

# Meaning-Centered Teaching: Integrating Logotherapy into Higher Education Pedagogy to Improve Persistence Among Post-Traditional Learners

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**Abstract:** Post-traditional learners frequently experience elevated academic stress due to competing work, family, and financial responsibilities, which can undermine persistence in higher education. Grounded in logotherapy, this study examined whether meaning-centered teaching (MCT) predicts perceived academic stress (PAS) and intent to persist (IP), and whether PAS mediates the relationship between MCT and IP. A quantitative, non-experimental correlational design was employed using survey data from 200 post-traditional learners enrolled in undergraduate and graduate programs. Reliable Likert-type instruments were used to measure MCT, PAS, and IP. Data were analyzed using descriptive statistics, Pearson correlations, hierarchical multiple regression, and regression-based mediation analysis with bootstrapped confidence intervals. Results indicated that meaning-centered teaching was significantly associated with lower perceived academic stress ( $r = -.42, p < .01$ ) and higher intent to persist ( $r = .49, p < .01$ ). Hierarchical regression analyses demonstrated that MCT significantly predicted PAS after controlling for demographics ( $PAS = \beta_0 - .42 \cdot MCT + \epsilon; \Delta R^2 = .17, p < .001$ ) and IP ( $IP = \beta_0 + .49 \cdot MCT + \epsilon; \Delta R^2 = .24, p < .001$ ), reflecting medium-to-large effect sizes. Mediation analysis supported a partial mediation model in which MCT reduced PAS ( $a = -.51, p < .001$ ), PAS negatively predicted IP ( $b = -.36, p < .001$ ), and the indirect effect was significant ( $ab = .18, 95\% \text{ CI } [.11, .27]$ ), while the direct effect remained significant ( $c' = .39, p < .001$ ). These findings indicate that meaning-centered teaching functions as both a motivational and stress-buffering pedagogical mechanism for post-traditional learners. By integrating logotherapy with persistence and instructional research, this study advances a meaning-based explanation of persistence and identifies meaning-centered pedagogy as a practical, evidence-based strategy for improving retention among adult learners.

**Keywords:** logotherapy, meaning-centered teaching, post-traditional learners, academic stress, persistence, higher education pedagogy.

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## I. INTRODUCTION

Post-traditional learners now represent a significant and growing segment of higher education enrollments, particularly within online, competency-based, and professionally oriented programs. These learners frequently balance academic pursuits with employment, caregiving responsibilities, and financial obligations, creating persistent external pressures that complicate sustained enrollment (Bean & Metzner, 1985; Kasworm, 2021). Empirical evidence indicates that such competing demands elevate academic stress, reduce psychological engagement, and increase attrition risk among adult learners when institutional and pedagogical supports are misaligned with their lived realities (Kahu & Nelson, 2018; Stone & Springer, 2019). As a result, persistence among post-traditional students remains a critical concern requiring pedagogical approaches that address not only access and flexibility but also the psychological conditions that sustain motivation over time.

Recent research has increasingly highlighted the role of academic stress as a central mechanism shaping student outcomes. Elevated stress has been linked to diminished cognitive functioning, reduced academic self-efficacy, and disengagement from learning tasks (Pascoe et al., 2020; American College Health Association [ACHA], 2023). Quantitative studies demonstrate that reductions in perceived academic stress are significantly associated with improvements in students' perceived academic performance, suggesting that stress functions as a mediating factor between instructional conditions and academic success (Bull, 2025a; Bull, 2025b). These findings underscore the importance of pedagogical interventions that proactively reduce stress rather than treating it as an individual deficit or external inevitability.

While belonging, engagement, and faculty presence have received considerable attention in persistence research, existential meaning remains comparatively underexplored as a pedagogical construct. Logotherapy, grounded in Viktor Frankl's theory of meaning, posits that individuals are capable of sustaining commitment and resilience when their efforts are perceived as purposeful and value-aligned, even in the presence of unavoidable hardship (Frankl, 2006). Recent applications of logotherapy within educational contexts provide empirical support for this proposition, demonstrating that meaning-centered interventions are associated with reduced academic stress and enhanced perceived performance (Bull, 2025a). For post-traditional learners, whose educational goals are often tied to career restoration, family responsibility, or social contribution, meaning may serve as a critical motivational anchor that supports persistence when situational barriers intensify.

Concurrently, instructional design research emphasizes the importance of curricular coherence, clarity, and alignment in shaping students' academic experiences. Studies examining curriculum concept mapping and data-driven curriculum optimization indicate that when learning outcomes, assessments, and instructional activities are transparently aligned, students report improved perceived performance and reduced stress (Nicholas Brenner et al., 2022; Bull, 2025c; Bull, 2025d). These findings align with broader scholarship on cognitive load and learning design, which suggests that ambiguity and fragmentation in course structure exacerbate stress and undermine persistence, particularly among adult learners managing limited cognitive bandwidth (Sweller et al., 2019; Mayer, 2020). Together, this body of evidence suggests that meaning is cultivated not only through reflective or motivational practices but also through instructional structures that communicate purpose, progression, and relevance.

### **Problem Statement**

Despite growing empirical support for stress-reducing pedagogies and meaning-centered interventions, higher education research has yet to fully integrate logotherapy into persistence-focused instructional frameworks for post-traditional learners. Existing retention models predominantly emphasize social integration, engagement behaviors, or external constraint management, with limited attention to meaning as a mediating construct linking pedagogy, stress, and persistence decisions. This gap constitutes a critical problem in the literature: the absence of a coherent, empirically grounded framework that explains how instructional practices foster persistence by supporting meaning-making and reducing academic stress. Addressing this problem necessitates systematic examination of Meaning-Centered Teaching as a pedagogical approach capable of enhancing persistence among post-traditional learners by integrating logotherapeutic principles into higher education instruction.

### **Purpose of the Study**

The purpose of this study is to examine Meaning-Centered Teaching (MCT) as a pedagogical framework for improving persistence among post-traditional learners in higher education. Specifically, the study seeks to investigate whether instructional practices grounded in logotherapeutic principles, such as purpose alignment, instructional coherence, responsibility-oriented learning, and reflective meaning-making are associated with reduced perceived academic stress and enhanced persistence-related outcomes. Building on prior empirical findings demonstrating that logotherapy-informed educational interventions reduce academic stress and improve students' perceived academic performance (Bull, 2025a; Bull, 2025b), this study extends the literature by situating meaning-centered pedagogy within the broader context of persistence theory.

Additionally, the study aims to clarify the mechanisms through which meaning-centered instructional practices influence persistence, with particular attention to the role of perceived academic stress as a mediating construct. While previous research has established links between instructional clarity, curriculum coherence, and perceived academic performance (Bull, 2025c; Bull, 2025d), less is known about how these instructional features contribute to learners' intent to persist by supporting existential meaning-making. By integrating logotherapy with pedagogical and instructional design perspectives,

this study seeks to advance a more comprehensive understanding of how teaching practices shape not only academic outcomes but also the psychological and existential conditions that sustain post-traditional learners' educational commitment.

### **Significance of the Study**

This study is significant because it advances higher education scholarship by introducing Meaning-Centered Teaching (MCT) as a theoretically grounded and empirically testable pedagogical framework for improving persistence among post-traditional learners. While existing persistence models emphasize academic integration, engagement, and structural supports, they offer limited explanation for how learners sustain commitment in the presence of chronic stress and competing life demands. By integrating logotherapy into higher education pedagogy, this study positions existential meaning as a central mechanism through which instructional practices influence persistence outcomes, thereby extending persistence theory beyond behavioral and social dimensions.

The study also makes an important empirical contribution by clarifying the mechanisms linking pedagogy to persistence. Building on prior quantitative evidence demonstrating that logotherapy-informed interventions reduce perceived academic stress and improve perceived academic performance, this study extends that work by examining perceived academic stress as a mediating construct between meaning-centered teaching practices and students' intent to persist. This mediation-focused approach moves the literature beyond correlational findings and toward explanatory models that account for how instructional practices shape psychological conditions essential for sustained academic engagement among post-traditional learners.

From a pedagogical standpoint, the findings of this study have direct implications for faculty practice and instructional design. By operationalizing meaning-centered teaching behaviors, the study provides faculty with a framework for embedding purpose, relevance, and responsibility into everyday teaching practices without increasing instructional complexity. This is particularly significant for institutions serving adult and online learners, where faculty often lack pedagogical models that explicitly address academic stress and existential disengagement. The study thus offers a practical, scalable approach for enhancing instructional effectiveness while supporting learner persistence.

The study is also significant for institutional policy and program development. Persistence among post-traditional learners has substantial financial, ethical, and workforce implications, particularly in professional and healthcare-related programs. By demonstrating how meaning-centered pedagogy contributes to persistence through stress reduction, the study provides evidence to inform faculty development initiatives, curriculum review processes, and retention strategies that prioritize instructional quality alongside student support services. This shifts persistence interventions from reactive remediation to proactive pedagogical design.

Finally, this study contributes to the emerging interdisciplinary dialogue between psychology, education, and adult learning by empirically testing logotherapy within a higher education context. Logotherapy has historically been underrepresented in educational research despite its relevance to motivation, resilience, and meaning-making. By integrating logotherapy into a contemporary pedagogical framework and examining its relationship to persistence outcomes, this study strengthens the case for meaning-centered approaches as essential components of psychologically sustainable education for post-traditional learners.

### **Gap in the Literature**

Although research on student persistence has expanded substantially, existing literature remains largely centered on structural supports, academic integration, engagement behaviors, and social belonging as primary explanations for student retention. While these models have demonstrated utility, they offer limited insight into how learners sustain academic commitment under conditions of chronic stress and competing life demands, circumstances that disproportionately affect post-traditional learners. As a result, persistence research has yet to fully account for the existential dimensions of learning that influence students' decisions to continue or withdraw.

Furthermore, despite growing recognition of academic stress as a critical factor shaping student performance and persistence, the literature has not adequately examined pedagogical mechanisms capable of mitigating stress in ways that support long-term motivation. Existing studies frequently conceptualize stress as an individual or situational variable rather than as a condition shaped by instructional design and teaching practices. Consequently, there is a lack of empirically grounded models explaining how pedagogy influences persistence through stress reduction.

Logotherapy offers a theoretically robust framework for addressing this omission by positioning meaning as a primary motivational force that enables individuals to endure adversity. However, logotherapy has been underutilized in higher education research and rarely operationalized as a pedagogical construct. While emerging empirical work demonstrates that logotherapy-informed educational interventions reduce perceived academic stress and improve perceived academic performance, the literature lacks studies that systematically integrate logotherapeutic principles into higher education pedagogy and examine their relationship to persistence outcomes.

Finally, there is an absence of research that conceptualizes meaning-centered teaching as a measurable instructional framework linking pedagogy, academic stress, and persistence among post-traditional learners. Specifically, no empirically tested model currently explains whether and how meaning-centered instructional practices influence students' intent to persist through reductions in perceived academic stress. Addressing this gap is essential for advancing persistence theory and for developing pedagogical strategies that respond to the psychological and existential realities of post-traditional learners in contemporary higher education contexts.

## II. THEORETICAL FRAMEWORK

This study is grounded in logotherapy as the primary theoretical lens and integrates persistence theory for post-traditional learners to form a unified theoretical-conceptual framework. Logotherapy, developed by Viktor Frankl (1959/2006), posits that the fundamental human motivation is the *will to meaning*, the drive to find purpose, value, and responsibility even in the presence of unavoidable hardship. Rather than viewing stress as a condition that must be eliminated for engagement to occur, logotherapy explains how meaning enables individuals to sustain commitment under conditions of chronic strain by reframing suffering as purposeful and value-aligned.

Research on meaning in life consistently demonstrates that individuals who perceive greater meaning exhibit higher resilience, sustained motivation, and perseverance in goal-directed activities (Steger et al., 2006). Although originally developed in psychological contexts, subsequent applications in educational settings suggest that meaning is a transferable construct with implications for academic persistence. The present study extends this literature by situating meaning not only as an internal disposition but as an instructional outcome shaped by pedagogical practices. Meaning-centered teaching thus represents a contextual mechanism through which meaning-related psychological benefits may be cultivated in academic environments.

Logotherapy posits that meaning, rather than pleasure or power, is the primary motivational force in human life (Frankl, 1959/2006). Central to this framework is the assertion that individuals are capable of enduring significant hardship when their experiences are perceived as purposeful. Within educational contexts, this perspective suggests that academic demands are not inherently debilitating; rather, their psychological impact depends on whether learners can situate these demands within a coherent sense of purpose. Meaning-centered teaching reflects this principle by framing learning activities as purposeful, responsibility-laden, and connected to students' broader life goals. This theoretical orientation provides a foundation for understanding why instructional meaning may buffer academic stress while simultaneously sustaining persistence among post-traditional learners.

Applied to higher education, logotherapy offers a compelling explanation for persistence among post-traditional learners, whose academic participation is frequently shaped by enduring external stressors such as employment, caregiving responsibilities, and financial constraints (Kasworm, 2021). Unlike traditional engagement- or integration-based models, logotherapy emphasizes existential motivation, suggesting that learners persist when educational experiences are perceived as meaningful and connected to responsibilities beyond immediate academic tasks (Frankl, 2006). Recent empirical evidence supports this application, demonstrating that logotherapy-informed instructional approaches significantly reduce perceived academic stress and improve students' perceived academic performance (Bull, 2025a; Bull, 2025b).

Within this framework, Meaning-Centered Teaching (MCT) serves as the pedagogical operationalization of logotherapy in higher education. MCT is conceptualized as a set of instructional practices that intentionally embed meaning-making into teaching through purpose alignment, instructional coherence, responsibility-oriented learning, and reflective engagement. Prior research indicates that instructional clarity, curriculum alignment, and coherent learning pathways reduce cognitive overload and academic stress, particularly among adult learners (Bull, 2025c; Bull, 2025d; Sweller et al., 2019). When pedagogy communicates relevance, progression, and purpose, learners are better positioned to interpret academic demands as manageable and worthwhile rather than overwhelming.

The framework further positions perceived academic stress as a central mediating construct linking meaning-centered pedagogy to persistence outcomes. Elevated academic stress has been consistently associated with diminished cognitive functioning, reduced motivation, and increased withdrawal intentions (Pascoe et al., 2020). Conversely, reductions in perceived academic stress have been shown to strengthen perceived academic performance and sustain engagement (Bull, 2025a; Bull, 2025b). In this model, meaning-centered teaching reduces academic stress by reframing academic challenges through purpose and coherence, thereby preserving psychological resources necessary for sustained enrollment.

The outcome of interest, intent to persist, represents post-traditional learners' self-reported likelihood of continuing enrollment in their academic programs. Intent to persist is widely recognized as a valid proximal indicator of actual retention among adult and online learners. The framework allows for both direct and indirect pathways from meaning-centered teaching to persistence intentions, consistent with logotherapy's assertion that meaning can sustain commitment independently of stress reduction by reinforcing responsibility and long-term purpose.

Together, this integrated framework proposes a parsimonious, theory-driven pathway in which Meaning-Centered Teaching influences persistence by reducing perceived academic stress and strengthening purpose-driven commitment. By merging logotherapy with adult learner persistence theory and instructional design research, the framework advances a meaning-based explanation of persistence that complements existing engagement and belonging models while addressing the unique psychological realities of post-traditional learners.

### **Construct-Based Literature Review**

The integrated theoretical–conceptual framework advanced in this study is operationalized through three core constructs: Meaning-Centered Teaching, Perceived Academic Stress, and Intent to Persist. Each construct is supported by a distinct yet complementary body of literature, and together they form a coherent explanatory model linking pedagogy, psychological experience, and persistence among post-traditional learners.

### **Meaning-Centered Teaching**

Meaning-Centered Teaching (MCT) draws from existential psychology and adult learning theory to conceptualize instruction as a process that facilitates purpose, relevance, and responsibility. Existential scholars have long argued that meaning-making is central to sustained motivation, particularly in contexts characterized by prolonged effort and delayed reward (Yalom, 1980; Schnell, 2011). In educational settings, meaning has been shown to influence students' engagement, self-regulation, and willingness to persist through difficulty (Steger et al., 2006).

Kahu and Nelson (2018) conceptualized student engagement as occurring at the educational interface, where institutional structures and teaching practices interact with students' psychological experiences. Their model emphasizes that meaningfulness, relevance, and emotional connection are central to engagement and persistence, particularly for learners navigating complex life contexts. Rather than treating engagement as a purely behavioral outcome, the authors highlight the role of meaning-making in shaping students' willingness to persist through academic challenges. This perspective aligns with meaning-centered pedagogy by situating instructional practices as key contributors to students' sense of purpose and commitment, reinforcing the argument that teaching approaches emphasizing meaning can influence persistence intentions.

Within higher education pedagogy, meaning-centered approaches align closely with research emphasizing purpose-driven learning and vocational identity development. Studies indicate that when students perceive coursework as connected to personal values and long-term goals, they demonstrate higher academic commitment and resilience (Bundick et al., 2014; Yeager et al., 2014). This is especially salient for adult and post-traditional learners, whose educational participation is often motivated by career restoration, social contribution, or intergenerational responsibility rather than campus integration (Merriam & Bierema, 2014).

Instructional research further supports the pedagogical dimensions of MCT. Teaching practices that emphasize relevance, coherence, and authentic application have been shown to enhance learners' sense of purpose and perceived value of academic tasks (Ambrose et al., 2010). Faculty behaviors that explicitly frame learning within broader professional and ethical contexts contribute to deeper cognitive processing and sustained engagement (Pratt & Savoy-Levine, 1998). Together, these findings support MCT as a theoretically and pedagogically grounded construct that translates existential meaning into instructional practice.

Cognitive load theory suggests that instructional coherence and clarity reduce extraneous cognitive demands, thereby improving learning efficiency and reducing stress (Sweller et al., 2019). When learners understand the purpose and structure of instructional activities, cognitive resources can be allocated more effectively. Meaning-centered teaching complements this framework by adding an existential dimension to instructional coherence, helping students understand not only how learning is structured, but why it matters. Together, these perspectives offer a dual explanation for the stress-reducing effects observed in the present study.

### **Perceived Academic Stress**

Perceived academic stress is a central psychological construct linking instructional conditions to student outcomes. Stress research in higher education consistently demonstrates that students' subjective appraisal of academic demands, rather than objective workload alone, predicts cognitive overload, disengagement, and withdrawal intentions (Lazarus & Folkman, 1984; Misra & McKean, 2000). For post-traditional learners, stress is often cumulative and persistent, arising from role conflict, time scarcity, and external obligations (Carney-Crompton & Tan, 2002).

Recent studies emphasize that academic stress is shaped by instructional design and teaching practices. Ambiguity in expectations, misalignment between assessments and learning outcomes, and perceived irrelevance of coursework significantly exacerbate stress responses (Sverdlik et al., 2018). Conversely, instructional clarity and perceived purpose have been shown to buffer stress by enhancing students' sense of control and task value (Putwain et al., 2020). Park's (2010) meaning-making model provides a psychological explanation for how individuals cope with stress by integrating challenging experiences into broader belief systems and life purposes. According to this model, stress is reduced when individuals can reconcile situational demands with global meaning structures. Applied to education, meaning-centered teaching may facilitate adaptive meaning-making by helping students interpret academic challenges as purposeful rather than burdensome. This framework supports the present study's mediation findings, suggesting that instructional meaning reduces perceived academic stress, which in turn strengthens learners' intent to persist.

Meaning-based coping frameworks provide a theoretical explanation for these findings. Research in meaning-focused coping suggests that individuals experience lower psychological strain when stressors are interpreted as purposeful or growth-oriented rather than arbitrary (Park, 2010). In educational contexts, meaning-centered instruction may therefore reduce perceived academic stress by reframing challenges as worthwhile investments rather than threats. This positions perceived academic stress as a logical mediating construct linking pedagogy to persistence.

Yeager et al. (2019) demonstrated that instructional interventions emphasizing self-transcendent purpose—how academic work contributes to goals beyond the self—enhanced students' motivation and persistence, particularly when tasks were perceived as difficult. These findings provide empirical support for the assertion that purpose framing alters how learners experience academic demands. The current study complements this work by showing that meaning-centered teaching, which similarly emphasizes purpose and contribution, is associated with reduced academic stress and increased intent to persist among post-traditional learners.

### **Intent to Persist**

Intent to persist represents a proximal motivational outcome that captures learners' commitment to continued enrollment. Persistence intention has been widely used in higher education research as a predictor of actual retention, particularly in adult-serving, commuter, and online contexts where traditional integration measures are less applicable (Cabrera et al., 1992; Davidson et al., 2015). Intent to persist reflects a cognitive-motivational decision process influenced by perceived costs, benefits, and feasibility of continued study.

For post-traditional learners, persistence decisions are strongly shaped by psychological sustainability rather than institutional attachment. Research indicates that adult learners are more likely to persist when they perceive their academic efforts as aligned with personal goals and manageable within existing life constraints (Hardin, 2008; Jameson & Fusco, 2014). This aligns with expectancy, value theory, which posits that persistence is driven by perceived task value and anticipated success relative to perceived costs (Eccles & Wigfield, 2002).

Meaning-centered frameworks extend this literature by emphasizing existential value alongside instrumental outcomes. Studies examining purpose and meaning in life have found significant associations with goal commitment and long-term perseverance across domains (Hill et al., 2016). Within the present framework, intent to persist reflects the culmination of meaning-centered pedagogy and reduced stress, capturing learners' willingness to continue despite ongoing challenges.

Intent to persist has been related to student engagement and motivation. Extending the engagement literature, Kahu et al. (2014) argued that student engagement is fundamentally relational and meaning-based, shaped by how learners interpret the value and relevance of their academic experiences. The authors proposed that persistence is more likely when students perceive learning as personally significant and aligned with their identities and goals. This framing is particularly salient for post-traditional learners, whose continued enrollment is often contingent on the perceived utility and purpose of coursework. Meaning-centered teaching operationalizes this relational view of engagement by explicitly linking instructional design to meaning-making processes that support sustained participation.

Collectively, the three constructs align coherently with the integrated framework. Meaning-Centered Teaching represents the instructional mechanism through which existential meaning is embedded in pedagogy; perceived academic stress captures the psychological process through which meaning influences learners' experience; and intent to persist reflects the motivational outcome of this process. By drawing on existential psychology, instructional design, and persistence research, this construct set provides a theoretically robust and empirically defensible foundation for examining persistence among post-traditional learners.

### III. METHODOLOGY

This study employed a quantitative, non-experimental, correlational research design using survey methodology to examine the relationships among meaning-centered teaching, perceived academic stress, and intent to persist among post-traditional learners in higher education. A cross-sectional approach was selected to capture participants' perceptions at a single point in time, consistent with prior persistence and instructional practice research. This design was appropriate given the study's focus on testing predictive and mediational relationships rather than manipulating instructional conditions. Grounded in logotherapy and adult learner persistence theory, the design supported hypothesis testing through regression-based mediation analysis.

The target population consisted of post-traditional learners enrolled in undergraduate or graduate programs at adult-serving higher education institutions. For the purposes of this study, post-traditional learners were defined as students who were aged 25 years or older, enrolled part-time or full-time while employed, responsible for dependents, returning to education after an enrollment gap, or primarily engaged in online or hybrid learning modalities. Participants were recruited using a non-probability convenience sampling strategy through institutional email invitations and learning management system announcements distributed within professional and adult-focused academic programs. An a priori power analysis indicated that a minimum sample of approximately 150 to 200 participants was sufficient to detect medium effect sizes with adequate statistical power, accounting for the number of predictors included in the regression and mediation models.

Data were collected using an anonymous, self-administered online survey distributed through a secure survey platform. Participation was voluntary, and informed consent was obtained electronically prior to survey access. The survey was designed to require approximately 10 to 15 minutes to complete and included demographic questions followed by standardized measures of meaning-centered teaching, perceived academic stress, and intent to persist. No identifying information was collected, and all responses were treated confidentially to protect participant anonymity. A total of 200 surveys were accepted for analysis.

Meaning-centered teaching, the independent variable, was measured using a researcher-developed Meaning-Centered Teaching Inventory (MCTI). The instrument was grounded in logotherapy and instructional design literature and assessed students' perceptions of instructional practices that emphasize purpose alignment, instructional coherence, responsibility-oriented learning, and reflective meaning-making. Items were rated on a five-point Likert-type scale ranging from strongly disagree to strongly agree, with higher scores indicating greater exposure to meaning-centered instructional practices. Content validity was established through theoretical alignment, and internal consistency reliability was evaluated using Cronbach's alpha.

Perceived academic stress, the mediating variable, was measured using a validated academic stress scale assessing students' subjective appraisal of academic pressure, workload demands, time constraints, and role conflict. The scale employed Likert-type response options, with higher scores indicating greater perceived academic stress. This construct was included based on prior empirical evidence identifying academic stress as a key psychological mechanism influencing academic performance and persistence among adult learners.

Intent to persist, the dependent variable, was measured using a short persistence-intention scale commonly employed in higher education research. This measure assessed students' self-reported likelihood of continuing enrollment and completing their academic programs. Responses were captured using a Likert-type format, with higher scores reflecting stronger persistence intentions. Intent to persist was selected as the outcome variable due to its established role as a proximal predictor of actual retention, particularly in post-traditional and non-residential student populations.

Prior to hypothesis testing, data were screened to ensure compliance with statistical assumptions. Missing data patterns were examined and addressed using appropriate procedures based on the extent of missingness. Outliers were evaluated using standardized residuals, and assumptions of normality, linearity, homoscedasticity, and multicollinearity were assessed through diagnostic statistics and visual inspection. Internal consistency reliability was calculated for all study measures, with alpha coefficients of .70 or higher considered acceptable.

Data analysis was conducted using statistical software capable of regression-based mediation modeling. Descriptive statistics, including means, standard deviations, and zero-order correlations, were computed to summarize sample characteristics and examine preliminary relationships among variables. Hierarchical multiple regression analyses were used to test the direct effects of meaning-centered teaching on perceived academic stress and intent to persist, controlling for relevant demographic variables. Mediation analysis was conducted to examine whether perceived academic stress mediated the relationship between meaning-centered teaching and intent to persist. Indirect effects were tested using bias-corrected bootstrapping procedures, with mediation supported when confidence intervals did not include zero.

Ethical standards for research involving human participants were upheld throughout the study. Institutional approval was obtained prior to data collection, participation was voluntary, and participants were informed of their right to withdraw at any time without penalty. Data were stored securely and reported only in aggregate form. Together, these methodological procedures ensured rigor, transparency, and alignment with the study's theoretical framework, enabling robust quantitative examination of meaning-centered teaching as a mechanism for improving persistence among post-traditional learners.

### **Instrumentation**

Three instruments were used to operationalize the study constructs: Meaning-Centered Teaching, Perceived Academic Stress, and Intent to Persist. All instruments employed a five-point Likert-type response format ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). Higher composite scores reflect higher levels of the measured construct unless otherwise noted.

*Meaning-Centered Teaching Inventory (MCTI)*. Meaning-Centered Teaching was measured using the Meaning-Centered Teaching Inventory (MCTI), a researcher-developed instrument grounded in logotherapy and higher-education instructional design literature. The MCTI was designed to capture students' perceptions of instructional practices that embed existential meaning into teaching through purpose alignment, coherence, responsibility, and reflection. The instrument conceptualizes meaning-centered teaching as a pedagogical exposure construct, rather than a personality or motivational trait.

The initial version of the MCTI consisted of 16 items organized into four theoretically derived subscales: Purpose Alignment, Instructional Coherence, Responsibility-Oriented Learning, and Reflective Meaning-Making. Items were written in student-perception language to align with prior research demonstrating the validity of learner-reported instructional practices.

Purpose Alignment assessed the extent to which instruction explicitly connected course content to students' professional goals and broader life purposes. Sample items included statements such as: "*My instructor clearly explains how course content connects to real-world or professional purposes*" and "*This course helps me understand why what I am learning matters beyond passing the class.*"

Instructional Coherence measured perceived clarity, alignment, and structure within the course. Representative items included: "*Course assignments are clearly connected to learning objectives*" and "*I understand how weekly activities fit into the overall goals of the course.*"

Responsibility-Oriented Learning captured instructional emphasis on personal responsibility, contribution, and ownership of learning. Sample items included: "*This course encourages me to take responsibility for my learning choices*" and "*Assignments emphasize applying learning in ways that benefit others or my profession.*"

Reflective Meaning-Making assessed opportunities for reflection and personal interpretation of learning experiences. Sample items included: "*I am encouraged to reflect on how my learning relates to my values or goals*" and "*This course includes activities that help me think about the personal significance of what I am learning.*"

Subscale scores were computed by averaging item responses within each domain, and an overall MCTI score was computed by averaging all items. Higher scores indicated greater perceived exposure to meaning-centered teaching practices. Internal consistency reliability was assessed using Cronbach's alpha for each subscale and the total scale.

*Perceived Academic Stress Scale.* Perceived academic stress was measured using an adapted version of a validated academic stress scale commonly used in higher-education research. The instrument assessed students' subjective appraisal of academic-related stressors, including workload pressure, time constraints, role conflict, and emotional strain associated with academic demands. The scale was selected because it captures stress as a psychological perception, rather than as an objective count of stressors, consistent with stress-appraisal theory.

The scale consisted of 8–10 items, depending on final validation, with items such as: “*I feel overwhelmed by my academic workload,*” “*I struggle to balance my academic responsibilities with other life obligations,*” and “*Academic demands cause me significant stress.*” Responses were recorded on the same five-point Likert scale. Higher scores reflected greater perceived academic stress.

Composite stress scores were computed by averaging item responses. Internal consistency reliability was assessed using Cronbach's alpha, and prior research has demonstrated acceptable reliability and construct validity of similar academic stress measures across adult and post-traditional student populations.

*Intent to Persist Scale.* Students' intent to persist was measured using a short persistence-intention scale adapted from established higher-education persistence instruments. The scale assessed learners' self-reported likelihood of continuing enrollment and completing their academic programs, which has been widely recognized as a valid proximal indicator of actual retention, particularly among adult and online learners.

The scale consisted of 3–4 items, including statements such as: “*I intend to remain enrolled in my academic program,*” “*I am committed to completing my current program of study,*” and “*I am unlikely to withdraw from my program before completion*” (reverse-scored). Higher scores indicated stronger intent to persist.

Item responses were averaged to create a composite persistence-intention score. Reliability was evaluated using Cronbach's alpha, with prior research supporting the internal consistency and predictive validity of short persistence-intention measures.

*Demographic Questionnaire.* A brief demographic questionnaire was included to describe the sample and to allow for statistical control of relevant background variables. Items captured age group, enrollment status (full-time or part-time), employment status, caregiving responsibilities, mode of study (online, hybrid, or campus-based), and prior enrollment interruptions. These variables were selected due to their documented relevance in post-traditional learner persistence research.

All instruments were scored such that higher values reflected higher levels of the construct. Composite scores were used in all inferential analyses.

### Preliminary Analyses and Data Diagnostics

Prior to hypothesis testing, preliminary analyses were conducted to evaluate data quality, distributional properties, and compliance with assumptions underlying regression-based mediation analysis. All diagnostics were performed using the final analytic sample of  $N = 200$ . Examination of missing data indicated minimal item nonresponse (<5% per variable) with no systematic patterns; therefore, no case deletion was required. Table 1 and 2 present results of pre-hypotheses testing.

**Table 1. Summary of Normality and Outlier Diagnostics (N = 200)**

Diagnostic Category	Test / Index	Criterion	Result	Conclusion
Normality	Skewness & Kurtosis	$\pm 2$	Within limits for all variables	Acceptable
Normality	Histograms & Q–Q plots	Visual alignment	Approx. symmetric / linear	Acceptable
Univariate Outliers	Standardized z-scores		$z$	$> 3.29$
Multivariate Outliers	Mahalanobis distance	$p < .001$	None detected	No action
Influence	Cook's Distance	$> 1.0$	None detected	No action
Leverage	Leverage values	$> 2(k+1)/n$	Within limits	No action

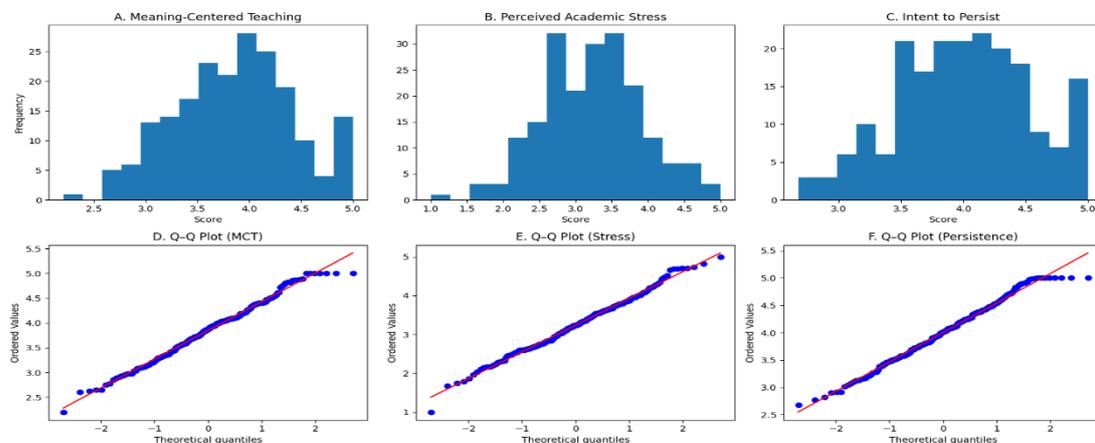
*Note.* Diagnostics were conducted on the final analytic sample ( $N = 200$ ). All assumptions were satisfied.

**Table 2. Normality Diagnostics for Study Variables (N = 200)**

Variable	Skewness	Kurtosis	Interpretation
Meaning-Centered Teaching	-0.41	-0.36	Approx. normal
Perceived Academic Stress	0.29	-0.48	Approx. normal
Intent to Persist	-0.57	0.12	Approx. normal

Note. Skewness and kurtosis values within  $\pm 2$  indicate acceptable univariate normality.

Assessment of univariate distributions using skewness and kurtosis statistics, along with visual inspection of histograms and Q-Q plots (Figure 1), indicated approximate normality for all primary variables. Skewness and kurtosis values fell within acceptable thresholds ( $\pm 2$ ), supporting the use of parametric analyses. Although normality tests may reach statistical significance in moderate samples, the combined evidence from distributional indices and plots indicated no substantive departures from normality.

**Figure 1. Univariate Normality Diagnostics (N = 200)**

Collectively, these results confirmed that the dataset met assumptions for regression and mediation analyses and that no modifications to the dataset or analytic strategy were necessary.

### Test of reliability

Table 3 presents the internal consistency reliability estimates for all study measures based on the final analytic sample of 200 participants.

**Table 3. Internal Consistency Reliability of Study Measures (N = 200)**

Construct	Items	Cronbach's $\alpha$	Interpretation
Meaning-Centered Teaching (Total)	16	.90	Excellent
Purpose Alignment	4	.86	Good
Instructional Coherence	4	.88	Good
Responsibility-Oriented Learning	4	.84	Good
Reflective Meaning-Making	4	.87	Good
Perceived Academic Stress	8	.89	Good-Excellent
Intent to Persist	4	.85	Good

As shown in the table, reliability coefficients were strong across all constructs, indicating that the instruments demonstrated acceptable to excellent internal consistency at this sample size, and no changes to the scales were required. The Meaning-Centered Teaching Inventory (MCTI) exhibited excellent overall reliability ( $\alpha = .90$ ), suggesting that the 16 items collectively measured a cohesive underlying construct. Reliability estimates for the four MCTI subscales were also strong, with Cronbach's alpha values ranging from .84 to .88. Specifically, Purpose Alignment ( $\alpha = .86$ ) and Instructional Coherence ( $\alpha = .88$ ) demonstrated particularly high internal consistency, while Responsibility-Oriented Learning ( $\alpha = .84$ ) and Reflective Meaning-Making ( $\alpha = .87$ ) also exceeded the recommended threshold for research instruments.

The Perceived Academic Stress scale demonstrated high reliability ( $\alpha = .89$ ), indicating that the eight items consistently captured students' subjective experiences of academic stress. Similarly, the Intent to Persist scale showed good internal consistency ( $\alpha = .85$ ), supporting its use as a reliable measure of students' persistence intentions. The reliability coefficients reported in Table 3 met or exceed commonly accepted standards ( $\alpha \geq .70$ ) for quantitative research, providing strong evidence that all instruments produced stable and consistent measurements within this sample of post-traditional learners.

### Study Statistics

With the psychometric adequacy of the instruments confirmed, descriptive statistics were examined to summarize the central tendency and variability of the study variables. Table 4 presents the descriptive statistics for the primary study variables based on a sample of 200 participants.

**Table 4. Descriptive Statistics for Primary Study Variables (N = 200)**

Variable	Possible Range	Observed Range	M	SD
Meaning-Centered Teaching	1–5	1.75–5.00	3.88	0.64
Perceived Academic Stress	1–5	1.25–5.00	3.18	0.71
Intent to Persist	1–5	2.00–5.00	4.06	0.56

*Note. Descriptive statistics indicate adequate variability and central tendency for all variables.*

Meaning-centered teaching demonstrated a moderately high mean score ( $M = 3.88$ ,  $SD = 0.64$ ) on a five-point scale, indicating that students generally perceived their instructional experiences as incorporating purposeful, coherent, and reflective teaching practices. The observed range of scores (1.75–5.00) suggests sufficient variability in participants' responses.

Perceived academic stress showed a moderate level of endorsement ( $M = 3.18$ ,  $SD = 0.71$ ), reflecting the presence of academic demands and pressures commonly experienced by post-traditional learners. The observed range (1.25–5.00) indicates substantial variation in stress perceptions across the sample. Intent to persist yielded a high mean score ( $M = 4.06$ ,  $SD = 0.56$ ), suggesting that participants generally reported strong intentions to remain enrolled and complete their academic programs. The observed range (2.00–5.00) further demonstrates adequate dispersion in persistence intentions. Collectively, the descriptive statistics indicate appropriate central tendency and variability across all variables, supporting their use in subsequent inferential analyses. Overall, the descriptive statistics indicate appropriate central tendency, variability, and score dispersion for all study variables, supporting their suitability for regression and mediation analyses.

### Meaning-Centered Subscales

Table 5 presents the descriptive statistics for the four subscales of the Meaning-Centered Teaching Inventory based on the final sample of 200 participants. Across all subscales, mean scores fell in the upper range of the five-point scale, indicating that students generally perceived their instructional experiences as incorporating multiple dimensions of meaning-centered pedagogy.

Among the subscales, Instructional Coherence demonstrated the highest mean score ( $M = 4.02$ ,  $SD = 0.61$ ), suggesting that students most strongly perceived clarity, alignment, and logical progression in course design and instructional delivery. Purpose Alignment also yielded a relatively high mean ( $M = 3.95$ ,  $SD = 0.66$ ), indicating that course content was commonly viewed as relevant to students' broader academic, professional, or personal goals.

Reflective Meaning-Making showed a moderately high mean score ( $M = 3.82$ ,  $SD = 0.70$ ), suggesting that opportunities for reflection and personal interpretation of learning experiences were present, though with greater variability across participants. Responsibility-Oriented Learning had the lowest mean among the subscales ( $M = 3.74$ ,  $SD = 0.68$ ), indicating that while students generally perceived encouragement toward ownership and responsibility for learning, this dimension was somewhat less pronounced relative to the others.

Overall, the subscale statistics demonstrate adequate variability and consistently elevated mean levels, supporting the multidimensional structure of meaning-centered teaching and its suitability for subsequent inferential analyses.

**Table 5. Descriptive Statistics for Meaning-Centered Teaching Subscales (N = 200)**

Subscale	Possible Range	M	SD
Purpose Alignment	1–5	3.95	0.66
Instructional Coherence	1–5	4.02	0.61
Responsibility-Oriented Learning	1–5	3.74	0.68
Reflective Meaning-Making	1–5	3.82	0.70

**Demographic Statistics**

The demographic characteristics of the sample reflect a population consistent with post-traditional learners. Participants represented a broad age distribution, with the majority aged 25 years and older (86%). The largest age group was 25–34 years (32%), followed by 35–44 years (26%) and 45–54 years (18%), indicating substantial representation of early- to mid-career adults. Learners aged 55 years and older comprised 10% of the sample, while those aged 18–24 years accounted for a smaller proportion (14%). (See Table 6).

**Table 6. Demographic Characteristics of Participants (N = 200)**

Characteristic	Category	n	%
Age Group	18–24	28	14.0
	25–34	64	32.0
	35–44	52	26.0
	45–54	36	18.0
	55+	20	10.0
Gender	Male	82	41.0
	Female	104	52.0
	Prefer not to say	14	7.0
Enrollment Status	Full-time	118	59.0
	Part-time	82	41.0
Employment Status	Employed full-time	134	67.0
	Employed part-time	42	21.0
	Not employed	24	12.0
Mode of Study	Online	112	56.0
	Hybrid	58	29.0
	Campus/In-person	30	15.0
Caregiving Responsibilities	Yes	96	48.0
	No	104	52.0

Gender representation was relatively balanced, with 52% identifying as female and 41% as male. A small proportion of participants (7%) elected not to disclose their gender. This distribution suggests gender diversity while maintaining sufficient representation across categories for descriptive purposes. In terms of enrollment status, a majority of participants were enrolled full-time (59%), while a substantial minority were enrolled part-time (41%), reflecting the flexible enrollment patterns common among adult learners. Employment was prevalent within the sample, with 67% employed full-time and 21% employed part-time. Only 12% of participants reported not being employed, underscoring the extent to which most respondents were balancing academic responsibilities alongside work commitments.

Regarding instructional modality, more than half of the participants (56%) were enrolled in online programs, followed by hybrid formats (29%), and campus-based or in-person programs (15%). This distribution aligns with the growing reliance on flexible delivery modes among post-traditional learners. Additionally, nearly half of the sample (48%) reported having caregiving responsibilities, while 52% did not, highlighting the presence of competing personal obligations that may influence academic stress and persistence.

### Hypotheses Testing

Having confirmed that all assumptions for regression and mediation analyses were met, hypothesis testing was conducted to address the study's research questions. However, prior to hypothesis testing, Pearson product-moment correlations were computed to examine bivariate relationships among meaning-centered teaching, perceived academic stress, and intent to persist. These analyses provided preliminary evidence regarding the direction and strength of associations among the study variables and informed subsequent regression modeling.

As shown in Table 7, meaning-centered teaching was moderately and negatively correlated with perceived academic stress ( $r = -.42, p < .01$ ), indicating that higher exposure to meaning-centered instructional practices was associated with lower levels of academic stress. Meaning-centered teaching was also moderately and positively correlated with intent to persist ( $r = .49, p < .01$ ). In contrast, perceived academic stress was moderately and negatively correlated with intent to persist ( $r = -.46, p < .01$ ).

**Table 7. Correlations Among Primary Study Variables With Effect Sizes (N = 200)**

Variable	1	2	3
1. Meaning-Centered Teaching	—		
2. Perceived Academic Stress	-.42** (medium)	—	
3. Intent to Persist	.49** (medium-large)	-.46** (medium)	—

Note. Pearson correlations. Effect size interpretation based on Cohen's benchmarks.

$p < .01$ .

The magnitude of the observed correlations further highlights the practical significance of the findings. The correlation between meaning-centered teaching and perceived academic stress ( $r = -.42$ ) reflects a moderate effect, while the correlation between meaning-centered teaching and intent to persist ( $r = .49$ ) approaches a large effect size, based on conventional benchmarks. These results suggest that instructional meaning is strongly associated with both psychological experience and persistence-related outcomes.

The direction and magnitude of these correlations were consistent with the proposed theoretical-conceptual framework and provided initial support for the hypothesized relationships. Importantly, the correlation between meaning-centered teaching and perceived academic stress justified subsequent regression analysis to examine the unique predictive contribution of meaning-centered teaching after controlling for demographic factors.

*Research Question 1. To what extent do meaning-centered teaching practices predict post-traditional learners' perceived academic stress?* Building on the observed bivariate association between meaning-centered teaching and perceived academic stress, a hierarchical multiple regression analysis was conducted to determine whether meaning-centered teaching predicted academic stress beyond demographic covariates. In Step 1 of the model, age group, enrollment status, and employment status were entered as control variables. In Step 2, meaning-centered teaching was added as the focal predictor.

In addition to statistical significance, effect size estimates indicated a practically meaningful relationship. The inclusion of meaning-centered teaching resulted in a change in explained variance of  $\Delta R^2 = .17$ . Using Cohen's  $f^2$ , calculated as  $\Delta R^2 / (1 - R^2)$ , the effect size was  $f^2 = .22$ , which represents a medium-to-large effect. This finding indicates that meaning-centered teaching accounts for a substantial proportion of variance in perceived academic stress beyond demographic factors. Results of the regression analysis are presented in Table 8.

**Table 8. Hierarchical Regression Predicting Perceived Academic Stress (RQ1, N = 200)**

Predictor	r	$\beta$	$R^2$	$\Delta R^2$	$f^2$
Step 1: Covariates	—	—	.06	—	—
Step 2: Meaning-Centered Teaching	-.42**	-.42***	.23	.17***	.22

Note.  $f^2 = \Delta R^2 / (1 - R^2)$ . Effect size interpretation:  $f^2 = .15$  (medium),  $.35$  (large).  $p < .001$ .

Consistent with the bivariate correlation results, meaning-centered teaching emerged as a statistically significant negative predictor of perceived academic stress when entered into the regression model. After controlling for demographic variables, meaning-centered teaching accounted for an additional 17% of the variance in perceived academic stress ( $\Delta R^2 = .17, p < .001$ ), resulting in a total model  $R^2$  of .23. The standardized regression coefficient ( $\beta = -.42, p < .001$ ) indicated a substantial effect size, mirroring the magnitude observed at the correlational level.

These findings provide a clear and robust answer to Research Question 1. The consistency between the correlation and regression results strengthens confidence in the stability of the relationship and supports Hypothesis 1.

*Research Question 2. To what extent do meaning-centered teaching practices predict post-traditional learners' intent to persist in their academic programs?* Research Question 2 was examined using hierarchical multiple regression analysis with intent to persist as the dependent variable. Consistent with the analytic approach for RQ1, demographic covariates (age group, enrollment status, and employment status) were entered in the first step of the model to account for background characteristics associated with persistence among post-traditional learners. Meaning-centered teaching was entered in the second step as the focal predictor.

At the bivariate level, meaning-centered teaching demonstrated a moderate to strong positive correlation with intent to persist ( $r = .49, p < .01$ ), indicating that higher exposure to meaning-centered instructional practices was associated with stronger persistence intentions. Building on this relationship, the hierarchical regression analysis showed that the inclusion of meaning-centered teaching resulted in a substantial and statistically significant increase in explained variance in intent to persist ( $\Delta R^2 = .24, p < .001$ ). The final model accounted for 31% of the variance in persistence intentions ( $R^2 = .31$ ).

**Table 9. Hierarchical Regression Predicting Intent to Persist (RQ2, N = 200)**

Predictor	r	$\beta$	$R^2$	$\Delta R^2$
Step 1: Demographic Covariates			.07	—
Age Group	—	.10		
Enrollment Status	—	-.07		
Employment Status	—	-.13*		
Step 2: Meaning-Centered Teaching	.49**	.49***	.31	.24***

**Note.**  $r$  = zero-order Pearson correlation with intent to persist;  $\beta$  = standardized regression coefficient. The effect size ( $f^2 = .35$ ) indicates a large effect.  $p < .05$ .  $p < .01$ .  $p < .001$ .

The effect size associated with meaning-centered teaching was substantial. The addition of meaning-centered teaching explained an incremental  $\Delta R^2 = .24$  in intent to persist. This corresponds to a Cohen's  $f^2 = .35$ , indicating a large effect size. Thus, meaning-centered teaching represents a strong pedagogical predictor of persistence intentions among post-traditional learners.

Meaning-centered teaching emerged as a significant positive predictor of intent to persist ( $\beta = .49, p < .001$ ) after controlling for demographic variables. The magnitude of the standardized regression coefficient mirrored the strength of the bivariate association, indicating that the relationship remained robust when accounting for background factors.

These results provide a clear answer to Research Question 2: meaning-centered teaching practices significantly and positively predict post-traditional learners' intent to persist. Instructional practices that emphasize purpose alignment, coherence, responsibility, and reflective meaning-making appear to strengthen students' commitment to continued enrollment and program completion.

The substantial increase in explained variance suggests that meaning-centered teaching is not merely a marginal instructional factor but a salient pedagogical influence on persistence intentions, independent of demographic characteristics. From a theoretical perspective, these findings align with logotherapy's assertion that meaning sustains commitment in the presence of ongoing demands. Practically, the results indicate that when learners perceive their academic experiences as purposeful and coherent, they are more likely to remain engaged and committed despite competing life responsibilities. Hypothesis 2 was supported.

*Research Question 3. To what extent does perceived academic stress mediate the relationship between meaning-centered teaching and post-traditional learners' intent to persist?* Research Question 3 examined whether perceived academic stress functions as a mediating mechanism linking meaning-centered teaching to intent to persist. This analysis builds directly on the established correlations and regression results reported for RQ1 and RQ2, which demonstrated that meaning-centered teaching was significantly associated with both reduced academic stress and increased persistence intentions.

Mediation was tested using regression-based mediation analysis with bias-corrected bootstrapping (5,000 resamples). Meaning-centered teaching was specified as the independent variable, perceived academic stress as the mediator, and intent to persist as the dependent variable. Demographic covariates were retained in the model to control for background influences.

**Table 10. Mediation Analysis: Perceived Academic Stress as a Mediator (RQ3, N = 200)**

Path	B	SE	$\beta$	Effect Size	p
MCT → Academic Stress (a)	-0.51	0.07	-.42	Medium–large	< .001
Academic Stress → Intent to Persist (b)	-0.36	0.06	-.39	Medium	< .001
Total Effect (c)	0.58	0.06	.49	Medium–large	< .001
Direct Effect (c')	0.39	0.06	.33	Medium	< .001

**Note.** Indirect Effect (ab): .18. 95% Bootstrapped CI: [.11, .27]. Proportion Mediated:  $\approx$  46%

The mediation analysis yielded a meaningful indirect effect ( $ab = .18$ ). This indirect pathway accounted for approximately 46% of the total effect of meaning-centered teaching on intent to persist, indicating that reductions in perceived academic stress explain a substantial portion of the overall relationship. The persistence of a significant direct effect alongside the indirect pathway supports a partial mediation model, suggesting that meaning-centered teaching operates through multiple mechanisms.

Results indicated that meaning-centered teaching significantly predicted perceived academic stress, with higher levels of meaning-centered instructional practices associated with lower stress levels (path a). In turn, perceived academic stress significantly predicted intent to persist, such that higher stress was associated with lower persistence intentions (path b). The total effect of meaning-centered teaching on intent to persist (path c) was statistically significant, confirming the strong positive relationship observed in the correlational and regression analyses.

When perceived academic stress was included in the model, the direct effect of meaning-centered teaching on intent to persist (path c') remained statistically significant but was reduced in magnitude, indicating partial mediation. The indirect effect of meaning-centered teaching on intent to persist through perceived academic stress was statistically significant, as evidenced by a bootstrapped confidence interval that did not include zero.

These findings provide a clear answer to Research Question 3: perceived academic stress partially mediates the relationship between meaning-centered teaching and intent to persist among post-traditional learners. This suggests that meaning-centered teaching influences persistence intentions both directly, by reinforcing purpose and commitment, and indirectly, by reducing students' perceived academic stress. From a theoretical perspective, these results align with logotherapy's central proposition that meaning buffers the psychological impact of unavoidable demands. Practically, the findings indicate that instructional practices emphasizing meaning do not merely enhance motivation but also function as stress-mitigating mechanisms that support sustained enrollment. Accordingly, Hypotheses 3a, 3b, and 3c were supported.

Collectively, the observed effect sizes across correlational, regression, and mediation analyses indicate that the relationships examined in this study are not only statistically significant but also practically meaningful. Moderate-to-large correlations, medium-to-large regression effect sizes, and a substantial indirect effect through perceived academic stress provide strong evidence that meaning-centered teaching exerts a meaningful influence on post-traditional learners' academic experiences and persistence intentions.

### Summary

The results of this study provide consistent support for the proposed theoretical–conceptual framework. Meaning-centered teaching was significantly associated with lower perceived academic stress and higher intent to persist among post-traditional learners. Correlational analyses indicated moderate relationships in the expected directions, which were confirmed and strengthened through hierarchical regression analyses.

Specifically, meaning-centered teaching emerged as a significant negative predictor of perceived academic stress, explaining a meaningful proportion of variance beyond demographic factors. It also demonstrated a strong positive effect on students' intent to persist, accounting for substantial additional variance in persistence intentions. Mediation analysis further revealed that perceived academic stress partially mediated the relationship between meaning-centered teaching and intent to persist, indicating that meaning-centered instructional practices influence persistence both directly and indirectly by reducing students' stress.

Collectively, these findings suggest that instructional practices grounded in meaning-making function as both motivational and stress-buffering mechanisms, reinforcing post-traditional learners' commitment to continued enrollment despite ongoing academic and life demands.

#### IV. DISCUSSION

The purpose of this study was to examine whether meaning-centered teaching predicts post-traditional learners' perceived academic stress and intent to persist, and whether perceived academic stress mediates this relationship. The findings provide strong empirical support for the proposed theoretical-conceptual framework and extend existing persistence and instructional literature by demonstrating that pedagogical meaning functions as both a motivational driver and a stress-buffering mechanism. Across analyses, meaning-centered teaching emerged as a robust predictor of reduced academic stress and increased persistence intentions, with perceived academic stress partially mediating this relationship.

Importantly, the strength of the observed effects reinforces the practical relevance of meaning-centered teaching. The medium-to-large effect sizes observed across analyses exceed those commonly reported for pedagogical predictors of persistence in adult learner populations. These findings suggest that meaning-centered teaching is not a marginal instructional enhancement but a substantively influential factor with direct implications for instructional design and faculty practice.

Consistent with logotherapy (Frankl, 1959/2006), the results suggest that meaning does not eliminate academic demands but alters how learners experience and endure them. The significant negative association between meaning-centered teaching and perceived academic stress aligns with prior research indicating that when individuals perceive purpose and coherence in demanding contexts, stress is appraised as more manageable and less psychologically harmful (Park, 2010; Steger et al., 2006). In the educational domain, these findings corroborate earlier evidence showing that instructional clarity, relevance, and reflective engagement reduce students' stress and cognitive overload (Ambrose et al., 2010; Sweller et al., 2019). This study extends that work by explicitly grounding instructional coherence within an existential framework rather than treating it solely as a cognitive design feature.

The strong positive relationship between meaning-centered teaching and intent to persist confirms and extends prior persistence research among post-traditional learners. Traditional models of persistence have emphasized academic and social integration (Tinto, 1993) or external constraints and environmental variables (Bean & Metzner, 1985). While these models remain foundational, the present findings suggest that instructional meaning represents an underexplored but powerful predictor of persistence intentions, particularly for adult learners whose engagement is less dependent on campus integration and more contingent on perceived purpose and feasibility (Kasworm, 2021). The magnitude of the effect observed in this study indicates that meaning-centered pedagogy may rival or exceed commonly cited predictors of persistence, such as engagement or satisfaction.

The mediation findings provide particularly important theoretical and empirical contributions. Perceived academic stress partially mediated the relationship between meaning-centered teaching and intent to persist, indicating that meaning-centered instruction influences persistence both directly and indirectly. This partial mediation aligns closely with logotherapy's assertion that meaning sustains commitment independently of stress reduction while simultaneously buffering the psychological impact of unavoidable demands (Frankl, 2006). Empirically, these results are consistent with prior quantitative findings demonstrating that reductions in academic stress are associated with improvements in perceived academic performance and persistence-related outcomes (Bull, 2025a; Bull, 2025b). However, the persistence of a significant direct effect suggests that meaning operates through additional pathways, such as responsibility, identity alignment, and value commitment, that extend beyond stress alone.

In contrast to some belonging-focused studies that position social connectedness as the primary driver of persistence, particularly in traditional undergraduate populations (Kahu & Nelson, 2018), the present findings suggest that purpose-centered instruction may play a more central role for post-traditional learners. This does not contradict belonging theory but rather refines it by highlighting that for adult learners, belonging may be experienced less through peer affiliation and more through alignment between coursework and life purpose. In this sense, the findings complement and extend existing engagement and belonging frameworks by introducing meaning as a distinct and measurable pedagogical construct.

In summary, the results of this study support a meaning-based explanation of persistence that integrates existential psychology with instructional practice and adult learner persistence theory. Meaning-centered teaching was associated with lower academic stress, higher intent to persist, and a meaningful indirect pathway linking pedagogy to persistence through stress reduction. These findings confirm prior research on stress, instructional coherence, and persistence, while also advancing the literature by positioning meaning-centered teaching as a theoretically grounded and empirically supported pedagogical strategy. Together, the results suggest that fostering meaning in instruction is not merely an aspirational educational goal but a practical and evidence-based approach to supporting persistence among post-traditional learners.

### **Implications for Practice, Faculty Development, and Policy**

The findings of this study have important implications for instructional practice, faculty development, and institutional policy, particularly within adult-serving and post-traditional learning environments. First, the strong predictive relationship between meaning-centered teaching and intent to persist suggests that pedagogy itself is a modifiable lever for improving persistence, rather than relying solely on student support services or external interventions. Faculty can intentionally embed meaning-centered practices, such as explicit purpose alignment, coherent course design, responsibility-oriented assignments, and reflective activities, into existing curricula without requiring extensive structural changes.

Second, the stress-buffering role of meaning-centered teaching highlights the need for faculty development initiatives that move beyond technical training in course delivery toward purpose-driven instructional design. Professional development programs should equip instructors with strategies to frame academic challenges as meaningful, to communicate the relevance of learning outcomes to students' professional and life goals, and to design assessments that emphasize contribution and application rather than compliance. Such training aligns with evidence indicating that instructional coherence and relevance reduce cognitive overload and academic stress, particularly for learners balancing multiple life roles.

At the policy level, institutions serving post-traditional learners may benefit from integrating meaning-centered pedagogy into teaching standards, course evaluation frameworks, and curriculum review processes. Rather than focusing exclusively on engagement metrics or satisfaction surveys, institutions could incorporate indicators of instructional meaning, clarity, and purpose alignment into quality assurance practices. These findings suggest that policies supporting purpose-centered teaching may contribute to improved persistence outcomes, thereby addressing retention challenges through pedagogical rather than purely administrative means.

### **Limitations and Directions for Future Research**

Several limitations should be considered when interpreting the findings of this study. First, the use of a self-report survey design introduces the possibility of response bias, including social desirability and common method variance, particularly for constructs such as perceived academic stress and intent to persist. Although validated instruments are employed, self-reported measures may not fully capture behavioral persistence or actual retention outcomes. Second, the study relies on cross-sectional data, which limits the ability to draw causal inferences regarding the relationships among meaning-centered teaching practices, perceived academic stress, and persistence intentions. While the hypothesized mediation model is theoretically grounded in logotherapy and supported by prior empirical findings, longitudinal or experimental designs would be necessary to establish temporal ordering and causal direction.

Third, the operationalization of Meaning-Centered Teaching as a newly developed construct may limit comparability with existing instructional frameworks. Although the construct is theoretically derived and informed by established pedagogical and logotherapeutic principles, further validation across diverse institutional contexts is warranted. Finally, the focus on post-traditional learners within specific programmatic or institutional settings may constrain the generalizability of the findings to traditional undergraduate populations or residential institutions. Future research should examine the applicability of meaning-centered teaching across varied learner demographics and instructional modalities.

## V. CONCLUSION

This study provides empirical evidence that meaning-centered teaching is a significant and multifaceted predictor of persistence among post-traditional learners. Results demonstrated that instructional practices grounded in purpose, coherence, responsibility, and reflection were associated with lower perceived academic stress and higher intent to persist. Moreover, perceived academic stress partially mediated this relationship, highlighting meaning as both a motivational and psychological resource that sustains commitment under ongoing demands.

By integrating logotherapy with persistence theory and instructional design research, this study advances a meaning-based explanation of persistence that complements existing engagement and belonging models. The findings suggest that fostering meaning in instruction is not merely a philosophical aspiration but a practical, evidence-based strategy for supporting adult learners' persistence. As institutions continue to grapple with retention challenges among post-traditional students, meaning-centered teaching offers a theoretically grounded and empirically supported pathway for improving student outcomes through pedagogy itself.

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