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Helping Students Cross the Finish Line: A Systems Approach to Postsecondary Persistence and Completion

Amanda K. Dolan[1*] and Diane M. Harrises[2]

[1] Learning Science and Assessment Department and School of Arts, Sciences, and Education Southern New Hampshire University, USA
[2] School of Education and Social Policy, Merrimack College, USA
a.dolan1@snhu.edu
https://orcid.org/0009-0002-5640-9254

ABSTRACT

This mixed-methods exploratory study examined the evolving needs of adult degree completers in higher education, using Bronfenbrenner's (1979) ecological systems theory and universal design for learning (cast, 2024) as guiding frameworks. A purposive sample of 122 adult degree completers across diverse disciplines and learning modalities was recruited using digital professional networking and snowball sampling. Findings indicate that personal determination, particularly in the form of resilience and self-direction, was central to participants' academic success. Simultaneously, participants described systemic barriers including limited faculty engagement, inconsistent access to or unawareness of career development resources, and financial strain and uncertainty. Participants shared their preferences for authentic, real-world learning experiences, yet disliked collaborative assignments designed to simulate organizational team interactions. This study addressed a gap in higher education literature by examining how degree completers experience both the support and the challenges that shaped their path to graduation. Findings show the need for coordinated, system-based strategies that connect academic programs to workforce demands and keep learners at the center of instructional planning and delivery.

Keywords: Adult Learners, Universal Design for Learning (UDL), Ecological Systems Theory, Student Persistence, Institutional Support, Workforce Readiness

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1. Introduction

In higher education, graduation rates are a key measure of success, yet many students face challenges that prevent them from completing their degree. This study aimed to explore the evolving needs of postsecondary learners and how those needs intersect with teaching practices, advising systems, and student outcomes. Specifically, the researchers examined how personal characteristics and instructional environments impact student engagement, motivation, and the ability to complete degrees.

The study is framed by two guiding frameworks: Bronfenbrenner's (1979) Ecological Systems Theory, which maps layered environmental influences on human development, and Universal Design for Learning (UDL), which promotes adaptable and inclusive learning environments (CAST, 2024). The central research question asked: How do instructional strategies and personal qualities intersect with student engagement, motivation, and well-being among students who successfully complete their degrees?

This research sought to investigate not only what learners experienced but also how instructional strategies, institutional support systems, and personal resilience shaped their experiences. It aimed to provide educators, administrators, and policymakers with a systems-based framework to enhance instructional design, student services, and long-term outcomes. The findings are intended to inform more equitable, responsive, and human-centered approaches to fostering academic persistence and career readiness among diverse learner populations.

2. Rationale

In today's higher education landscape, adaptability represents a foundational imperative rather than an optional enhancement. Learners today reflect the impact of rapidly changing technology, the needs of today's workforce, and diverse backgrounds (Education Dynamics, 2025). As a result, post-secondary institutions are compelled to respond with pedagogical and structural frameworks that are inclusive, flexible, and aligned with practical, real-world applications. Research demonstrates that traditional lecture-based instructional models and static curricula often fail to meet the needs of current student populations, who benefit more from interactive, participatory, and professionally relevant learning experiences (Barty et al., 2024; Dell et al., 2022; Rose et al., 2024).

Simultaneously, higher education faces considerable systemic challenges, including escalating tuition costs, pervasive student debt, and inconsistent access to career development resources (Maloy & Mott, 2018). Such barriers disproportionately affect adult learners and students from historically marginalized backgrounds, impeding both persistence and completion (Wu et al., 2024). These issues are further exacerbated by a lack of institutional transparency regarding available support and a limited capacity to accommodate the complex life demands of non-traditional students.

Early research and scholarship on student persistence offer a foundational perspective on factors influencing degree completion. Astin's (1985, 1993) Theory of Involvement, along with the Bean and Metzner (1985) Conceptual Model of Nontraditional Undergraduate Student Attrition, emphasized the importance of student involvement. Specific time extended to academic and social engagement was found to be the primary determinant of persistence. Bean and Metzner included non-traditional learners within this finding, proposing that environmental factors such as family, employment, and finances exert greater influence on retention and attrition factors than traditional measures put forth by institutions to support students. Both models underscore how external obligations and variables can limit student engagement in their campus-based experiences. This research supports the need for institutions to develop a system framework that reinforces the need to address both academic and social contexts and factors when promoting persistence and degree completion (Astin, 1993; Bean & Metzner, 1985).

Persistence only represents one part of the student experience. Success is also measured by how well an institution prepares students for their respective professional careers. As workforce expectations shift, institutions must reimagine graduate preparedness to ensure alignment with real-world demands and the labor market. Employers increasingly prioritize competencies such as adaptability, critical thinking, collaboration, digital fluency, and professional communication (Committee for Economic Development of The Conference Board, 2020; Rose et al., 2024). Yet, many graduates report a disconnect between their academic preparation and workforce realities, citing insufficient emphasis on applied skills and career alignment. This disjunction underscores the necessity to integrate inclusive pedagogical frameworks. Universal Design for Learning (CAST, 2024) promotes equitable

access to content through multiple means of engagement and representation, while also emphasizing action and expression through authentic, project-based, and collaborative learning experiences, thereby fostering competencies and skills most valued by employers.

To complement this pedagogical approach, Bronfenbrenner's (1979) Ecological Systems Theory provided a conceptual scaffold for examining how institutional practices are experienced across relational, structural, and sociocultural dimensions. Together, these frameworks enable a deeper, system-level understanding of student persistence. Guided by these frameworks, this study conducted an exploratory analysis of the lived experiences of degree completers to generate insights that can inform the development of more responsive, inclusive, and career-aligned educational practices.

3. Foundations and Focus of the Study

To address these challenges, this study drew on two complementary theoretical frameworks: Bronfenbrenner's (1979) Ecological Systems Theory and Universal Design for Learning (UDL), developed by CAST (2024). Bronfenbrenner (1979) conceptualized development through five interrelated systems: microsystem (direct relationships), mesosystem (interactions between systems), exosystem (external forces), macrosystem (societal structures), and chronosystem (changes over time). This ecological framework allows institutions to understand students not only in classroom settings but also in the broader context of their social, economic, and personal environments (Tong & An, 2024). Universal Design for Learning (CAST, 2024) is a framework grounded in both neuroscience and learning science. It emphasizes three core principles: multiple means of engagement, representation, and action/expression. UDL offers educators actionable strategies to support students' diverse learning needs, stay motivated, and succeed in the classroom. Recent studies have demonstrated the efficacy of UDL in increasing motivation and academic outcomes, particularly among adult and non-traditional learners (Dell et al., 2022).

This study draws on the foundational research of Astin (1985, 1993), as well as Bean and Metzner (1985). Astin posited that student learning and persistence are directly attributed to a student's level of involvement. Astin's Theory of Involvement operationalizes how the quality and quantity of time and energy invested in academic and social activities within a learning system correlate to a student's level of persistence. His Input-Environment-Outcome (IEO) model situates persistence as the outcome of the student's characteristics, the institutional environment, and social integration with peers and faculty. In contrast, Bean and Metzner's (1985) Model of Nontraditional Student Attrition highlights external environmental variables that play a role in a student's level of persistence. Such factors as familial responsibilities, professional responsibilities, and finances play a more significant role in the persistence of adult learners. Their work reframed student persistence as a balance between a student's academic experiences and a student's competing external commitments.

Together, their work informs contemporary perspectives relating to student persistence. Astin identified that engagement with peers and faculty was a primary influencer of persistence, while Bean and Metzner highlighted the roles of environmental and psychological factors, specifically, how they can shape outcomes for adult learners. Combined, these models extend Bronfenbrenner's ecological perspective by leveraging persistence and situating it within both institutional and individual contexts. In doing so, this illustrates how a student's personal agency, along with the institutional systemic factors, can interact and influence student completion. Astin's focus on engagement within the institutional level parallels Bronfenbrenner's microsystem, while Bean and Metzner's contribution of external and psychological influences reflects Bronfenbrenner's exosystem and macrosystem layers. The

integration of the framework underscores how student persistence is a product of a dynamic interplay between a student's individual agency and the systemic context (Astin, 1985; Bean & Metzner, 1985; Bronfenbrenner, 1979).

Guided by these theoretical frameworks, the study was designed to pursue the following research objectives:

1. Explore student perceptions of their educational experiences in relation to degree completion,
2. Identify ecological factors that impact student success,
3. Apply UDL principles to enhance instructional design and accessibility, and
4. Develop evidence-based recommendations to improve student engagement and persistence.

A purposive sample of adult college graduates 18 years and older was recruited through convenience and snowball sampling strategies, allowing for a broad representation of disciplines, identities, and institutional backgrounds. Participants were sought through publicly posted digital flyers and professional networks, including LinkedIn, Facebook, and regional professional research organizations. Exclusion criteria included those under the age of 18 and non-degree completers. A University Institutional Review Board approved the study, and informed consent was obtained electronically before participation.

Recruitment materials were distributed across social media platforms, professional networks, and the New England Educational Research Organization (NEERO) community. An estimated 400 people viewed or accessed the research survey link. Of those individuals, a total of 122 engaged with the survey, providing electronic consent. At the conclusion of the survey, respondents were invited to participate in an optional virtual interview or focus group. This flow and response pattern reflects the study's qualitative subsample situated within the broader survey population.

Participants in this study included adult learners who completed a postsecondary degree, ranging from associate's degrees to terminal degrees, across diverse fields of study. These individuals represented varied educational pathways, having studied in campus-based, hybrid, or fully online modalities. This range explored how modality choice intersected with personal, professional, and contextual factors in learners' academic journeys.

4. Methodology

To address these objectives, this study employed a mixed-methods research design, combining the statistical power of quantitative data with the depth and context provided by qualitative inquiry (Creswell & Plano Clark, 2023). Quantitative survey data offered baseline demographic and educational background information, while qualitative data provided participants the opportunity to share nuanced, in-depth perspectives on the supports, barriers, and pivotal moments that shaped their educational persistence and degree completion.

The survey instrument was developed through a theory-driven, literature-informed process to ensure alignment with the conceptual foundations of the study. Survey items were designed to reflect Bronfenbrenner's (1979) Ecological Systems Theory, Universal Design for Learning (CAST, 2024), and contemporary persistence and retention scholarship (Astin, 1993); Bean & Metzner, 1985; Tinto, 2015). Items addressing instructional experiences, engagement, and accessibility were aligned with UDL's three principles of multiple means of engagement, representation, and action/expression, while items examining motivation, support networks, and external pressures were intentionally mapped to ecological systems levels. Additional items assessing academic behaviors, professional skills, and a sense of belonging were

derived from empirical studies on postsecondary persistence, adult learner needs, and workforce readiness. This approach ensured that the instrument captured both individual and contextual factors influencing adult learner persistence.

Data collection occurred in three phases. A pilot test of the survey instrument was conducted with 16 participants at the New England Educational Research Organization (NEERO) annual conference. Participants completed the draft survey and then engaged in a single structured focus group to provide feedback on survey clarity, item relevance, and usability. The focus group session began with two core prompts based on IRB-approved protocol: 1.) "Could you please share your feedback on the survey experience with us?" and 2.) "What suggestions, if any, do you have for enhancing the functionality or purpose of this survey based on your experience?" Based on these prompts, open-ended questioning was utilized to determine if survey items aligned with the study's constructs. Feedback from the pilot informed revisions to four items, including rewording for clarity and refinement of response options. Pilot survey responses and the focus group transcript were used exclusively for survey refinement and were not included in the data analyses.

To establish content validity, the initial item pool was reviewed for conceptual fit, redundancy, and clarity. The pilot test resulted in minor revisions to four items, including rewording for clarity, streamlining of phrasing, and refinement of response options. These revisions strengthened alignment between the instrument, the guiding frameworks, and the research objectives. The finalized survey, administered via Qualtrics, captured demographic information and included Likert-scale and open-ended items, designed to elicit participants' reflections on instructional effectiveness, student support, and career preparedness. Pilot data were not included in the final analysis.

Participants were invited to volunteer for optional follow-up virtual interviews and focus groups designed to elaborate on survey responses and gather deeper insight into the lived experiences of learners. Participants who expressed willingness were subsequently contacted to schedule a 15-20 minute virtual interview or focus group. Semi-structured protocols for interviews allowed for narrative exploration in response to emerging survey themes. All interviews were conducted via a secure video-conferencing system, were audio-recorded with participant consent, and transcribed verbatim for analysis. No additional focus groups were conducted in the main study beyond the pilot phase described above.

Quantitative survey data were analyzed using descriptive statistics to identify patterns in participant demographics, perceptions of instructional quality, and career alignment. Qualitative data, including open-ended survey responses and interview transcripts, underwent a three-cycle coding process. Data analysis followed a thematic analysis approach, drawing on the procedures of Naeem et al. (2024) to ensure trustworthiness and credibility. This included examining the data through perspectivization for deeper understanding and iterative refinement to support analytic transparency.

A combination of deductive and inductive approaches guided the coding process. The initial coding framework was first aligned with Bronfenbrenner's (1979) Ecological Systems Theory to place participants' experiences within interconnected layers of influence, including individual, interpersonal, institutional, and societal systems. In the second coding cycle, a priori codes were complemented by emergent themes found from descriptive and process coding methods (Saldaña, 2021). The third coding cycle involved narrative coding to contextualize findings and support naturalistic generalizations, enhancing interpretation across ecological system levels (Creswell & Creswell, 2022). These emergent themes reflected the lived realities of adult learners in contemporary higher education, including

issues of digital access and fluency, flexible learning design, and the role of global connectedness in shaping their identities and opportunities.

The coding of this qualitative data was conducted by the study's two researchers, both trained in qualitative methods and CITI-certified in human-subject research. To ensure consistency prior to the researchers' independent coding, they first reviewed initial sample transcripts to determine preliminary codes grounded in Bronfenbrenner's Ecological Systems Theory and the constructs of UDL. This calibration process allowed researchers to determine resolution of interpretive differences and align coding practices. This intercoder agreement allowed the researchers to work independently with any inconsistencies to be reconciled through a consensus-oriented review of data. This systematic approach enhanced research dependability, credibility, and overall trustworthiness.

Data saturation occurred when no new categories emerged. was evaluated following guidance from Naeem et al. (2024), who emphasize redundancy of conceptual categories as the benchmark in thematic analysis. Saturation was reached when no new themes, codes or ecological system-level insights emerged during analysis of the final transcripts, and when additional cases confirmed, rather than expanded, the established patterns. The convergence of survey findings, open-ended responses, and qualitative interviews across participants with varied demographics and degree pathways provided sufficient depth and breadth to support saturation for the purposes of this exploratory mixed-methods study.

Given the exploratory design and sampling approach employed, inferential analyses were not conducted; instead, the use of descriptive statistics was applied to identify demographic patterns and participants' perceptions. For constructs measured using more than one survey item (instruction and engagement; support and persistence; and career readiness and professional skills), internal consistency reliability was evaluated using Cronbach's alpha (Cronbach,1951). All multi-item constructs demonstrated acceptable internal consistency for exploratory research (α = .72–.84). Single-item variables (e.g., primary modality, motivation for degree) were not included in reliability testing. The synthesis of findings emphasized actionable insights with direct relevance to the study's objectives. The following section presents the study's findings, organized around the key themes from the multi-layered coding process, illuminating how adult learners navigate contemporary higher education.

In alignment with the analytic procedures and Institutional Review Board protocol, data collection for this study was conducted through a 22-item Qualtrics survey (Appendix A) designed for adult degree completers, with optional focus group participation and virtual interviews. The survey items were structured around four constructs: a.) demographic and background characteristics; b.) instruction and engagement; c.) support and persistence; and d.) career readiness and professional skill alignment. The survey was written in accessible language to support comprehension and broad participation. Multiple-choice, Likert, and open-ended questions were employed. A combination of convenience and snowball sampling was utilized and distributed through professional networks, social media platforms, and the New England Educational Research Organization (NEERO) community.

Although recruitment targeted 200 participants, the final sample of 122 respondents yielded a 61% completion rate, providing an appropriate basis for an exploratory analysis of a broad and diverse population. Methodological reviews of categorical-data studies also report median sample sizes near 119, further supporting a sample of this size (Liao et al, 2022). In mixed methods designs, quantitative samples of this size are often paired with qualitative follow-up because saturation in qualitative research typically occurs within 10-30 interviews (Hennink & Kaiser, 2022). Based on these guidelines, the quantitative and qualitative samples meet acceptable standards for exploratory mixed-methods research.

Of the 122 survey completers, 26 volunteered for qualitative follow-up, and 10 completed individual semi-structured interviews (15–20 minutes each). No additional focus groups were conducted during the main data-collection phase. The only focus group took place during the pilot and informed survey refinement. These qualitative sessions allowed for the contextualization of the quantitative patterns observed.

The design of the data collection instrument was intended to capture the breadth and depth of the participants' experiences in relation to persistence and degree completion. The study's Qualtrics survey consisted of 22 items, including demographic information, Likert-scale items, and open-ended prompts that addressed instructional clarity, access to support systems, and perceptions relating to career readiness and professional skills alignment. Participation with Qualtrics required five to ten minutes of the participants' time. Engagement with an informed consent statement preceded the survey, stating the purpose of the research, the voluntary nature, and confidentiality protections. Because recruitment relied on voluntary participation, the resulting sample may not be statistically representative of all postsecondary graduates; however, it captures diverse perspectives from a varied adult learner population sampling across degree levels.

The researchers acknowledge that their professional backgrounds in higher education, instructional design, and student support shape the perspectives they bring to this study. These experiences inform their sensitivity to issues of access, learner engagement, persistence, and institutional structures. To minimize the influence of these positionalities on data interpretation, the researchers engaged in reflexive journaling and documented assumptions before analysis to ensure that themes reflected participant experiences rather than researcher expectations. This reflexive stance supported transparency and contributed to analytic rigor throughout the study.

5. Results

Participants varied in age, professional status, degree attainment, and educational modality, representing a wide range of life stages and educational pathways. As summarized in Table 1, participants ranged in age from 18-24 (3.5%), 25-29 (8.8%), 30-34 (11.4%), 35-39 (13.2%), 40-44 (14.9%), 45-49 (8.8%), 50-54 (10.5%), 55-59 (12.3%), 60-64 (8.8%), and 65 or older (7.9%). Degrees completed by participants included Associates (2.7%), Bachelors (27.3%), Masters (43.6%), Doctorate (20.9%), and Other (5.5%). Learning modalities included on-campus programs (52.4%), hybrid formats (21.0%), and fully online programs (26.7%).

Table 1. Participant Characteristics (N=122)

Variable	**Category**	**(*n*, %)**
Age range	18-24	3.5%
	25-29	8.8%
	30-34	11.4%
	35-39	13.2%
	40-44	14.9%
	45-49	8.8%
	50-54	10.5%
	55-59	12.3%
	60-64	8.8%

Variable	Category	(*n*, %)
	65+	7.9%
Degree Attained	Associates	2.7%
	Bachelors	27.3%
	Masters	43.6%
	Doctoral	20.9%
	Other	5.5%
Learning Modalities	On-campus	52.4%
	Hybrid	21.0%
	Online	26.7%

To contextualize the composition of demographic variables and quantitative results, illustrative insights were highlighted to present the mixed-methods integration of data. Table 2 presents aligned patterns that show how identity, employment, and finances influenced participants' motivation and persistence throughout their educational experiences.

Table 2. Joint Display of Quantitative Demographics and Qualitative Insights (N=122)

Demographic variable	Quantitative results (n, %)	Illustrative insight
Gender identity	Woman: 89 (74%) Man: 26 (21%) Gender diverse: 2 (2%) Prefer not to respond: 5 (4%)	Nearly three-quarter of participants identifying as women, qualitative themes reflected experiences balancing coursework, professional expectations, and family. Women in the sample often described relational and family-based supports as primary drivers to persistence. Gender-diverse participants noted inconsistent representation and gaps within institutional support structures.
Race/ethnicity	White: 103 (84%) Hispanic/Latino: 4 (3%) Black/African American: 2 (2%) Asian/Asian American: 2 (2%) Multiracial: 3 (2%) Other/Prefer not to respond: 8 (7%)	Racial composition of sampled participants highlighted that white participants rarely considered race as an influential factor. Participants of color reflected gaps in representation in curriculum, while also noting fewer visible mentor figures with shared lived experiences. This called attention to inconsistent institutional inclusivity.
Marital status	Married: 46 (38%) Single: 36 (30%) In a relationship/Partnered: 28 (23%) Divorced: 6 (5%) Prefer not to respond: 6 (5%)	Married and partnered participants commonly reflected that their level of success was dependent on coordinated support systems comprising home, work, and school settings. Partners and spouses absorbed household responsibilities. Such cross-cutting coordinated support was not available to single or divorced participants. In contrast, the full burden of balancing work, school, and personal responsibilities reinforced the need for instructional clarity, communication, and flexible course structure.
Disability status	Yes: 16 (13%)	Participants reporting disability status described

Demographic variable	Quantitative results (n, %)	Illustrative insight
	No: 104 (85%) Prefer not to respond: 2 (2%)	uneven accessibility to institutional supports and curriculum. With lack of clear institutional processes being most significant and impactful to persistence.
Employment during degree	Full-time: 85 (70%) Part-time: 18 (15%) Did not work: 4 (3%) Self-employed: 2 (2%)	Participants working full time emphasized the need for clear instructions, clarity of instruction, and strong institutional and peer support systems. Those participants who reported part-time work or less, referenced more ease of access to content and learning, while still highlighting the need for institutional structure and support systems.
Use of federal loans	Yes: 54 (44%) No: 62 (51%) Prefer not to respond: 6 (5%)	Participants who relied on federal loans reported heightened stress related to their studies. Expectations to meet academic performance thresholds tied to aid proved mitigating. Additionally, lack of financial communication from the universities were highlighted. For those not using loans, they reported less financial anxiety, but also commonly viewed faculty as being influential to academic decision making, motivation, and stress when it came to grading and outcomes.
Incurred education-related debt	Yes: 60 (49%) No: 56 46%) Prefer not to respond: 6 (5%)	Participants who incurred debt, described a heightened level of pressure to perform academically and complete their program. Financial strain influenced not only academic persistence, but the need for flexibility in programming, and level of career readiness and support provided by the institution.

Motivations for degrees attained were primarily career-related (40%), with participants citing enhancement of employability and access to job opportunities. Personal achievement (35%), interest in the subject matter (15%), and family influence (6%) were also reported, as shown in Figure 1. These findings show that participants viewed education as a pathway to career advancement, supplemented by personal factors.

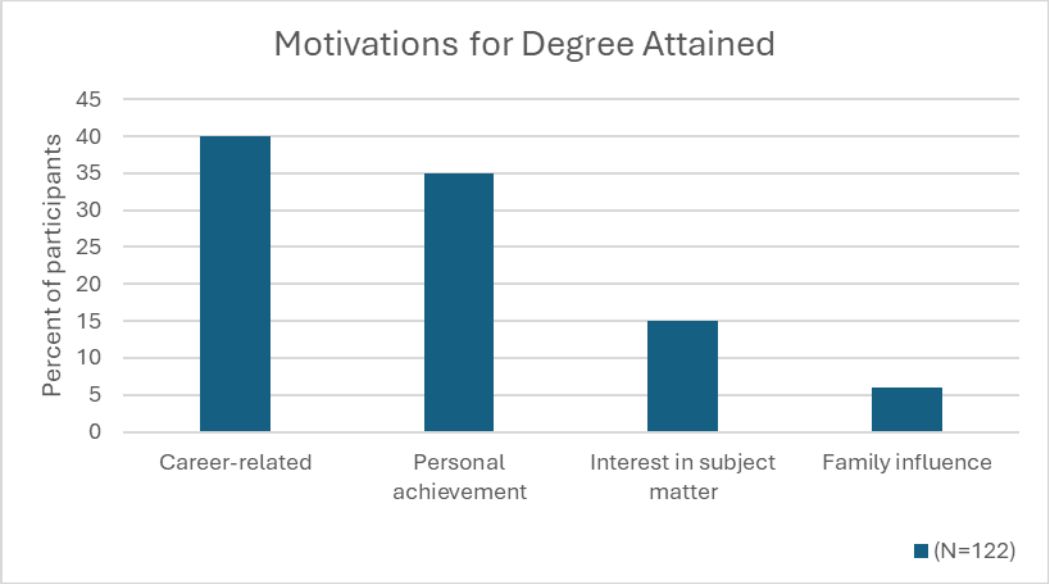

Figure 1. Motivations for Degree Attained

Participants also identified the conditions under which they felt most successful academically. Engagement with authentic and relevant professional content emerged as the most valued factor (93%), followed by having a welcoming, respectful, and inclusive learning environment (83%), and the ability to work autonomously (78%). The importance of feeling a connection with instructors (67%) and a sense of community (54%) was also reported. Comparatively, to a lesser degree, project-based work (31%) and small-group work (17%) were also perceived as factors, as shown in Figure 2.

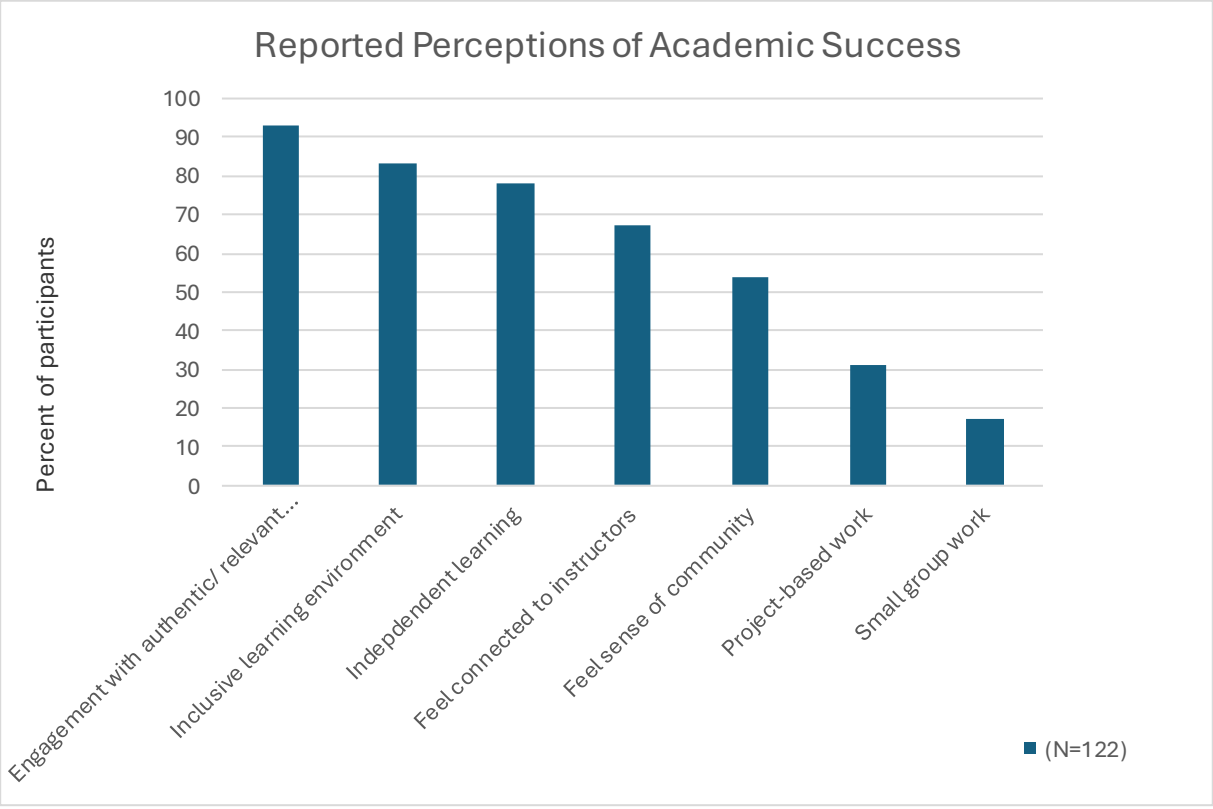

Figure 2. Reported Perceptions of Academic Success

When asked which professional skills were taught in their respective programs, participants most frequently identified higher-level thinking (78%) and professional communication (69%). Fewer participants indicated that they had been taught career management and teamwork (33%), technology for organization (25%), or navigating cultural differences (25%). Very few reported receiving instructions in resume/CV writing and email communication (8%), and some stated that none of these skills were addressed in their programs (10%), as seen in Figure 3.

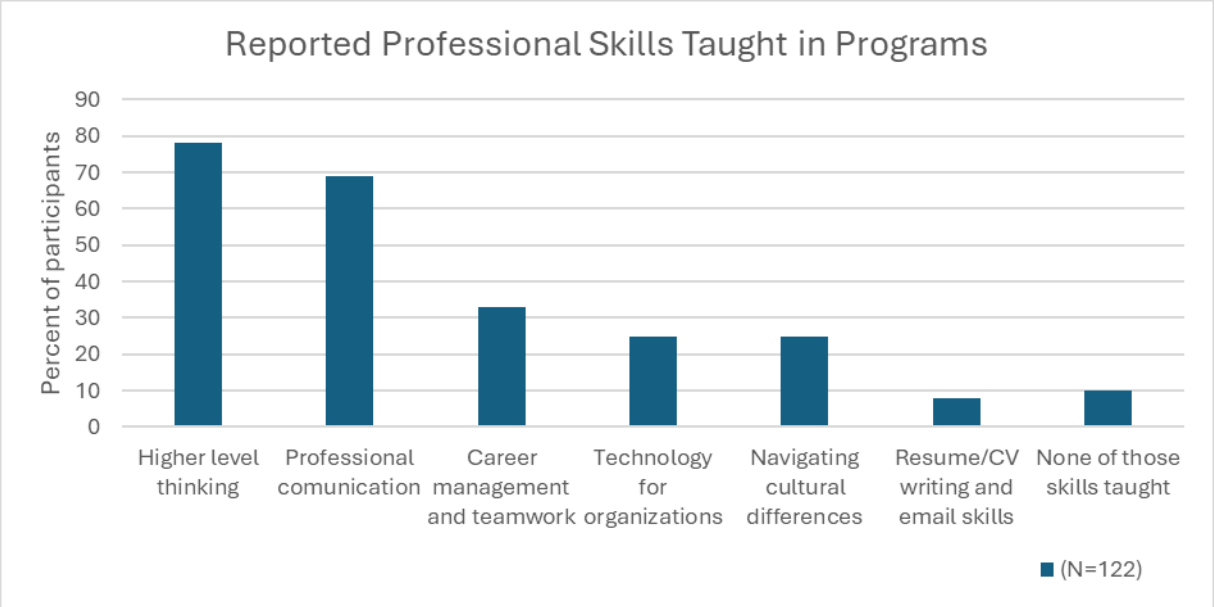

Figure 3. Reported Professional Skills Taught in Programs

When asked about specific elements within a learning activity that contributed most to engagement, most participants (93%) identified real-world application and relevance as the most valued condition. Participants also selected immediate performance feedback (58%), interactive multimedia (53%), and personalized, self-directed options (49%) as valuable tools for engagement, along with varied means of assessment (39%), as seen in Figure 4.

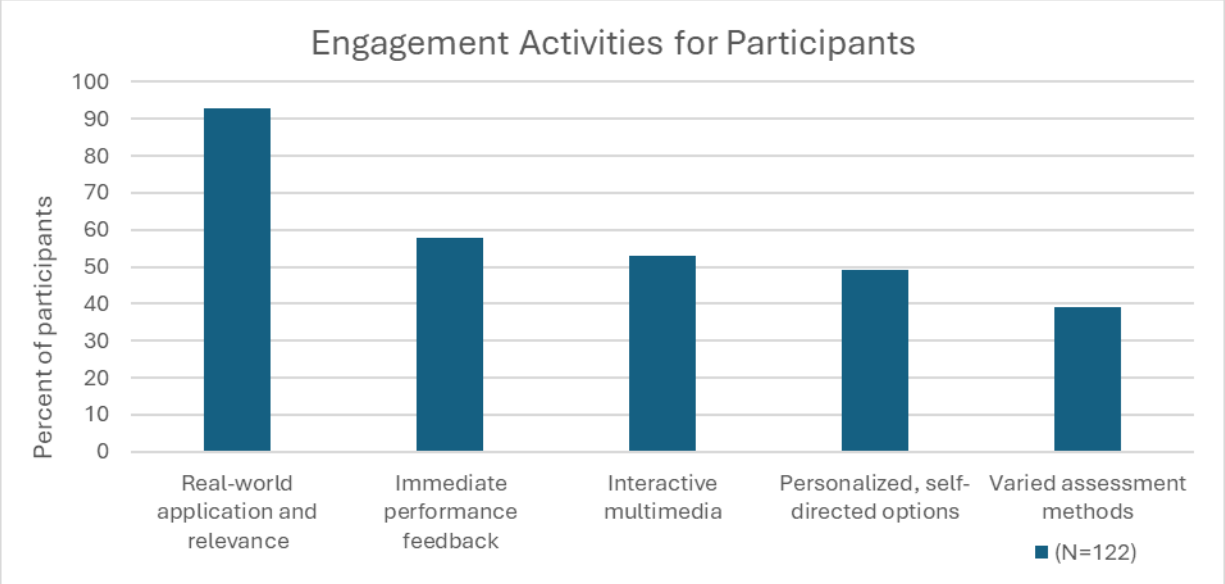

Figure 4. Engagement Activities for Participants

When asked about their preferred instructional formats, participants most often selected case studies and authentic problem-solving (79%), followed by interactive workshops and group discussions (73%). Traditional presentations and assignments were also valued (65%). By comparison, fewer participants preferred online courses/e-learning (50%) or peer-to-peer collaboration (32%), as shown in Figure 5.

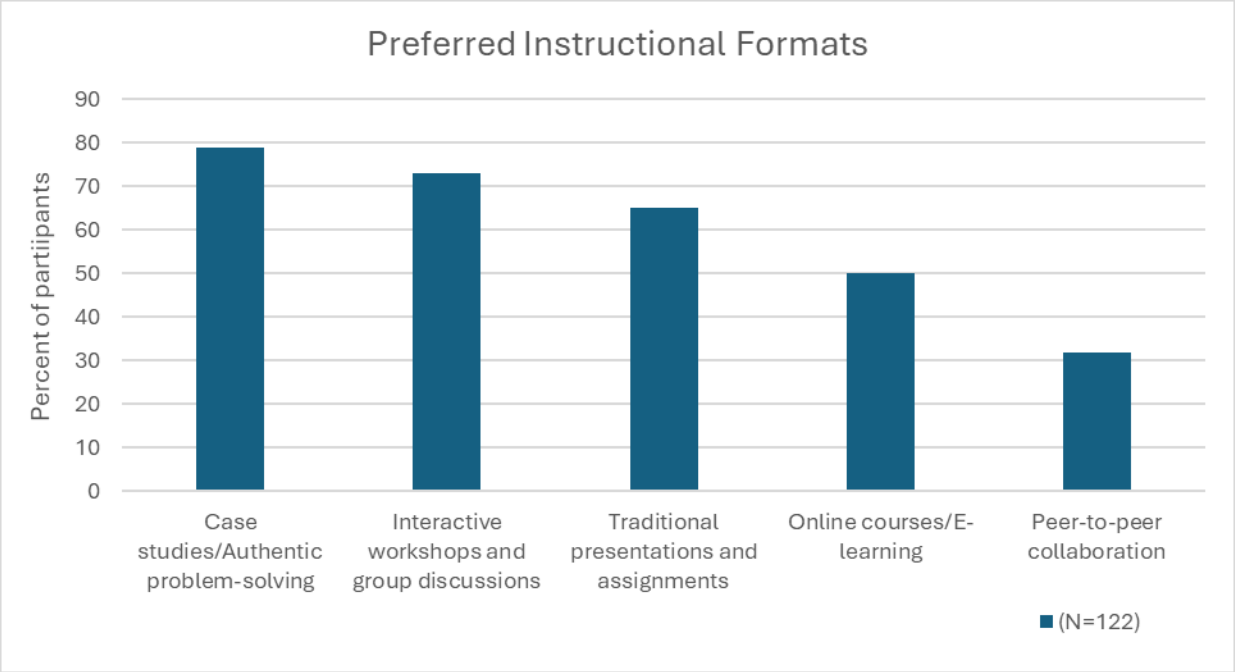

Figure 5. Preferred Instructional Formats

These results suggest that while participants viewed education as a pathway to career advancement and placed strong emphasis on real-world application, they reported inconsistent experiences with professional skills and collaborative practices. Across all three datasets, a consistent gap appeared between career-focused motivations and instructional exposure. Learners expressed a strong preference for applied learning formats but reported limited opportunities for direct workforce readiness training, such as resume development and career management. Although collaborative practices in professional environments are prevalent, participants rated group assignments and peer-to-peer collaborations as a less preferred learning format. Together, these findings point to a disconnect between students' long-term career goals and the instructional experiences emphasized in their programs.

To contextualize these quantitative findings, qualitative analysis examined how participants experienced support and barriers across ecological system levels and uncovered several recurring themes across Bronfenbrenner's (1979) Ecological Systems Theory. The following results highlight the interactions between individuals and the multiple environmental systems that shape their development and experiences.

At the microsystem level, immediate support such as family encouragement, peer mentorship, and timely faculty feedback was central to persistence. Many participants highlighted the importance of informal accountability structures, with one noting, "We really did meet weekly… we held each other accountable for that."(Dia, personal communication, July 9, 2024). Participants frequently described the microsystem as a powerful source of persistence. One participant shared, "My husband was amazing. He held the fort down while I finished my dissertation. If the kids were sick, he took the calls. Without him, there is no way I would have completed that degree" (Annette, personal communication, March 10, 2025). Another participant noted the multigenerational role of family support: "My parents moved in with us

while I was in the program… they understood when I needed to write or read and just stepped in wherever they were needed" (Mya, personal communication, July 10, 2024). Such support provided both academic reinforcement and motivational encouragement. These findings align with prior research affirming the centrality of peer connection in sustaining motivation among adult learners (Erck & Sriram, 2023).

Peer accountability further supported learner persistence. One participant described, "We met every week, religiously. We exchanged papers, critiqued each other's work, and picked each other up when we fell down" (Mya, personal communication, July 10, 2024). For others, children served as a core motivational anchor. "I wanted to show my daughter that anything is possible, no matter what's thrown at you," one participant explained (Jeri, personal communication, July 22, 2024).

Instructor relationships also shaped persistence at the microsystem level. As one participant shared, "I could talk to my advisor whenever I needed. That support made me feel confident in what I was doing" (Micah, personal communication, July 10, 2024).

Together, these patterns illustrate how the microsystem plays an integral role as the set of immediate relationships and environments that most directly influence students' educational experiences. The proximal interactions that occur between family members, peers, and instructors offer reinforcement for the complex demands of a student's journey. These microsystem influences are the daily drivers that inevitably strengthen a student's persistence.

Within the mesosystem, participants benefited from intentional connections between departments and services, which fostered a stronger sense of continuity and belonging. Participants especially valued integrated advising and cross-course faculty mentorship, noting that coordinated communication across roles helped them stay on track academically. This support facilitated career pipelines and capstone experiences that linked coursework with workforce readiness. One participant reflected, "…I really liked their program and the support… I could go talk to my advisor whenever… and she supported me in that decision" (Milly, personal communication, July 10, 2024).

Support within the participants' immediate work environments also played a central role. As one participant explained, "My superintendent would tell me, 'Shut your door and write.' That kind of support made all the difference. 'Don't let anyone interrupt you working unless the school is on fire.' That level of support helped me balance both worlds" (Dia, personal communication, July 9, 2024). Participants placed emphasis on their relationships across home, work, and academic settings, noting the overlap of support as being essential to their educational persistence. For some, clear communication and guidance from instructors bridged professional and academic responsibilities. One participant explained, "I needed that connection with instructors because I was paying out of pocket, and their clarity and guidance were what made it possible to succeed" (Chris, personal communication, July 9, 2024).

Data also highlighted the way peer networks and faculty collectively created a web of support for students. As one participant shared, "When professors and students came together, it felt like a network. We met other cohorts during breaks, built connections, and learned from people outside our own specialization" (Jeri, personal communication, July 22, 2024).

Family routines likewise required a level of coordination with institutional structures. "Because my classes were in person, my husband and I used to meet halfway to hand off our daughter so I could get to campus. Our family routines had to shift to make the program work" (Mya, personal communication, July 10, 2024). Beyond home and workplace, participants described how their relationship with faculty extended into professional networks, strengthening long-term ties between institutional and workplace systems. As one

participant explained, “Some of my professors later became colleagues and mentors. Those relationships extended beyond graduation and shaped my career path” (Elle, personal communication, July 9, 2024).

These findings echo prior research demonstrating that coordinated advising and faculty engagement promote retention and psychosocial development (Wu et al., 2024). Collectively, these accounts demonstrate how the mesosystem functions, highlighting how connections across students’ homes, work responsibilities, and academics form a network of support. The cross-setting support system helps to reduce strain of competing demands, promotes stability, and functions as a mechanism for sustained educational persistence.

At the exosystem level, where external factors may indirectly impact students, participants cited barriers related to unclear institutional communication, particularly concerning financial aid tools and career preparation resources. The influence of institutional policies, communication systems, and structural conditions shaped participants' engagement and experiences in consequential ways. Several participants reported being unaware of platforms such as Handshake or LinkedIn, which limited access to professional development opportunities. One student reflected, “I didn’t know about Handshake, I didn’t know about Teams, there are all these tools we could have used” (Jeri, personal communication, July 22, 2024). Such gaps in institutional communication contributed to missed opportunities for workforce readiness. One participant reflected, “Employers never asked about my degree, my portfolio, any of it. They were looking for soft skills, but higher education assumed we’d just pick those up” (Chris, personal communication, July 9, 2024).

Participants also described expectations and program policies that increased the stakes of academic work in ways institutions may not fully recognize. For example, one participant shared, “Because I needed an 80 (as a final score in the course) to get reimbursed, there was no margin for error. The policy shaped everything about how I had to approach the degree” (Chris, personal communication, July 9, 2024). Other participants noted missing components in their programs that would have supported professional advancement. As one participant described, “My program never taught us grant writing or how to collaborate on research. Those are things every doctoral graduate needs” (Annette, personal communication, March 10, 2025).

Participants also highlighted broader system-wide mismatches, highlighting the disjunction between training and workforce realities. One participant noted, “We were all told we’d get jobs as soon as we graduated, but the reality was very different. Nobody prepared us for the path we’d actually have to take” (Elle, personal communication, July 9, 2024). Another pointed to the rapid evolution of student needs and institutional lag: “We’re not preparing special educators for the reality they’re stepping into. The needs in schools change so fast that programs can’t keep up” (Dia, personal communication, July 9, 2024). These accounts reflect how institutional structures can fail to keep pace with the evolving demands of professional landscapes. Such preparation gaps become systemic barriers to readiness, directly impacting students’ professional trajectories in consequential ways. System-level misalignments such as these are characteristic of exosystem influences, illustrating how institutional structures exert significant influence not only on student persistence but also on preparedness and long-term professional outcomes.

Collectively, these exosystem experiences reflect how institutional structures, resource availability, and policy decisions indirectly shaped students’ academic pathways. As a result, these factors often constrained or complicated student progress despite high levels of personal motivation. These findings align with research highlighting how miscommunication and lack

of transparency in institutional systems can undermine student progression (Ortagus et al., 2021).

Finally, at the chronosystem level, participants' motivations and educational goals often shifted from career-centered objectives to more personally fulfilling or purpose-driven aspirations. Several participants described returning to education after career or life changes, reframing their learning as part of a longer trajectory of growth. One participant reflected, "I diverted and then I went back, and then I just kept going" (Jeri, personal communication, July 2024). Another participant traced the evolution of their goals across decades, noting, "When I was four years old, I started playing school… teaching was all I ever wanted. But over the years, what education meant for me changed completely" (Barry, personal communication, July 23, 2024). This reflection illustrates how meaning-making and educational identities shift with time, changing through interactions and contexts as individuals move through different life stages.

Participants additionally described how these shifts in purpose were shaped by the personal circumstances experienced across their lifespan. One participant reflected on their early academic struggles and how they came back to further their education with a new sense of identity: "I was academically terminated twice, but years later I went back and realized I could still reach goals I never thought I could" (Jeri, personal communication, July 22, 2024). Another described how their own perceptions of education changed over time: "As my kids grew, I saw education differently; it made me more open in the world, less judgmental, and more aware of what really matters" (Mya, personal communication, July 10, 2024). These lifespan developmental shifts in perspective are examples of the chronosystem, capturing how changes in life and circumstance shape an individual's motivation and capacity over time.

These evolving motivations highlight the importance of programs that support lifelong learning, incorporate alumni mentorship, and use proactive milestone tracking with flexible reentry points. Such motivations underscore the need for programs that accommodate lifelong learning and flexible reentry points. Such findings align with broader research documenting the increasingly individualized and non-linear nature of educational trajectories in the 21st century (Gorard & Rees, 2002).

6. Discussion

This study revealed a range of instructional, relational, and institutional elements that influence student retention and completion. For example, faculty were perceived not only as academic mentors but also as financial gatekeepers whose feedback directly impacted tuition reimbursement or scholarship continuation. This dynamic illustrates Bronfenbrenner's (1979) mesosystem, where connections between faculty roles, financial systems, and student outcomes intersect to influence persistence. It also highlights how institutional policies can unintentionally create additional stress for learners navigating complex life circumstances (Ortagus et al., 2021).

Participants expressed a strong preference for learning formats grounded in real-world relevance, aligning with UDL's principle of multiple means of engagement, which emphasizes authentic tasks as motivators for learning (CAST, 2024). At the same time, many reported unease with collaborative strategies such as team-based projects, even though these approaches are widely recognized as essential to workplace readiness. This contradiction highlights a tension between students' preference for individually driven, efficient learning and the collaborative skills demanded by professional environments. Adult learners may resist group work due to time constraints, prior negative experiences, or the perception that

collaboration reduces efficiency; yet, employers consistently identify teamwork and communication as critical skills (Committee for Economic Development of The Conference Board, 2020).

Barriers to persistence spanned multiple ecological levels. At the microsystem level, family encouragement and peer accountability supported persistence, but the absence of these supports presented barriers, echoing prior findings that peer networks sustain motivation (Erck & Sriram, 2023). At the mesosystem level, integrated advising and mentoring were valued but inconsistently available (Wu et al., 2024). At the exosystem level, students frequently cited institutional communication failures, such as unawareness of tools like Handshake or career workshops, which limited workforce-preparation opportunities. At the macrosystem level, participants reported experiences of cultural exclusion, ageism, and societal bias, reflecting how broader structures shape academic identity (Smythe & Hirsch, 2021). At the chronosystem level, motivations shifted over time, from career-focused to purpose-driven, reflecting lifelong learning trajectories (Gorard & Rees, 2002). Taken together, these findings demonstrate that while retention strategies often focus narrowly on short-term persistence, degree completion requires a longitudinal approach. Structured pathways, integrated career development, and flexible modalities are essential for supporting adult learners across the entirety of their educational journey.

7. Limitations

This study offers valuable insights into the topic of adult learners, learner persistence, and degree completion; however, methodological limitations should be acknowledged. With the use of convenience and snowball sampling methods, and reliance on voluntary participation through professional networks and social media outreach, limited representation should be considered among those sampled. Participants who were more professionally engaged or active in digital media may be overrepresented in this study's findings. Because degree completers comprised the participant pool, findings also elevate the perspectives of those who successfully completed their higher education programs. Due to purposive sampling, there are no insights into the experiences of students who were not able to complete their educational programs.

Additionally, because of the nature of exploratory research and the fact that participants were recruited through networks and referrals, generalizable results are limited to the broader population. As such, the analysis focused on describing observable patterns, rather than making statistical predictions. Such limitations shaped the analytic scope of the research and emphasized the study’s depth over breadth in relation to participant experiences and qualitative insights. Study findings were situated to be ecological in nature as data reflected the ways participants’ experiences were shaped and embedded within interconnected system levels.

8. Recommendations and Implications for Practice

As shown in Figure 6, over three-quarters of participants (78%) reported perceiving a disconnect between institutional preparation and job market demands. Participants particularly noted areas such as resume development, cultural competence, and career navigation. This finding underscores the urgency of aligning academic programs more closely with the professional goals of adult learners. It also reflects a broader misalignment in which traits like resilience and self-determination, though critical to success, were often cultivated despite rather than because of institutional support. Taken together, these insights highlight the need for persistence strategies that address both academic success and long-term

workforce readiness. Results from this study further align with the Bean and Metzner model (1985), which emphasizes environmental support, including advising and career services as predictors of persistence. This research contributes to the growing body of scholarship that demonstrates the integration of career development into advising and curriculum design. Such structural efforts enhance student motivation and degree completion (Erck & Sriram, 2023; Wu et al., 2024).

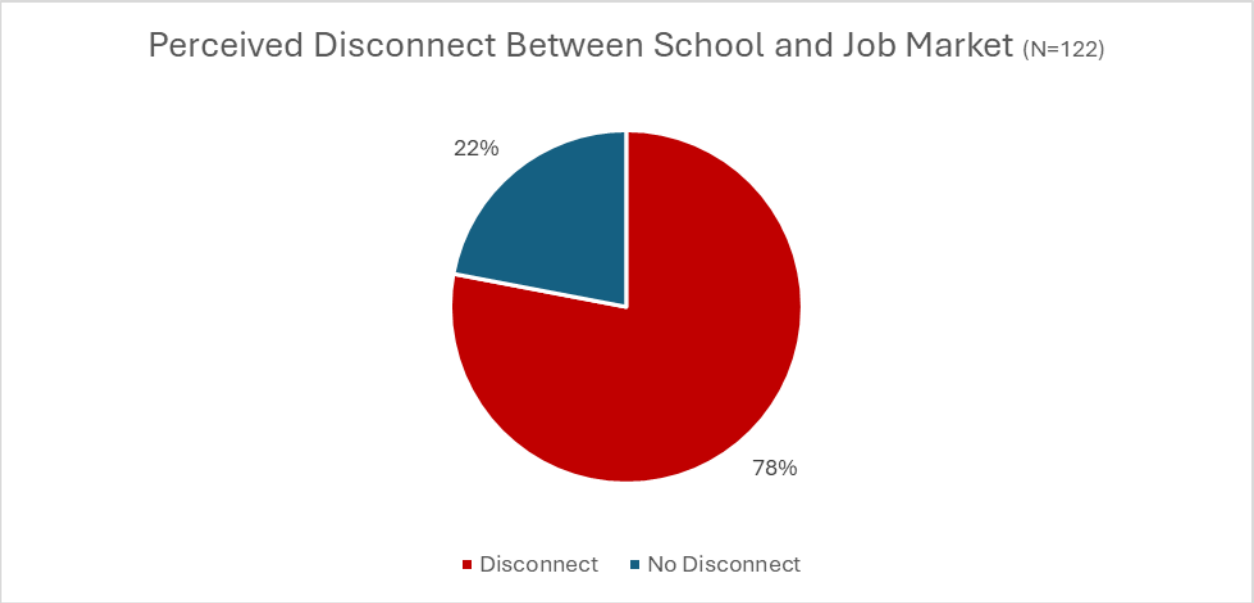

Figure 6. Perceived Disconnect Between Institutional Preparation and Job Market Demands

These findings reinforce the construct of persistence as a multidimensional process, not only in relation to academic performance but how it is embedded within the ecological system, reflecting the degree to which an institution's structures align with its students' lived contexts and professional goals. This analysis aligns with Astin's (1993) Theory of Involvement, which highlights persistence as a result and function of a student's engagement with the academic and social environment of an institution, along with the Bean and Metzner (1985) Model of Nontraditional Student Attrition. This model emphasized the environmental and psychological factors that influenced the adult learner. By integrating these theoretical perspectives within Bronfenbrenner's (1979) Ecological Systems Theory, a multilevel lens can be used to understand how a student's individual agency and institutional systems interact to shape persistence and completion.

While many institutions invest heavily in first-year retention programs, fewer adopt a coordinated approach that extends across the entire degree pathway. Research on persistence has historically emphasized first-year experiences and social integration as primary retention levers (Tinto, 2015), but mid-degree engagement and final-year completion strategies remain underdeveloped. Current practice often results in fragmented support: orientation and mentorship at entry, siloed advising services during mid-degree, and alumni engagement only after graduation (Ortagus et al., 2021; Wu et al., 2024).

8.1. Framework for Persistence and Completion

Early integration into the academic and social fabric of an institution remains foundational for persistence. Institutions can strengthen this foundation by embedding coordinated entry strategies that promote a sense of belonging and stability. To reinforce this critical point, institutions should incorporate these entry strategies:

- First-year experience programs and cohort-based mentorship models to foster belonging and strengthen academic integration (Tinto, 2015).
- Financial literacy education and emergency aid programs to mitigate financial strain (Gerrans, 2021).

Although these practices are well-established, this study situates them within a longitudinal model, emphasizing their role as the first link in a connected sequence of support rather than as isolated interventions.

Mid-degree represents a critical, underexamined phase in the persistence continuum, yet it is a high-risk period when student motivation can wane, particularly for adult learners balancing multiple responsibilities. With prioritization often given to recruitment and early retention efforts, there is often a systematic lack of attention afforded to sustained enrollment. As students' motivation and persistence can plateau during this mid-degree mark, along with competing external responsibilities, this period should be considered highly vulnerable to attrition (Bean & Metzner, 1985; Ortagus et al., 2021). Recognizing this vulnerability and systemic gap can allow institutions to design momentum strategies, specifically targeted to re-engage learners through academic, social, and career-related connections. To address this gap, institutions should incorporate these momentum strategies:

- Adopt dual-purpose advising models that unify academic and career guidance, reducing silos and aligning degree milestones with professional aspirations.
- Expand experiential and applied learning opportunities, supported by integrated advising systems that systematically track academic progress (Wu et al., 2024).
- Offer flexible learning modalities, including online, hybrid, and part-time pathways to accommodate diverse life circumstances.
- Introduce alumni mentorship programs, reframing alumni engagement from a post-graduation activity to a structured completion strategy that strengthens networks and supports workforce transition (Raposa et al., 2021).

The significance here lies in treating mid-degree as a structural redesign. Dual-purpose advising, in particular, reframes advising as an integrated model rather than a bifurcated service, ensuring continuity between academic persistence and career readiness.

As students approach completion, the challenge shifts from persistence to preparation for workforce entry. This study contributes completion strategy recommendations that reposition the final year as an intentional bridge between higher education and employment:

- Integrate applied capstone projects that demonstrate mastery through authentic, real-world application (Danielson & Björkman, 2025).
- Expand competency-based education and recognition of prior learning as deliberate completion tools, accelerating time to degree rather than serving solely as entry pathways (Barty et al., 2024; Committee for Economic Development of The Conference Board, 2020; Håkansson Lindqvist et al.,2023).
- Utilize alumni mentorship programs in the final year to strengthen professional networks and career transitions (Raposa et al., 2021).

These completion strategies represent a key contribution to the study, as they reconceptualize existing resources, competency-based education, and alumni networks as strategic mechanisms for facilitating on-time completion and career alignment.

The Framework for Persistence and Completion (Figure 7) advances the field by reframing persistence as an ongoing, systems-based process that aligns academic progress with professional outcomes (Bronfenbrenner, 1979; Rosa & Tudge, 2023; CAST, 2024; Rose et al., 2024).

This framework synthesizes students' learning experiences within nested ecological contexts (Bronfenbrenner, 1979), Astin's (1993) Theory of Involvement, which emphasized engagement within the academic and social environment of a university, and the Bean and Metzner (1985) Model of Nontraditional Student Attrition, which highlights the external and psychological factors that influence adult learners. Collectively, the strategies presented in this framework operationalize persistence as a longitudinal and ecological process, shifting the focus from remediation and interventions to systematic design. The convergence of these models informs a systems-based approach to address students' needs that supports continuity across academic, personal, and professional domains (Astin, 1993; Bean & Metzner, 1985; Bronfenbrenner, 1979).

Figure 7. Framework for Persistence and Completion

8.2. Framework for Retention and Completion

At the institutional practice level, support should function within a coordinated, longitudinal system of persistence rather than as fragmented services. Within Bronfenbrenner's (1979) Ecological Systems Theory, these practices operate at the mesosystem and exosystem levels, where institutional structures and cross-departmental relationships shape student success. Financial literacy education should be integrated into advising and orientation programs, not as optional workshops but as a core element of student preparation (Gerrans, 2021). Structured mentorship should be reconceptualized as a multi-layered ecosystem connecting peers, faculty, and alumni to provide both academic guidance and psychosocial support throughout the degree journey (Raposa et al., 2021). Finally, career services must be made more visible and accessible by embedding them into advising structures and curricular milestones, reducing the gaps in awareness that often undermine student preparation for workforce transitions (Ortagus et al., 2021).

Instructional strategies should be leveraged not only to promote access but also to align academic learning with workforce readiness. Within Bronfenbrenner's (1979) Ecological Systems Theory, instruction operates at the microsystem level, where students directly engage with learning, and at the mesosystem level, where classroom experiences connect with broader career preparation. Using the Universal Design for Learning (UDL) framework ensures multiple means of engagement and expression (CAST, 2024), but UDL should also be reframed as a bridge between academic mastery and employability. Curriculum should embed transferable skills such as collaboration, adaptability, and communication alongside disciplinary competencies, strengthening long-term career readiness (Rose et al., 2024). Project-based and applied learning approaches allow students to demonstrate both technical knowledge and professional skills in authentic contexts, enhancing engagement and employability (Danielson & Björkman, 2025).

Further, integrating career exploration and skill application into milestone and capstone courses ensures that students leave higher education prepared to navigate complex, real-world demands.

Educational policy creates the macrosystem context in which institutions and learners operate, while policy shifts over time reflect the chronosystem, shaping opportunities across life stages. Faculty grading and evaluation processes should be reviewed to ensure they do not inadvertently jeopardize financial aid eligibility, which risks positioning instructors as unintended gatekeepers to funding (Opoku Gakpo et al., 2025; Titus, 2004). Policymakers should establish transparent, equitable aid eligibility criteria that are independent of subjective instructional practices. Policies that incentivize alternative credentialing and competency-based models can broaden access and accelerate degree completion for nontraditional learners (Barty et al., 2024; Committee for Economic Development of The Conference Board, 2020). Equally important are policies that formally recognize prior learning and expand reentry programs, acknowledging that learners often pursue higher education in nonlinear ways across the lifespan (Gorard & Rees, 2002; Håkansson Lindqvist et al., 2023). Such reforms validate experiential learning, reduce redundancy, and align academic outcomes with evolving workforce demands. To provide context for the table that follows (Table 3), this section explains how retention and completion strategies function across ecological and UDL perspectives.

Table 3. Framework for Retention and Completion

Bronfenbrenner ecological level	**Institution UDL retention & completion focus & recommendations**	**Policy focus & recommendations**
Microsystem (Student experience)	Structure peer mentoring programs, regular advising check-ins, and milestone progress, supported by digital tracking tools, faculty engage active learning strategies and provide timely feedback to strengthen engagement, and offer structured pathways to graduation	Pursue opportunities and identify mechanisms to fund advising capacity and encourage institutions to share student-support engagement data.
Mesosystem (Academic integration)	Embed career exploration into first-year seminars and connect coursework to capstone or internship opportunities, track internship to employment outcomes	Consider opportunities to secure grants that support partnerships between colleges and employers.
Exosystem (Institutional	Expand flexible scheduling options, proactively communicate emergency aids and resources, and	Explore transfer agreements and tuition models that are more accessible to adult

Bronfenbrenner ecological level	Institution UDL retention & completion focus & recommendations	Policy focus & recommendations
policies)	provide clearer degree maps and transfer pathways to support retention	learners.
Macrosystem (Social and cultural factors)	Strengthen inclusive teaching strategies that allow multiple means of engagement, representation, and expression, and provide family orientation or community-building support for first-generation students	Consider bridge programs for underrepresented students and promote access-focused initiatives across higher education systems.
Chronosystem (Long-term development)	Explore early alert milestone tracking systems, alumni-student mentoring networks, and continuing education options such as stackable credentials	Identify legislation or funding models, existing or emergent, that support lifelong learning and encourage alumni-institution partnerships through recognition or incentives.
(Dolan & Harrises, 2025)		

9. Future Research Directions

The findings from this study point to several avenues for future research that could deepen understanding of persistence, completion, and workforce readiness in higher education (Table 4).

Table 4. Avenues for Future Research

Avenues for Future Research	
Cohort-based models and peer mentorship	While prior research highlights the importance of social and academic integration (Erck & Sriram, 2023; Tinto, 2015), longitudinal evidence on how peer networks sustain persistence across diverse demographics remains limited. Future studies should investigate the long-term impact of structured cohort-based models and peer mentorship on degree completion, particularly for adult learners balancing complex responsibilities.
Faculty roles and gatekeeping	Further inquiry is needed into the relationship between faculty engagement, financial stability, and student perceptions of gatekeeping. Participants described faculty as both mentors and gatekeepers of financial resources, suggesting a tension that warrants closer examination (Opoku Gakpo et al., 2025; Titus, 2004). Research in this area could inform more equitable faculty evaluations, while also addressing how faculty roles intersect with the gatekeeping of financial resources, such as financial aid.
Dual-purpose advising	Research should test the effectiveness of advising models that integrate academic and career guidance. Since many students pursue higher education with career advancement as a primary goal, examining dual-purpose advising frameworks could clarify how academic progress and professional readiness can be aligned more effectively (Wu et al., 2024). This represents a departure from traditional advising models and warrants empirical evaluation.
Alumni mentorship	Alumni mentoring has often been studied as a post-graduation engagement practice, but this study suggests it may also serve as critical, longitudinal support throughout the program. Future research should examine the timing, structure, and outcomes of alumni mentorship, with particular attention to early career alignment, workforce transition, and early career success (Raposa et al., 2021).
Faculty mentorship and identity development	The role of faculty mentorship in mitigating impostor syndrome deserves further exploration, particularly among students from historically marginalized populations. Although mentorship is known to support psychosocial development, its influence on identity affirmation and persistence remains underexplored.

Avenues for Future Research	
Soft skills and workforce readiness	Employers consistently identify adaptability, collaboration, and communication as critical skills (Committee for Economic Development of The Conference Board, 2020; Rose et al., 2024). Further research should assess how embedding these skills into curricula, through UDL and applied learning, shapes graduates' long-term career trajectories.
(Dolan & Harrises, 2025)	

10. Conclusion

Retention and completion are interconnected goals that require a student-centered, developmental approach. This study contributes to the field by applying Bronfenbrenner's (1979) Ecological Systems Theory and the Universal Design for Learning (CAST, 2024) framework to conceptualize persistence as a process that unfolds throughout the program. By framing persistence longitudinally, this study advances institutional strategies that extend beyond traditional first-year retention efforts.

Key contributions include the proposal of dual-purpose advising models that integrate academic and career guidance, the reframing of alumni mentorship as longitudinal support, and the use of competency-based education and prior learning recognition as intentional acceleration tools. In addition, the study repositions UDL as a bridge between academic mastery and workforce readiness, embedding transferable skills such as collaboration and adaptability within disciplinary learning. These insights highlight actionable opportunities for institutional innovation and targeted areas for future research.

Participants made clear that academic preparation alone was insufficient. Programs also needed to align directly with their professional goals and personal circumstances. Meeting these needs will require continued investment in mentorship, curricular flexibility, and policy reform. By aligning institutional practices with student aspirations in this way, higher education can serve not only as a pathway to degree completion but also as a bridge to purpose-driven careers and lifelong learning.

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Appendix A - Survey

Responding to Changing Learner Needs in Higher Education: Strategies for Instructional Practice

Q1 Project Title: Responding to Changing Learner Needs in Higher Education: Strategies for Instructional Practice

Informed Consent Purpose of the Research Study: The purpose of this exploratory study is to investigate various teaching methodologies and presentation techniques used in higher education settings, as well as additionally, it aims to understand graduates' perspectives on how well their educational experiences have prepared them for professional success.

You are being asked to complete this brief survey, estimated to take 6-8 minutes to complete. At the end of the survey, you will be asked if you would like to participate in an **OPTIONAL** virtual meeting with one of the researchers at a later date. You do not need to participate in that optional interview to complete this survey and be part of the study. Participation in this study is entirely voluntary, and you have the freedom to withdraw at any time without penalty. There are no anticipated risks or benefits to you that are associated with participating in this study. Should you choose to participate in the interview, your interview transcripts will be sent to you for validation review and clarification purposes. Your personal information will be kept confidential. By continuing with this study, you acknowledge that you have read and understood the information provided in this consent form, and you consent to participate voluntarily. **Statement of Consent:** I have read the above information about this study. I understand the study well enough to make a decision regarding my involvement. By clicking the link below to begin the survey, I understand and agree to the terms described above.

If you have any questions regarding this project, you may contact the researchers: Amanda Dolan at **a.dolan1@snhu.edu** or Diane Harrises at **harrisesd@merrimack.edu**. If you have questions regarding your rights as a research participant or any concerns regarding this project, you may report them – confidentially, if you wish – to the COCE Institutional Review Board Chairperson at COCEIRB@snhu.edu.

- o Yes, I agree. Please begin the survey.
- o No, I don't want to participate.

Q2 Select your (current) age range.

- o 18-24 years old
- o 25-29 years old
- o 30-34 years old
- o 35-39 years old
- o 40-44 years old
- o 45-49 years old
- o 50-54 years old
- o 55-59 years old
- o 60-64 years old
- o 65+ years old

Q3 Do you identify as:

- Married
- Single
- Divorced
- Live-in partner(s)
- In a relationship
- I prefer not to respond to this question

Q4 Gender identity

- Man
- Woman
- Transgender/Gender Non-conforming Individual
- Preferred response if not listed (Please specify)
- I prefer not to respond to this question

Q5 Sexual Orientation

- Heterosexual
- Gay/Lesbian
- Bisexual
- Questioning
- Queer
- Asexual
- Preferred response if not listed (Please specify)
- I prefer not to respond to this question

Q6 Racial and ethnic group you most closely identify with:

- Black/African American
- Asian/Asian American
- Multiracial
- Middle Eastern or North African
- Hispanic/Latino
- Native American
- Pacific Islander
- White
- Other (Please specify):
- I prefer not to respond to this question

Q7 Do you identify as a person with a disability?

- Yes
- No
- I prefer not to answer this question

Q8 **Highest level** of education and degree you have **completed:**

- Associate's Degree
- Bachelor's Degree
- Master's Degree
- Doctoral Degree
- Medical Degree
- Juris Doctorate Degree
- Other Degree (Please specify):

Q9 When did you complete your **most recent degree**?

- 2020-2024
- 2015-2019
- 2010-2014
- 2005-2009
- 2000-2004
- 1995-1999
- 1990-1994
- 1985-1989
- 1980-1984
- Before 1980

Q10 Please select any of your immediate family members **who have completed** a college degree. **Select all that apply.**

- No one in my immediate family completed a college degree
- My mother(s) completed a college degree
- My father(s) completed a college degree
- My sibling(s) completed a college degree
- My spouse/partner(s) completed a college degree
- My child/children completed a college degree

Q11 Thinking about your **most recently completed degree**, who comprised your support network? **Select all that apply**.

- Family
- Friends
- Colleagues
- Mentor or Advisor
- Religious leader
- Other (Please specify)

Q12 Did you hold employment while completing your **most recently completed degree**?

- I did not work while completing my degree
- Yes, full-time employment
- Yes, part-time employment
- Yes, self-employment
- No

*Q13 While completing your **most recently completed degree**:*

	Yes	No
Did you use Federal Student Loans?	○	○
Did you incur debt because of your education?	○	○
Were you worried about incurring debt for daily living necessities?	○	○
Were you worried about food insecurity?	○	○

Q14 What type of institution(s) did you attend for your **most recently completed degree**? Select all that apply.

- ○ Campus-based, in-person
- ○ Online
- ○ Hybrid Model

Q15 How often did you struggle to complete assignments on time in courses for your **most recently completed degree**?

- ○ Never
- ○ Rarely
- ○ Sometimes
- ○ Regularly
- ○ Always

Q16 Please provide your response based on your overall experience in each of these areas.

	Not important	**Somewhat Important**	**Neutral**	**Important**	**Very Important**
How important is it to you to feel connected to your instructor?	○	○	○	○	○
How important is it to you to feel connected to others in your class?	○	○	○	○	○
How important is it to you that your university shares the same values and politics as you?	○	○	○	○	○
How important is the role of timely feedback from your professor?	○	○	○	○	○
	○	○	○	○	○

Q17 I am most successful in academic tasks when: Select all that apply.

- o I am provided a welcoming, respectful, and inclusive learning environment
- o I feel a sense of community
- o I feel connected to my instructors
- o There is engagement with authentic and relevant professional content
- o I can work on my own
- o I can work in a small group
- o I can do project-based work

Q18 Which type of assessment do you find most engaging? Select **up to three** choices.

- o Quiz
- o Project
- o Presentation
- o Paper
- o Other

Q19 When working on a project, would you rather:

- o Work independently
- o Work with a partner
- o Work with a small group

Q20 Thinking about your **most recently completed degree**, how often did you reach out to your professor for support or clarification during your time in college?

- o Never
- o Rarely
- o Occasionally
- o Frequently
- o Often

Q21 For the following question, please **select three choices** of the specific elements within a learning activity that contribute most to your engagement:

- o Interactive multimedia (videos, simulations, etc.)
- o Real-world applications or relevance
- o Immediate feedback on performance
- o Varied assessment methods
- o Personalized options for self-directed learning

Q22 Select **three preferred choices** for learning formats.

- o Traditional presentations and assigned readings
- o Interactive workshops or group discussions with a guest lecturer/industry expert
- o Online courses, e-learning modules, or demonstrations
- o Case studies or authentic problem-solving activities
- o Peer-to-peer learning or collaborative projects

Q23 When reflecting on your **most recently completed degree**, which of the following qualities did you find most important in your professors? **Select up to three qualities**.

- Enthusiasm for subject matter
- Fairness in assessment and feedback
- Flexibility in teaching methods and adaptability to diverse learning needs
- Strong ability to deliver authentic and relevant subject matter experiences
- Approachability
- Use of innovative teaching methods and technology
- Commitment to fostering an inclusive and respectful learning environment

Q24 Do you feel that the following skills were taught to you within your **most recently completed degree** program? Select all that apply.

- Professional communication skills (spoken and written language, active listening, etc.)
- Higher-level thinking skills (critical thinking, problem-solving, etc.)
- Technology for organization and communication (Microsoft, Google, Zoom, etc.)
- Resume/CV and email writing
- How to navigate cultural differences
- Career management (teamwork, collaboration, leadership, etc.)
- I do not feel that any of these skills were taught in my most recently completed degree program.

Q25 When thinking about my **most recently completed degree**

	Yes	**No**	**I am not sure**
I was offered the option to use chosen pronouns to self-identify.	○	○	○
Faculty members promoted inclusive practices.	○	○	○
My college had visible, active diverse representation in faculty and staff and/or leadership roles.	○	○	○
My college had a reporting system for bias incidents and/or hate crimes.	○	○	○
Curriculum, reading, and assignments reflected diverse authorship and a level of multiculturalism.	○	○	○

Q26 Thinking about your **most recently completed degree**, how much did you feel a sense of community and representation in each of the following aspects of your college/university setting?

	Not at all	**Slightly**	**Moderately**	**Very**	**Extremely**
Academic Courses/ Curriculum	○	○	○	○	○
Campus Environment	○	○	○	○	○
Academic Faculty/Staff	○	○	○	○	○

Q27 Thinking about my **most recently completed degree**, I experienced anxiety and depression in relation to my academic experiences

- ○ Yes
- ○ No
- ○ I am not sure
- ○ I prefer not answer this question

Q28 If yes, was this treated by a medical professional or counselor?

- ○ Yes
- ○ No
- ○ I am not sure
- ○ I prefer not to answer this question
- ○ N/A

Q29 What encouraged you to persist in completing your **most recently completed degree**?

Q30 In your opinion, what is the purpose for attaining a degree in higher education?

Q31 Thinking about your **most recently completed degree**, how many times have you changed jobs/work organizations?

- ○ No job change
- ○ 1 job change
- ○ 2-3 job changes
- ○ 4-5 job changes
- ○ 6+ jobs

Q32 Is your current occupation aligned with the profession you initially envisioned when you obtained your **most recently completed degree**?

- ○ Yes
- ○ No
- ○ Somewhat

Q33 Do you feel that there is a disconnect between how institutions prepare students and what the job market is requiring of recent graduates?

- Yes
- No

Q34 Are you interested in being contacted by one of the researchers to join a 15- to 20-minute focus group or to have a virtual interview? If yes, please provide your name/name you'd like to use and contact information. This will serve as your consent to share your experiences and be contacted by the researchers.

- Yes
- No