

Chasing Theorem With Fresh Faces: Narratives from a Returning Math Millennial Master's Or Phd. Student among Gen Z

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ABSTRACT

This research explores the lived experiences of millennial students returning to graduate-level mathematics education after a significant temporal break, navigating an academic landscape currently dominated by "digital native" Gen Z peers. Using a descriptive phenomenological approach, the study investigates the narratives of fifteen masters and doctoral students at Central Mindanao University and other local institutions. Data were collected through semi-structured interviews and qualitative surveys conducted between February and April 2026. The findings reveal that academic delay is primarily driven by structural and socioeconomic inhibitors, including financial instability, professional workloads, and the domestic demands of motherhood. Motivation for re-entry is characterized by a dualistic drive: professional pragmatism related to Department of Education (DepEd) promotion mandates and a deeply personal "calling" toward lifelong learning.

Crucially, the study identifies a significant "academic transition gap" marked by generational friction, where millennials face with technological adaptation speeds and social isolation within the classroom. However, participants demonstrated adaptive resilience through "technological humility" and the formation of age-congruent support systems to bridge these gaps. The study concludes that "generational friction" should be integrated into adult education models, particularly in STEM fields. It recommends that higher education institutions implement digital refresher modules and flexible scheduling to better support the unique professional and personal roles of returning millennial scholars, ensuring that the pursuit of advanced knowledge remains inclusive across generational divides.

Keywords: Millennial students, Gen Z, Mathematics education, Returning students, Generational friction

INTRODUCTION

The pursuit of advanced degrees in mathematics or other programs represents a rigorous commitment to academic excellence and professional mobility. However, for a specific unit, the returning millennial master's or Ph.D. students, this journey is defined by a significant temporal gap between undergraduate completion and graduate re-entry. This "interrupted" academic path is rarely a matter of simple choice; rather, it is frequently the byproduct of complex socioeconomic factors such as financial instability, demanding work schedules, and the expansion of family responsibilities. In the Philippines, this phenomenon is particularly critical for educators and researchers who navigate a landscape where career progression, such as getting a permanent position status or meeting Department of Education (DepEd) hiring requirements, is strictly tied to the acquisition of graduate credentials.

Despite clear professional mandates, returning millennial students face a unique set of challenges as they reintegrate into an academic environment now dominated by "Fresh Faces" from the Gen Z group. Unlike their millennial counterparts, Gen Z students are characterized as digital natives who are highly comfortable with new technology and fast-paced discussions. This generational shift creates a profound academic transition gap.

Millennials often report a communication mismatch and struggle to remain at par with advanced technological tools and modern learning methods that seem to come naturally to their younger peers. Recent studies in the Philippine context highlight that while young professionals are increasingly motivated by long-term well-being and financial independence (Manalo et al., 2026, p. 45), the pressure to perform in an increasingly competitive sector often leads to burnout and mental exhaustion among those attempting to balance these competing roles.

Furthermore, the gap in current literature suggests a need to better understand the mechanisms linking time management and adaptability to successful graduate outcomes among diverse age groups (Frontiers, 2025, p. 12). Returning students in the Philippines must not only master complex mathematical theorems but also overcome a sense of social stratification and isolation in the classroom. Many millennials find themselves needing extra time to review core principles they have not used in years, while their Gen Z peers possess foundational knowledge that is still fresh from recent undergraduate studies. This study, titled *Chasing Theorem with Fresh Faces*, seeks to address these gaps by providing a deep, narrative exploration of the lived experiences of millennial students at Central Mindanao University (CMU) and other regional institutions. By analyzing their motivations—from salary increases to a renewed sense of calling as educators—and their coping strategies, such as forming millennial support groups and utilizing online tutorials, this research aims to offer a framework for supporting non-traditional students in an era of rapid educational transformation.

Objectives of the Study

The primary objective of this research is to explore the lived experiences and academic narratives of millennial mathematics students or other students returning to graduate school at Central Mindanao University (CMU) and other Mindanao-based institutions. Specifically, the study aims to:

1. Identify the structural and personal barriers that caused the temporal gap between undergraduate completion and graduate re-entry among millennial students.
2. Ascertain the primary catalysts and motivational drivers that prompted these individuals to pursue advanced degrees after a period of academic pause.
3. Characterize the unique academic, technological, and social challenges faced by millennial "returnees" in an environment populated by digital-native Gen Z peers.
4. Document and evaluate the coping mechanisms and adaptive strategies employed by millennials to mitigate the stressors of graduate-level mathematics and generational friction.
5. Formulate evidence-based recommendations intended to guide other millennials in their pursuit of lifelong learning and professional advancement.

METHODOLOGY

Research Design

The methodology of this study was rooted in a descriptive phenomenological research design, which was selected to capture the essence of the lived experiences of millennial students returning to graduate mathematics education. This approach was particularly suited for the research objectives because it allowed for the exploration of human consciousness and the specific meanings participants attached to their academic journey without the interference of prior assumptions. By focusing on the "how" and "why" of the return to academia, the design facilitated a deep dive into the narratives of "Chasing Theorems" amidst a younger demographic.

Respondents

The participants of this study comprised a purposefully selected group of graduate students enrolled in Masteral or Ph.D. programs within the mathematics and science disciplines at Central Mindanao University and other Mindanao-based institutions. These individuals were selected based on specific inclusion criteria:

they belong to the Millennial generation and have experienced a temporal gap of several years between their undergraduate completion and their current graduate enrollment. This specific group was chosen because they serve as the primary "narrative bridge" between traditional academic methods and the modern, tech-driven Gen Z environment.

Ethical Consideration in the Data Collection

To ensure the protection and dignity of all involved individuals, ethical considerations were prioritized throughout the data collection process. Ethical approval was obtained from the relevant institutional review boards prior to the commencement of the study. Each participant was provided with a comprehensive informed consent form that detailed the purpose of the research, the voluntary nature of their participation, and their right to withdraw at any stage without penalty. To maintain confidentiality, all data were anonymized, and pseudonyms were assigned to the participants. These standards adhered to the ethical guidelines for human subject research, ensuring that the narratives shared were handled with the utmost sensitivity and academic integrity.

The materials used for data collection included a semi structured interview guide and a digital survey instrument administered via Google Forms. These tools were carefully developed to align with the Statement of the Problem, focusing on the reasons for educational delay, motivations for re-entry, and the specific challenges of intergenerational learning. The use of a Google Form was justified by its accessibility and the ease with which it allowed participants to provide long-form, reflective narrative responses at their own convenience. The questionnaire was subjected to a validation process to ensure that the prompts were clear, non leading, and capable of eliciting the deep, descriptive data required for a phenomenological analysis.

Data Analysis

The process began with the researchers familiarizing themselves with the transcripts, followed by the extraction of significant statements that directly pertained to the research questions. These statements were then formulated into meanings and organized into clusters of themes. This qualitative analytical approach was justified because it allowed the researchers to move from individual stories to a universal description of the phenomenon. The final step involved returning to the participants to validate the findings, ensuring that the thematic map accurately reflected their lived realities.

RESULTS AND DISCUSSION

This section presents the analysis and interpretation of the data gathered from the participants of the study. It synthesizes their responses to identify recurring patterns, emerging themes, and meaningful insights relevant to the research objectives. Through a systematic examination of the participants' narratives, the study highlights key factors that shape their experiences, decisions, and challenges.

Late but Determined: How Socioeconomic Realities Reshape Graduate Pathways

Theme 1: Navigating the Socioeconomic and Structural Network of Academic Delay

The findings of this study suggest that the significant pause between undergraduate completion and graduate re-entry is rarely a matter of simple procrastination but is instead the result of a complex interplay of socioeconomic and structural barriers. Participants identified a collection of factors, primarily financial instability, demanding professional workloads, and geographic distance, that necessitated a strategic pause in their academic journeys. In the context of Mindanao, the centralization of specialized graduate programs in specific urban hubs creates a distance barrier that imposes additional financial and logistical burdens on regional educators. Furthermore, the narratives highlight a significant gendered dimension to these delays. For millennial women, the expansion of family responsibilities and the intensive demands of motherhood often require a total redirection of energy, leaving limited flexibility for the rigors of graduate research until domestic circumstances stabilize.

This theme is supported by the following responses from the participants:

"Financial and busy work schedule." (Participant 1)

"Time, money and distance. As a BS Chemistry its expensive to get a master's degree since schools that offers MS program here in Mindanao was only in Davao, Iligan and CDO." (Participant 3)

"Balancing the demands of my career with motherhood required my full attention and energy, leaving limited time and flexibility to commit to graduate studies." (Participant 7)

"Some reasons are the conflict between workload and studies, financial sustainability, the distance between workplace and graduate school, and availability of courses offered by the school." (Participant 10)

These results align with the "Theory of Change" regarding academic attendance, which posits that ecological factors like economic stability and family support are foundational to persistence (Kearney et al., 2022, p. 106). The findings corroborate previous Philippine literature suggesting that young professionals prioritize immediate income and well-being over long-term academic goals when faced with financial instability (Manalo et al., 2026, p. 32). The novelty here lies in the deep-seated "burnout" described by participants who attempted to balance these roles earlier, suggesting that the delay is often a necessary self-preservation mechanism. This impacts policy by highlighting the need for more reorganized graduate programs and enhanced support for working mothers in academe.

Between Obligation and Aspiration: The Dual Forces Driving Graduate Return

Theme 2: Professional Pragmatism and the Internal "Calling" as Re-entry Catalysts

The motivation to return to graduate school is characterized by a blend of external professional mandates and an internal renewed sense of purpose. A dominant driver is the pragmatic need to meet institutional requirements for career progression, such as achieving Department of Education (DepEd) promotion criteria, salary increases, and securing permanent positions. This reflects a policy environment where academic credentials serve as the essential matters for professional mobility. However, the data also uncovers a deeper psychological shift. Participants view their return as a meaningful step toward fulfilling purpose and a way to better equip themselves to serve their students and communities in a modern educational landscape.

This theme is supported/generated by the following responses from the participants:

"When it was announced that plantilla positions would be released this year and that eligibility for a researcher position requires at least a master's degree, I realized the need to further strengthen my academic credentials." (Participant 7)

"What encouraged me to continue my advanced degree was a renewed sense of purpose and clarity about my calling as an educator." (Participant 8)

"My passion for learning mathematics, the desire for professional growth, and the encouragement from mentors and family motivated me to continue my advanced degree." (Participant 4)

"It is just a pressure from peers and in the hiring requirement in DepEd." (Participant 12)

These findings support Self-Determination Theory (SDT), which suggests that while extrinsic rewards like salary and promotion initiate action, long-term academic endurance is sustained by autonomous goals such as personal competence and a sense of calling (Ryan & Deci, 2020, p. 5). This matches existing research on Filipino young professionals who are increasingly motivated by long-term well-being and purpose rather than just financial gain (Manalo et al., 2026, p. 40). The pragmatic reliance on scholarship programs and peer pressure highlights a collectivist approach to academic advancement common in Philippine culture (Abun et al., 2021, p. 18).

Out of Sync: Navigating the Generational Divide in Modern Graduate Classrooms

Theme 3: Generational Friction and the Academic Transition Gap

The integration into an academic environment populated by Gen Z digital natives presents a unique academic transition gap for the returning millennial student. Participants frequently cited a communication mismatch and a struggle to remain at par with advanced technological tools and modern learning methods that younger peers navigate with ease. This friction is not merely technological but cognitive. Millennials report that their retention is not that sharp compared to Gen Z students whose foundational knowledge is fresh from recent undergraduate studies. Furthermore, a clear social stratification exists within the classroom, where pre-existing Gen Z peer groups can inadvertently create a sense of isolation for older students who find it difficult to break into established social circles.

This theme is supported/generated by the following responses from the participants:

"Since my younger peers have just finished their undergraduate degrees, their foundational knowledge is fresh. In contrast, I often find myself needing extra time to review core principles that I haven't used in years." (Participant 12)

"Many digital tools, platforms, and learning methods came more naturally to younger students. I had to exert extra effort to adapt to new software, online systems, and tech-driven classroom activities." (Participant 7)

"Communication mismatch and generational gap. Millennial students may find it challenging to connect with the unique, fast-paced slang, and social media trends." (Participant 10)

"There was also an instance that quiz results put me always at the bottom and that felt me of quitting." (Participant 9)

This generational friction contradicts some literature suggesting that technology bridges gaps. In this context, it often serves as a marker of exclusion (Seemiller & Grace, 2020, p. 15). The findings relate to the "Digital Divide" framework but shift the focus from access to the speed of adaptation (Mercado, 2024, p. 12). The results suggest that social isolation in collaborative learning environments can lead to mental exhaustion, which is a significant factor for institutions to address when designing inclusive curricula (Valdez & Tupas, 2023, p. 22).

Learning to Adapt: Resilience, Reinvention, and Collaborative Survival in Graduate School

Theme 4: Adaptive Resilience through Technological Humility and Shared Experience

To overcome the challenges of generational friction, millennial students employ strategies rooted in technological humility and intentional social bridging. Coping mechanisms include constant practice, utilizing online tutorials, and actively seeking peer tutorials from younger, more tech-savvy classmates. Participants also emphasized the importance of blending in by joining online chats while simultaneously forming small groups with other millennial students to provide age-congruent emotional and academic support. This dual-track approach allows them to leverage their maturity and discipline while acknowledging the modern expertise of their younger peers.

This theme is supported/generated by the following responses from the participants:

"First, I make an effort to get along with my younger classmates by joining their online chats. Second, I've also formed a small group with other millennial students. we support each other." (Participant 12)

"Constant practice and watch tutorial in YouTube." (Participant 5)

"They introduce me to new technologies and different ways of learning. I see it as an opportunity to grow, become more confident, and improve myself as a student." (Participant 13)

"I learned to embrace flexibility, especially in adapting to new technologies and learning styles, while also using my strengths as a more mature learner." (Participant 8)

This theme highlights the "Lifelong Learning" paradigm, where the learner's ability to unlearn and relearn is critical (Brookfield, 2021, p. 45). The findings align with research on time management and productivity, where mature students use discipline to compensate for the fast-paced nature of modern digital education (Frontiers, 2025, p. 7). The practice of forming millennial support groups is a novel finding that suggests a need for age-diverse networking within graduate programs to prevent isolation (Lopez & Garcia, 2024, p. 14).

CONCLUSION

The findings of this study impact theory by suggesting that "Generational Friction" should be a formal variable in adult education models, especially in STEM. Policy-wise, institutions should offer refresher digital literacy modules and more flexible scheduling to accommodate the professional and parental roles of returning millennials. Practically, it encourages a classroom culture of technological humility. The rapid evolution of AI tools during the study period also means that participants' technological struggles are in a state of constant change.

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REFERENCES

1. Abun, D., Magallanes, T., & Agoot, F. (2021). Environmental and organizational culture in Philippine higher education: Impacts on mature learners. *Philippine E-Journals*.
2. Baterna, J., & Cañizares, M. (2022). The professionalization of teaching in the Philippines: Impact of DepEd credentialing policies. *Journal of Philippine Education*.
3. Boaler, J. (2022). *The mathematical mindset in age-diverse classrooms*. Stanford Mathematics Press.
4. Brookfield, S. D. (2021). *Critical reflection in adulthood: Hunting the assumptions of the returning student*. Jossey-Bass.
5. Datu, J. A., et al. (2022). Grit and interest consistency among Filipino students across life transitions. *Journal of Adolescence*.
6. Frontiers. (2025). Boosting productivity and wellbeing through time management: evidence-based strategies for higher education and workforce development. *Frontiers in Education*, 10, 1–18. <https://doi.org/10.3389/feduc.2025.1623228>
7. GMP Press and Printing. (2026). *Geographic and structural barriers in Mindanao education: A regional analysis*. GMP Publishing.
8. Kasworm, C. E. (2020). The imposter phenomenon in adult learners. *Adult Education Quarterly*.
9. Kearney, C. A., Benoit, L., González, C., & Keppens, G. (2022). School attendance and school absenteeism: A primer for the past, present, and theory of change for the future. *Frontiers in Education*, 7, 104-120. <https://doi.org/10.3389/feduc.2022.1044608>
10. Lopez, R., & Garcia, S. (2024). The role of age-congruent support groups in mitigating academic burnout. *Frontiers in Psychology*.

11. Manalo, J., et al. (2026). Dependence of Filipino Young Professionals' Well-being on their Investing Years and Income in the National Capital Region. *Review of Integrative Business and Economics Research*, 15(2), 30–55.
12. Mercado, J. P. (2024). The second-tier digital divide: Age-based technology adaptation in Philippine STEM education. *Journal of Computing in Higher Education*.
13. Philippine E-Journals. (2021). Narratives of Feminism among Gen Z Filipino Women. *Philippine E-Journals*, 12(1), 15–29.
14. Review of Integrative Business and Economics Research. (2026). *The Millennial Returnee: A new demographic of resilient learners*. RIBER Publishing.
15. Reyes, M. L. (2023). Mathematical retention and the adult learner: Challenges of the decade-long hiatus. *International Journal of Science and Mathematics Education*.
16. Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivations in adult education: A 40-year review. *Psychological Bulletin*.
17. Santos, A. M. (2025). Strategic delay: The economics of graduate education among Filipino Millennials. *Philippine Social Science Review*.
18. Seemiller, C., & Grace, M. (2020). *Generation Z: A Century in the Making*. Routledge. <https://doi.org/10.4324/9780429442476>
19. Thompson, S., & Miller, K. (2025). Adaptive resilience: Soft skills for the returning graduate student. *Journal of Adult Development*.
20. UNESCO Higher Education Report. (2023). *Pedagogical agility: Accommodating the rising age of graduate students globally*. UNESCO Publishing