedagogical Triangle Intervention (PTI) was a resource-intensive intervention. The intervention involved a close coordination with alumni to make the weekly career talks a reality, and logistical and technical assistance to have students build and manage their digital literary portfolios. Such needs might be problematic during replication in institutions that have less resources or access to alumni networks in the future, the PTI should be tested in various institutional settings to determine the level of its adaptability and scalability. Also, longitudinal research is required to examine the longevity of gaining engagement benefits such as whether gains in deep learning strategies and perceived relevance continue beyond the immediate course context. It will assist in establishing the long-term effect and feasible possibility of the wider adoption of the PTI. Figure 12 presents a conceptual framework for the study, illustrating a multi-dimensional model that links psychological predictors of engagement (Phase 1) to the Pedagogical Triangle Intervention (Phase 2) and its integrated outcomes (Phase 3).

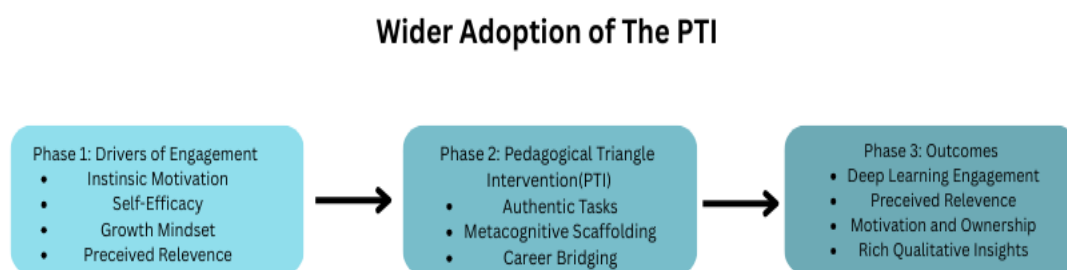


Figure 12: Conceptual Framework for the Study: A Multi-Dimensional Model Linking Psychological Predictors of Engagement (Phase 1) to the Pedagogical Triangle Intervention (Phase 2) and its Integrated Outcomes (Phase 3).

7. CONCLUSION

This study provides a clear and practical way forward in a time when the relevance of the humanities is continually challenged. The results indicate that English departments cannot afford to

rely solely on the intrinsic interest in their subject matter to keep students engaged (Flaherty, 2023). Although literacy and language interest cannot be neglected, they are not enough to guarantee deep engagement with texts, critical thinking, and

persistence in the face of academic difficulties. This finding aligns with critiques of the "magic bullet" of intrinsic interest, arguing that sustained engagement in challenging disciplines requires structured pedagogical support to develop students' capacity for complex work (Fink, 2013). In place of passive reliance, departments should be active in developing curricula with deliberate motivational, self-efficacy, and perceived relevance building. This means establishing real-life, real-world learning that stretches students but supports them; providing opportunities for structured reflection to build metacognition; and directly connecting coursework to various career paths to demonstrate its practical application. Such an integrated approach is advocated by models of "high-impact educational practices" that link challenging, authentic tasks with explicit skill articulation and reflective dialogue (Kuh & O'Donnell, 2013). Furthermore, explicitly teaching

for the transfer of skills—such as critical analysis and communication—from the literature classroom to other contexts is essential for students to recognize and value their learning (Haskell, 2001). With these aspects built into a consistent pedagogical framework, English programs can promote long-term, high-stakes interaction, impart transferable skills to students, and enhance the perceived value and effectiveness of humanities education in the modern academic and professional environment. Ultimately, this proactive stance in curriculum design represents a form of "assertive humanism," where departments confidently articulate and pedagogically enact the unique and vital contributions of humanistic inquiry (Donoghue, 2008). By doing so, they directly counter narratives of a "crisis" in the humanities by demonstrably fostering the adaptable, critical thinkers that contemporary society demands (Nussbaum, 2016).

1. **Connect to the Real World** through authentic, project-based assessments.
2. **Teach the Process of Learning** by embedding metacognitive reflection.
3. **Articulate Transferable Value** by explicitly linking literary skills to diverse career pathways.

By implementing this "Pedagogical Triangle," educators can more effectively cultivate the deep, critical, and passionate engagement that is the hallmark of a truly transformative English education.

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