A narrative research of experiences of STEM teachers pursuing doctoral degree

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Abstract
Purpose: The main purpose of this study is to explore the experiences, struggles, and coping mechanisms of educators currently pursuing doctoral degrees.

Research methodology: This narrative research explored the experiences of three (3) STEM teachers in the Division of San Pablo City, who are also enrolled as doctoral students in a private graduate school. Participants were selected through purposive sampling and underwent one-on-one in-person interviews. To better understand STEM-aligned teachers' experiences in teaching vis-à-vis their doctoral education, the Colaizzi method of analysis was utilized.

Results: Five themes emerged in this study: (1) practical reasons such as promotion and higher salary cause participants to take doctoral education; (2) challenges such as expensive education, heavy workload, distress, struggles, and strictness of professors are experienced by doctoral students; (3) intrapersonal motivation fuels participants in learning and teaching; (4) cultivating professionally; and (5) personally are what the participants see as benefits of pursuing doctoral education.

Limitations: The programs of the participants in their doctoral education were not explicitly specified. Findings may be different if participants take a degree related to their specialization (e.g., science education, mathematics, etc.). In addition, the experiences of teachers teaching in private schools who are pursuing doctoral education may also be explored for comparison of experiences.

Contribution: This research could be beneficial to educational institutions where doctoral students teach by adapting to more open policies and regulations that can help teachers attend schools. Moreover, graduate schools may mandate working-student-friendly schedules and policies regarding deadlines and tasks.

Keywords: *Doctoral degree, teachers, education, experiences, STEM*

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1. Introduction

Being a teacher requires sacrifice, time, and effort; therefore, teaching is a uniquely challenging profession (Gershenson & Holt, 2022). It can cause emotional disturbance and deterioration in the teachers themselves, as they face financial, personal, and work-related challenges that lead them to require personal and career development assistance. This prompts them to look for ways to acquire knowledge and skills to add to their repertoire of expertise (Magno, 2010). Eventually, they found high-paying, personal, and career-developing occupations. Aside from career development programs

provided for teachers to expand their teaching horizons, educators turn to pursuing a postgraduate degree known to provide sufficient knowledge and experience to enhance their professional prospects (Pikos-Sallie, 2018).

Postgraduate education is part of higher-level education that covers a broad number of academic degrees, certificates, diplomas, or other qualifications pursued by those who have completed an undergraduate degree. Although a master's degree contributes well enough to the professional development of teachers (Vural & Başaran, 2021), educators also find that attaining formal education beyond a master's degree, that is, a doctoral degree, guarantees their chances for better job prospects, promotions, and a higher labor market value (Sherman, 2021). A doctorate, doctoral degree, or doctor's degree is the highest form of an academic degree that symbolizes mastery in a certain field of study or profession. Moreover, having a doctoral degree comes with expectations such as expertise and adaptability. Students pursuing doctoral education said it was taxing both mentally and physically; they also stated that they had experienced burnout or exhaustion at the price of competence (Ulla, 2018).

Upon graduation from high school or college, the dilemma faced by students is whether to pursue higher education or acquire employment experience in the workplace. A growing number of students believe that a bachelor's degree is no longer sufficient to capture employers' attention when searching for jobs; hence, they are enrolling in postgraduate studies to further improve their employment aspects. The main difference between graduate and postgraduate education is that graduate education can only provide a bachelor's degree, while postgraduate education, a higher level of education, covers academic degrees, certificates, diplomas, and other qualifications, including a doctorate. Two-point two percent (2.2%) of graduates with bachelor's degrees were unemployed compared to 2.0% of those with master's degrees (Staff, 2020). Additionally, McFarland et al. (2019) found that there has been a significant increase in individuals pursuing doctoral degrees between 2000 and 2017. A limited amount of research has been conducted on the relationship between these factors and academic success, particularly for postgraduate international students, despite a large body of Western literature examining adjustment experiences among international students.

Statistical reports from the Commission on Higher Education (CHED) in the Caraga Region showed that in 2009, there were 1,143 students enrolled in doctoral education as compared to a decade later when it was about 335 students (Ramil-Sanchez, 2022). Postgraduate takers declined significantly from 2009 to 2019. However, the number of enrolees for graduate programs, such as master 'sand doctoral degrees, has increased over the past three academic years. Reports from universities such as the University of Science and Technology of Southern Philippines stated that 1.17% more students enrolled in graduate programs from 2019 to 2021 (USTP, 2022).

It appears that doctoral education helps students cultivate key characteristics of success in their respective fields. Attending doctoral education provides students with adequate information and experience in management-based activities such as mentoring and supervision (Cumings Mansfield, Welton, Lee, & Young, 2010). However, some findings have stated that multiple elements affect the experiences and views of doctorate students. One is pressure on the requirements or budget of work for postgraduate education. Similarly, adjusting to the new environment can also be a contributing factor, as it introduces a new academic culture. Finally, some postgraduates find it difficult to read and comprehend academic texts in a deeper and more critical manner (Kaur & Sidhu, 2009).

This study aimed to explore the experiences, struggles, and coping mechanisms of educators who have attained a doctorate degree. Furthermore, this study extended the exploration of the different behaviors, ways, and habits of educators.

Research Questions
This narrative research aimed to explore the experiences and habits of STEM teachers attending doctoral education. Their experiences, habits, and coping mechanisms while participating in postgraduate education were considered, and the following questions were asked.

1. What were the previous experiences and factors that prompted STEM teachers to pursue doctoral degrees?
2. What were the experiences encountered by STEM teachers pursuing doctoral degrees?
3. What are the plans of STEM teachers pursuing doctoral degrees?

2. Literature Review

Throughout the world, doctoral education has been perceived as a necessity for professional skills and knowledge. Among historical papers by Renate Simpson (1983, in Brock (1986)), evidence proved that global cooperation and labor modernization were the root causes for doctoral education to take hold in Britain in the 1880s. These reasons are also evident across countries that pursue a shared global market and the expansion of globalization. Essentially, what doctoral education aims to deliver to students is the opportunity to broaden their skills and knowledge expertise in preparation for school practice (Cremin, 1978). According to Green and Powell (2005), the title Doctorate pertains to any awards given at the doctoral level in accordance with universities and their standards for what constitutes a doctoral level. These standards include the following: (1) a holder of an award develops practical, conceptual, and technological understanding to create ideas and formulate creative paths against contexts that lack information; (2) a holder can practice critical thinking of complex information, concepts, and theories; and (3) a holder has extensive knowledge of a certain area of discipline by contributing to original knowledge (Ofqual, 2015). Doctoral Education is also described as a program of advanced studies, including applied research studies (USNEI, 2020). Although doctoral degrees can vary among types, such as honorary degrees to licentiate degrees across countries, research doctoral degrees were the most known in 2011, and 97% of all doctorate degrees are doctoral degrees. Research doctoral education is mostly aimed at preparing students in terms of skills, techniques, and knowledge to contribute to an area's body of knowledge through research (SED, 2017).

2.1. STEM Teaching

The STEM field can be broken down into four distinct strands: science, the systematic study of the physical universe; technology, a branch of science that deals with the conception and use of technical means that support life and the environment; engineering, the science of practical applied knowledge of pure sciences; and mathematics, the interrelationship of numbers that form related sciences (White, 2014). On the other hand, STEM education, in a secondary education context, can be defined as an approach to learning rigorous academic concepts that apply STEM in context to equip students of skills and interdisciplinary knowledge (Nguyen, Nguyen, & Tran, 2020; Samsudin, Jamali, Md Zain, & Ale Ebrahim, 2020), as cited in Jamali, Ale Ebrahim, and Jamali (2023). Being a STEM teacher requires an intricate mixture of educators, risk-takers, curriculum innovators, negotiators, collaborators, and learners (Darling-Hammond, Ancess, & Ort, 2002; Winger, 2000); as cited in Slavit, Nelson, and Lesseig (2016). STEM teachers are constantly pursuing professional learning and development to improve their classrooms and integrate STEM concepts effectively in the curriculum (Margot & Kettler, 2019).

2.2. Utilizing Value in Doctoral Education
2.2.1. Relevance in Occupation

Education has been one of the foundations of development and progress on a personal level and on other important aspects such as career, skills, and knowledge. Postgraduate education helps teachers enhance and develop the skills required for advancement in their field, even more so than a bachelor's degree can provide (Vural & Başaran, 2021). Moreover, obtaining a master's or doctor's degree can increase salary and help an individual's chances for promotion and even better occupational prospects. Lindley and Machin (2011) found that employees with a postgraduate degree are paid significantly higher as compared to those who only completed undergraduate education. Similarly, the chances of acquiring a high-quality job are also increased by achieving postgraduate studies; obtaining an advanced degree can open a wider range of job opportunities, as skills acquired during postgraduate education will be found useful by employers; and larger responsibilities require higher educational attainment (Bridgestock, 2022); Moore, 2019). As stated earlier, knowledge and skills are important teaching factors. Having the skills and knowledge attained during postgraduate education can further enhance the quality of teaching, thus producing highly qualified students (İnel-Ekici, Ekici, & Can, 2020). In

correlation with the previously stated study, postgraduate education allows the attainment and learning of skills and techniques that are useful in professional occupations and careers (Deng, 2022).

Desires are one of the motivating factors that affect teachers into taking postgraduate education. Such desires can also affect the students 'enthusiasm and general interest in the education. Such study from the Journal of Social, Humanity, and Education showed that high levels of motivation can directly affect a students 'interest positively (Khaneghahi, Nasripour, & MahmoudZehi, 2022). The results of Arab teachers in minority colleges have shown that reputation, self-fulfillment, convenience, and further advancement in education are the most common desires of teachers who partake in postgraduate education (Arar & Abramowitz, 2017). Likewise, a study conducted on social science teachers stated that postgraduate studies improve their personal, academic, and professional endeavors. In addition, teachers who undertook postgraduate studies further innovated the classroom environment, their workplace, and the education system (Alabas, 2011).

2.2.2. Skills and Benefits
Students who would undertake postgraduate studies at a postsecondary institution plan to have better and high-paying occupational options when they obtain their bachelor's degree. The baccalaureate-graduate job market has become increasingly competitive, making it difficult to stand among all other recent graduates. A postgraduate degree stands as a path to higher success, whereas they realize that developing a career ladder will take time (Bridgestock, 2022). Postgraduate study gives the opportunity to learn from experts and ultimately become a professional in your own right if you choose to progress to doctoral study. The motives for pursuing postgraduate education vary; however, they are typically driven by the prerequisites for work and personal goals. Students pursuing doctoral studies claim that the greatest factor influencing them to pursue postgraduate education is the aspiration to gain additional skills in pursuit of education and personal satisfaction from engagement (Ryan & Deci, 2000). In addition, these educators aim to innovate their practice through research by undertaking postgraduate studies (Ion & Iucu, 2016). Other than broadening horizons, equipping new skills, and deepening the understanding of an industry role, educators who pursued a doctoral degree emphasized that their studies had directly impacted their student learning outcomes positively. Postgraduate education aims to gain or improve the majority of educators' personal and professional, teaching-learning process-related, and assessment-related abilities (Arslan & Fatma, 2010). Additionally, skill development performed with proper investment objectives produce better organizational performance and quality of delivery (Amegayibor, 2021).

2.2.3. Performance-dependent Factors
Educators pursuing a PhD provide an edge in a teacher's career. This influences the teachers' instructional ability. The mentoring abilities of university faculty members significantly influence postgraduate student training. Mentoring qualities such as counselling students, serving as role models for them, passing on information, and supervising them are important predictors of postgraduate students' achievement (Arabacı & Ersözlü, 2010).

2.3. Cost of Education
2.3.1. Psychological Cost
A number of students taking doctoral education experience psychological distress or are at risk of having one, resulting in the participants having a feeling of constant strain, depression, sleep deprivation, and inability to overcome difficulties (Levecque, Anseel, De Beuckelaer, Van der Heyden, & Gisle, 2017). However, the level of burnout is based on how graduate students manage their emotions. Graduate students who were handled by universities that were alert to the pandemic and had good sleep quality had a lower chance of experiencing burnout (Andrade, Ribeiro, & Máté, 2023). In addition, there are also risk factors for burnout, such as using antidepressants, drinking alcohol, considering quitting school, and not having a partner. Furthermore, students who are able to balance their work lives are likely to have higher commitment and success in their careers at home (Olawale, Fapohunda, & Ilesnmi, 2017). Subcomponent demand is a significant factor in the moderate level of work-related stress experienced by a sample of Angeles City's elementary and secondary teachers (Sarabia & Collantes, 2020).

2.3.2. Physical Cost

Regarding doctoral education, investments in time, energy, and money are expected. With doctorate studies being a necessity for academics to pursue teaching careers, studies have shown that the challenge of participating in such programs is an extremely difficult process. Economic difficulties and time-bound problems also hinder students to pursue doctoral education; thus, hesitancy is common for those considering to pursue it (Ekici et al., 2020.)

2.4. Switch Cost Effect

The cost of task switching is a mix of costs between the tasks that an individual switches to and fro, and oscillating between tasks causes a decrease in the quality between the tasks at hand (Strobach, Liepelt, Schubert, & Kiesel, 2012). Teachers are known to switch from task to task; though not an explicit job requirement, they are compelled to do so to get through with their occupation. Adding to this is the responsibility and requirement of energy and attention resources in undertaking a degree during which they also tend to work as teachers.

2.4.1. Skill-related Cost

According to Jamadar, Thienel, and Karayanidis (2015), task switching is a core behavioral characteristic of humans that engages goal-oriented behavior to work in situations where switching tasks is necessary to proceed. However, this behavior damages parts of the brain that contribute to better coordination, such as the frontoparietal network. Such damage to the network can cause deterioration in speed, agility, and accuracy, thus lowering the quality of the output (Marek & Dosenbach, 2022). This is evident in studies such as that by Yeung and Monsell (2003), who stated that switching tasks create task-set inertia within the participants of the experiment after being exposed to two sets of alphabetic arithmetic and shape comparison tests. This proves that task-set inertia or the time buffer of the brain and memory to adapt to other stimuli greatly affects the performance of each participant, as reflected in their scores. Therefore, it has been proven that task switching often results in the cost of accuracy and overall success in task execution (Monsell, 2003).

2.4.2. Psychological Distress

According to Adler and Benbunan-Fich (2015), multitasking can affect a person's mental state and performance. In addition, constant interruptions and disturbances can alter and deteriorate a person's output and performance. Furthermore, the results suggest that multitasking generates both positive and negative outcomes. Negative outcomes arise when a given task is difficult and demanding, while positive outcomes are generated when a given task is easy to accomplish. That said, the effects of multitasking and task switching on teachers pursuing a doctorate degree can either be negative or positive, depending on the task that is being done simultaneously. According to Becker, Alzahabi, and Hopwood (2013), multitasking is a key factor in the development of social anxiety and depression. Continuous multitasking can lead to psychological dysfunctions and distress.

2.4. Research Locale

Among the teachers pursuing a doctoral degree in one of the public schools in the Division of San Pablo City, some keynotes were observed. For instance, educators were observed to split their schedules between daytime and nighttime. Some chose to use their daytime schedules to work as teachers in the workplace, while using their available time in the evening for studying at their respective colleges and universities. Nevertheless, educators were still perceived to be able to accomplish their responsibilities despite busy schedules. Although other related literature or studies have provided data and information on the roles and benefits a doctoral degree provides for an individual's professional and career development, these studies also impart recommendations for future researchers to explore the issue of doctoral academics defining their role within their profession (Ulla, 2018). Furthermore, the researchers found that there are few to no studies exploring the lived experiences of in-service STEM teachers earning doctoral degrees.

3. Research Methodology

3.1. Research Design

This study utilized a qualitative narrative approach to explore the experiences of STEM public school teachers attaining a doctoral degree. According to Clandinin (2006), narrative studies involve the study of personal experiences narrated recursively. Studies such as Elbaz-Luwisch (2007)'s "Studying Teachers' Lives and Experiences," and Kissling (2014)'s recommended using narrative inquiry as a design to explore the experiences of educators to further expound the experiences and turn them into meaning and significance.

3.2. Participants and Sampling Method

The participants were three licensed public school teachers in San Pablo City, Laguna, who were pursuing their doctoral degree by the time this study was conducted. Purposive sampling was used to identify the study participants. Criteria were set for choosing the participants. The criteria were as follows: (1) must have either completed, currently pursuing, or pursuing doctoral education; (2) currently obtained at least 18 units in the program; (3) have been working in a public school for at least three to five years; and (4) have taught or currently teaching STEM-aligned subjects.

3.3. Research Instrument

The researchers conducted a researcher-made, semi-structured interview. All patients underwent expert validation. In addition, an audio-recording device was used to record the interviews with the participants' consent.

3.4. Data Analysis

Colaizzi's data analysis method was employed to examine the responses of the participants during the interview. The data were then transcribed. The researchers then clustered themes to develop an exhaustive description of the narrative, which was condensed into a fundamental structure validated by the participants (Morrow, Rodriguez, & King, 2015). The descriptive nature of Colaizzi's method helped the study to account for the reactions, behaviors, thoughts, feelings, and impressions of the participants.

3.5. Ethical Consideration

All participants were informed of the nature and objectives of the study. No potential harm risk was observed during the study period. Permission to use audio recordings of participants' responses was also sought. The anonymity and confidentiality of the participants were also observed.

4. Results and Discussions

4.1 Previous Experiences and Factors that Prompted STEM Teachers to Pursue Doctoral Degree

Theme 1: Practical Reasons Cause Participants to Take Doctoral Education

One of the most common reasons individuals pursue higher-level education is mainly to aid professional growth to attain a higher-ranking position that, in turn, provides a better salary. With regard to the factors influencing teachers to pursue a doctoral degree, it was commonly emphasized that pursuing such attainment is mainly for the sake of promotion of position in work as a requirement and for a higher salary. All three participants said that salary increases and promotions were their main reasons for pursuing a doctoral degree.

Participant 1: "Actually, professional growth, okay. Included yung promotion sa position, of course that could be increase in salary, and of course, I believe that learning is a lifelong process."

Participant 3: "It widens my opportunities. It widens the horizon. It widens your income as a person."

However, most of their initial statements were immediately backed by their personal ideologies that such educational attainment is also needed to feed their yearning for constant learning, to provide

change to the current educational system, to be respected because of their title, and to invest in education for their students' best interests. The following statements support this observation.

Participant 1: "Yung self-actualization, respect, 'no? Syempre, 'pag doctoral ka, 'di naman nirerespeto ka, kumbaga kikilanin ka…"

Participant 2: "I need to pursue further education, kasi may sinusumpaan tayong tungkulin sa DepEd - To provide quality education for all students. So, kailangan makapag provide ka sa kanila ng quality learning, paano mo mapo-provide yun kung wala ka sa sarili mo or kulang ka?"

Participant 3: "…it's a privilege…it is a blessing, you are blessed with knowledge so that your student will [be] bless[ed] as well because you studied and you pursue postgraduate studies…"

Their responses showed that their top priority and main reason for taking doctoral education were their career development and salary increase. Factors cited as reasons for undertaking doctoral education are commonly identified as professional/skill development, salary increase, and respect for title. They also mentioned other aspects proceeding their first statements that are more 'ideological' such as seeking lifelong learning, accomplishing their students' needs as a teacher, and striving to end unfair treatment from co-workers. These proceeding reasons were explicitly mentioned as 'extra' or 'bonus' aspects.

Participant 1: "…of course, gusto ko rin namang magka-title, personally ano, na Doctor of Education, then, ayun."

Participant 2: "Actually, laging may word yan na,'kung gusto mong mabago yung system, magpa-promote ka.'"

Participant 3: "You share it with your students, which is a bonus already. Kase, yun talaga ang ultimate purpose. Let us assume that is blunted and true. The purpose why teachers study is for their promotion."

The statements are aligned to a quantitative study by Kennett, Reed, and Lam (2011), which revealed that common external factors, such as money and peer influence, are central reasons for pursuing further education. Reasons categorized as "ideological, " such as self-growth, respect, and interest in learning, followed as popular factors. Students from the study overwhelmingly chose career and money as the top categories on why they chose to pursue higher education. Like the three participants, they showed a higher priority in salary increase and promotion of utility.

It is heavily implied that the main reason STEM teachers pursue a doctoral degree is to attain higher ranks in their profession, allowing an increase in their income as individuals. In the current Philippine educational system, it has been a merit if educators would have at least a master's degree to qualify. Aspiring teachers with master's or doctoral degrees is given merits during the grading period (DepEd, 2016). Trends such as teachers pursuing doctoral education for the sake of requirements may arise in the future.

Another arising factor is that because the Philippine educational system has seen a significant increase in teachers pursuing higher education after their bachelor's degree (David et al., 2020), it is conceivable that this phenomenon has increased the level of competition among teachers, prompting them to pursue higher education to achieve a higher labor market value. However, apart from the ostensible practical benefits of a doctoral degree, teachers are also driven by personal aspirations and ideals that are influenced by their upbringing and past experiences as students and teachers.

4.2 Experiences Encountered by STEM teachers Pursuing a Doctoral Degree
Theme 1: Challenges Caused by External Factors
a. Expensive Education

Finance is one of the top indicators for why students hesitate to pursue higher education. All the experiences stated by participants were united in the idea that doctoral education is costly to pursue in aspects such as finance, time, and energy. This creates a dilemma in that, in order to have a higher salary in work, educators need to pursue such highly expensive attainment. Reasons why they said that doctoral education is expensive mostly focus on creating thesis papers, dissertations, and other related requirements.

Participant 1: "Medyo magastos din kasi ang thesis eh. I remember nag-thesis ako, kulang-kulang mga 20,000, thesis pa lang yun. Bayad sa statistician, bayad sa technical editor, pakain sa panelist..."

Participant 2: "Kapag kinulang ka talaga...mahirap naman mangutang...so, hindi ka makakapagpursue ng further education 'pag less ang iyong income."

Participant 3: "Diba nagpapart-time nga ako, so, yung binabayad nila sa akin, binabayad ko sa tuition."

b. Heavy Workload
As working teachers and students work at the same time, balancing work and studies is a difficult task that can be a challenge for students. According to two of the three participants, pursuing doctoral education is a daunting task to do—let alone balance work and studies—efficiently and precisely. According to their responses, being a doctoral student alongside being a full-time STEM teacher requires many sacrifices. Costs that were acknowledged by the participants do not just extend in the aspect of finances, but such costs they struggled with also included the quality of work and the time that can be allotted to social activities with peers and family.

Participant 2: "So, 'yung family namin hindi makapagbonding kasi, una, pag nag kulang hindi naman masaya, pag may get-together kami or may, let's say, may boodle fight syempre wala ako, its either may program dito sa school, or may lessons naman kami, may report naman sa doctoral. So maraming parang nahahamper yung mga schedule ko sa family gawa nito."

Participant 3: "This particular multitasking and yung mentally taxing activity will not hurt you physically, but somehow the quality of the work will suffer. Primarily, you must put everything on a single day. You have to perform this task. You must accomplish everything on a single day. Kaya napakahalaga ng scheduling"

c. Distress and Struggles
Workloads and limitations cause students to struggle to keep up with their tasks and obligations. Often, participants also stated that they had to make sacrifices throughout their endeavors in doctoral education to keep up with their tasks and requirements. They also expressed their frustration whenever either of the two duties—being a teacher and being a student—suddenly gave them unplanned tasks that throw off their schedules. These circumstances cause mental distress to participants and lower their capabilities.

Participant 2: "Sometimes, talagang puyatan, umabot ng alas-tres ng madaling araw gising pa ako. Minsan alas kwatro ng madaling araw, gising pa ako, two hours na tulog para makagawa ng grades."

Participant 3: "Alam niyo when you are in the Department of Education, there are always unplanned activities na sisingit na lang at sisira ng schedule niyo, merong burned out, meroong feeling na it's physically taxing, emotionally, and mentally taxing. Sabi ko nga hindi ako sanay na nag-ooverlap ang aking activities. So kapag ganon, mahihirapan akong mag-adjust"

d. Strictness of Professors
Another challenge in pursuing doctoral education is the intense pressure and workload given to students in the program. Participants stated that their experiences inside the classes were tenser because of the general strictness of their professors and the stakes of their tasks. Many of their professors were not

tolerant to late submissions and often gave huge penalties to them. Furthermore, their professors were not too keen on their students' tardiness, because there is a preconceived notion that doctoral students are already adults. Thus, there is no excuse for tardiness, because adults should already know how to manage their tasks without issues. The struggle to balance studies and work as teachers themselves creates stress that affects their well-being.

Participant 2: "Very strict sila kasi kapag doctoral study. Pero kapag masteral marami akong chances na minsan hindi ako nakakapasok, pinagbibigyan naman pero kapag doctoral sobrang strict ng mga professors…"

Participant 3: "They are very strict. Syempre you will raise the bar, you will not be satisfied, you will not be dignified na mag bigay ng subpar performance yang mga yan, ano? So, they are expecting a lot from us, kasi unang-una matanda na kami, hindi naman kami mga 16 years old na kapag hindi naka-pasa eh ano? We are matured enough na to manage our task, kasi hindi na nga kame college students."

Many of the participants accepted the strict behavior of their professors because the latter gave long grace periods to work on the task before the deadline.

However, one trend that the researchers observed in the analysis is that not all doctoral students share the same outlook that doctoral education is difficult and time-consuming. Participant 1 stated that their experience in doctoral education was not exhaustive and that the workload was generally tolerable, contradicting the responses of participants 2 and 3.

Participant 1:' Actually yung aming doctorate class ay flexible, online pa naman. Every Saturday online ayon tapos ang submission online din although may mga attempt na gawing face-to-face like sa ibang school pero yung amin pa rin ginawang online."

"Nagagawa ko pa naman ang dapat kong gawin sa pagtuturo although sa katunayan nga mas pinoproblema ko pa yung aming pagtuturo kesa yung sa doctoral. 'Di naman sa pagmamayabang 'no, syempre flexible…"

During the interview, Participant 1 stated that he was not socially active among peers to the point that he would hang out with peers unless they were invited. In contrast, Participants 2 and 3 were more sociable with their peers, and both participants stated that they tended to be closer to their peers and families.

Participant 1: "Tingin ko parang okay na ako dun sa kung ano meron ako ngayon. Pero siyempre malay natin maging sabi nyo mas sociable [ako] 'no, kase ako hindi ako yung nagyayaya"

Participant 2: "Talagang nagkaroon kami dun sa mga kaklase ko ng drive na, pagalingan kami. The Pero hindi naman crab mentality.

"Katulad nito, may swimming kami ng Saturda,y namo-move sya ng Sunday…which is yung mga Sunday naman, may activities na rin yung mga iba kong mga kapatid so,'yung family namin hindi makapagbonding kase, una, 'pag nag kulang… hindi naman masaya…"

Participant 3: "I'm really a family man. I would love to spend a lot of time with my family. Kase nga, I lost my father at the age of ten."

This observation supports the idea that doctoral education is too demanding and takes a toll on students' lives, often resulting in them being unsociable. When one is not sociable, the difficulty of doctoral education does not affect them as much as more sociable students do. The free time of introverted students is allocated to focusing on studies instead of socializing with peers and families.

A study by Gardner and Gopaul (2012) supports the findings of this study, as they stated in their qualitative study that achieving balance in studies in doctoral education was significantly difficult among part-time students. Participants in their study also expressed challenges in the program as well as making extreme compromises to keep up with the program. Furthermore, in accordance with the study of Johnson, Marus, Adyanga, and Ayiga (2023), the inefficiency and poor standards of educational institutions in nurturing the need of doctoral students can truly prompt uneasiness and hinder advancement among the people they are meant to serve. Therefore, it is necessary to provide services specifically tailored to meet the demands of the students for them to excel academically while also tending to their occupations. This challenge was the main cause of stress among participants who were pursuing part-time doctoral education. In turn, their participants had lower self-satisfaction with their performance because of the sacrifices made. As the majority of the participants who were more sociable tended to find more struggles when dealing with the oscillation of work and studies, a recurring factor arose: being less sociable increases satisfaction over time and effort expenditure on work and pursuance of higher educational attainment. In addition, it is evident that having a family can heavily affect the time allotment on tasks since it comes with obligation and responsibility. Hence, sacrificing the time to focus on the tasks at hand is necessary to pursue doctoral studies.

Although being less sociable can increase work efficiency, it has a fair share of the consequences. According to an article written by Gorvett (2020), humans are deeply social creatures and are bound to socialize. In correlation, isolation can lead to loneliness, low self-esteem, stress, and social anxiety

Theme 2: Intrapersonal Motivation Fuels Participants in Learning and in Teaching
Intrapersonal experience is defined as the experience and perception of oneself. Even though STEM teachers who pursue an additional level of education grappled with varying external factors — as mentioned in the previous theme—they conditioned themselves by personal virtue or were conditioned by positive circumstances to deal with external experiences in a motivational and virtuous manner.

Participant 1: "Yung masaya dun, halimbawa dun sa doctoral...eh of course 'pag nakakatapos ka ng task or pag mataas ang score mo sa task, yun ang joy nun. Tapos yung joy naman sa STEM teacher, siyempre pagka yung mga estudyante mo ay natututo...or yung estudyante mo ay talagang gusto pang matuto."

Participant 2: "...nakakapag-enjoy na lang talaga ako sa mismong classroom, sa mga students ko...'pag kinakausap ko na sila, 'pag nalalaman ko yung mga ups and downs nila sa klase, kung matataas yung grades nila, yun lang yung joy..."

Participant 3: 'I always believe that there is no substitute for hard work... sometimes, ang naghihiwalay sayo at t'saka sa success mo ay ang iyong katamaran...pero yung iyong motivation to listen, to learn, to jot down notes. It all boils down to your hard work and your need, your thirst, yung pagka-uhaw mo sa kaalaman."

In addition, the teachers exhibited the will to perform their duties as both students and teachers out of their ambitions and sense of obligation to their family, work ethics, and profession.

Participant 1: "Ahh priority? Syempre teaching. Kase may oras yun eh, dun ako binabayaran eh..."

Participant 2: "Based on my experience, actually, napakahirap pagsabayin 'yung pag-aaral at pagtuturo. In a sense na 'yung pagtuturo mo, that is your regular job eh—mas uunahin mo iyan priority, as in kapag kinakailangan na...may pasok ka...may trabaho ka—uunahin mo pa rin yung trabaho..."

Participant 3: "Time Management. Yes. I make the point that my work in DepEd will not be affected by my extra-curricular activities. I make it a point. Is it not an issue alright? This is not an issue because I work efficiently. I have my schedules everyday..."

All participants agreed that their experiences served as their motivation and as a drive to battle the challenges and struggles stated in the previous theme. Furthermore, these experiences are important for a student pursuing doctoral studies, as having a support system can lessen the chances of burnout and exhaustion. A study by Løvoll, Røysamb, and Vittersø (2017), emotional experiences provide students with intrinsic motivation. Moreover, positive emotions also affect students' educational choices. Many intrapersonal experiences that are used as motivation only include factors such as virtues and self-satisfaction. These observations are in line with the study of Posselt (2018), who stated that many factors that STEM PhD students indicate as motivations to persist with challenges in the program do not include interpersonal relationships such as teacher-student relationships.

The interviewed participants were fortunate enough to have support systems within their family and colleagues to aid them both emotionally and physically, as they deal with the demanding feat of doctorate education and their job as a teacher. Currently, many doctoral students struggle to gain motivation because of the challenges in the program. In the future, building strong mental and emotional support systems will be important for students; otherwise, many students may experience burnout and higher dropout rates will be expected.

4.3 Plans of STEM Teachers Pursuing a Doctoral Degree
Theme 1: Cultivating Oneself Professionally
The responses of the three participants showed that their plans were for professional growth, such as principalship, doctorate as an advantage, continuing teaching, and promotion. All participants were united in one plan to apply for the principalship. The following are the significant responses that support this idea:

Participant 1: "If I ever finish my doctoral, ff course that would be for professional growth 'no, pwede rin actually sabi ko nga sa inyo, I do not see myself as a principal pero I would take the risk, I would try, I would test the waters, kukuha ako ng exam ng principal. Malay natin makapasa diba, tapos actually isa rin sa mga plano ko ay DepEd parin pero wala na sa teaching."

Participant 2: "Siguro pursues a higher rank. Halimbawa, principal or maybe master teacher 2, 3, 4. In terms of promotion, meron din siyang bearing. Mas preferable na meron ka talaga."

Participant 3: "If I would be given a chance, I would take it, I would grab it. Gusto kong maging principal kung loloobin ng Panginoon and kung dumating yung point na yun, edi maganda. If I am going to pass the test, maganda. So it's additional opportunity to bless other people."

The participants had already planned goals to enhance their professional status. They use their experience in doctoral education as an advantage or leverage to set themselves apart from other educators based on skills.

In a study by Hancock, Black, and Bird (2006), the findings stated that one of the reasons teachers choose to become school administrators is for professional gain or advantage, including higher salaries, job progression, and increased reputation and status. These factors were explicitly stated by all the participants at the onset of the inquiry. It was also observed that teachers attaining a doctoral degree tended to lean towards principalship as a prospective occupation in their future. Also, according to the study of Siswanto, Hasan, Sowiyah, and Ridwan (2020), the management of a principal can severely affect the mannerisms and the capacity of teachers to teach. In particular, the principal's skills in handling problems, communicating, and being attentive can create a better environment for teachers, thus requiring these school heads to expand and enhance their set of skills. Furthermore, a study by Sastrawan, Dewi, and Yuliansyah (2020) indicated that budgeting participation immediately enhances managerial effectiveness. Doctoral studies, especially within the managerial aspect, can help attain the said skills needed in order to operate a good management within the school premise.

These responses coincided with several studies that state that teachers who have completed their doctoral education tend to align themselves with occupations that involve management, research, and

budgeting. Occupations such as college professors, deans, assistant deans, and principals are highly available to students after graduation (Moore, 2022).

The innate urge of the participants to achieve higher educational attainment was mainly for professional growth, as in principalism. Pursuing doctoral studies is a significant step towards achieving the potential for aspiring principals. A doctorate in education provides the necessary skills and knowledge to lead educational institutions effectively and make a difference in the lives of students and teachers. Additionally, a higher profession brings financial stability, personal fulfillment, and social recognition; it opens doors to new opportunities and expands one's horizons, as stated by all participants.

Theme 2: Cultivating Oneself Personally
Self-development is the act of recognizing one's responsibilities and learning through self-reflection and assessment. Among the three participants' responses, their goals steered towards career and self-development, such as fulfillment, obtaining further education, having a family, and having DepEd-related careers. This idea is supported by the following significant responses:

Participant 1: "Siguro naman magpa-pay off siya, alam mo it's a doctoral degree, the highest educational degree in the Philippines, ano?. Pero dipende rin yon kung kahit iyan ay mapa-doctor of education, doctor of philosophy it is still the highest degree of education in the Philippines. Siguro magiging sabi ko nga diba yung sa hierarchy, ano? It is either self-esteem mo or self-actualization mo na magkaroon ka ng doctor of education sa pangalan mo."

Participant 2: "Kung paano mo ipe-prepare yung mga data mo, mga files mo ay medyo mas mataas compare dun sa teacher 1 ka lang, teacher 2 na makakalaban mo kasi you have the skills na eh, you have knowledge kung papano and medyo ayos na yung system parang organize na siya dahil meron ka ng knowledge dun sa mga natutunan mo."

Participant 3: "Whatever happens, ma-promote ka or hindi, you have a certain thing called knowledge – it's not actually knowledge, it's more of a wisdom…it widens your horizon. It widens your perception ng mga bagay-bagay. Sabi ko nga, after I graduated I would like to study again. I'd like to take naman Masters of Theology siguro."

The participants completed their doctoral studies to attain fulfillment. Furthermore, the knowledge they will gain will not only help them in their line of work but also expand their horizons and boost their self-esteem. It also gave some of the participants the drive to continue pursuing further education.

A study by Kowalczuk-Walędziak, Lopes, Menezes, and Tormenta (2017) aligned with the theme stated earlier. According to their study, doctoral studies can change teachers' views and practices. Moreover, the results of this study showed that having a doctorate title had a positive impact on their careers and workplaces. Furthermore, it was stated that advanced education can help increase teachers' confidence.

Although individuals who graduate from the doctorate of education, especially in the Philippines setting, are expected to pursue principalship as a career prospect, many doctorate takers and holders are also inclined to branch out to different areas of the academe after graduating. Individuals who invest in higher-level education tend to pursue it more the higher the educational attainment they obtain; this is either to satisfy tangible needs or to fulfill personal ambition and broaden their knowledge and set.

5. Conclusion
5.1. Conclusion
This narrative research intended to explore the experiences and habits of STEM teachers attaining a doctorate. Emerging themes occurred in relation to teachers' previous experiences and factors that prompted them to pursue a doctorate, their experiences during doctoral education, and their plans. The following conclusions were drawn from a review of the results:
1. The study sheds light on what previous experiences and factors prompted STEM teachers to pursue a doctoral degree by the emergence of the first theme: practical reasons cause participants to take

doctoral education; teachers pursue higher education to fulfill practical necessities and ambitions such as promotion and increase in salary; ideological reasons, on the other hand, were secondary reasons or virtuous support to their pursuit of further education; undertaking it mainly encapsulates their personal moral values, namely, their will to pursue constant learning, to transform the educational system, to be highly regarded by others, and to provide better education to their students.

2. Pursuing a doctoral degree while being a teacher can produce challenges and experiences that can be perceived as reasons for either exhaustion or motivation. While exploring the different experiences of STEM teachers who were pursuing a doctoral degree, two themes arose: (1) challenges such as expensive education, heavy workload, distress and struggles, and strictness of professors, which were caused by external events; and (2) intrapersonal experiences and motivation that fuel participants in learning and teaching were encountered by participants. Both challenges and experiences were found to be key features in a person's growth, especially within the intrapersonal self. However, the challenges that emerged from pursuing a doctoral degree were taking too much of a toll on the mental and social state of the teachers who were pursuing the degree. Nevertheless, positive experiences such as self-satisfaction and virtues, and continuous support from relatives and close confidants can lessen the chances of exhaustion and burnout of the said group; and

3. Pursuing a doctoral degree stems from a longing for growth that motivates them to persevere in dreams and overcome obstacles on their journey towards fulfillment. It entails seeking opportunities for learning and development in areas related to one's profession and desire. The study was completed with a theme formed in response to the question: cultivating oneself both professionally and personally. In attaining doctorate education, it provides a teacher with a significant increase in salary, credit, and a higher job position, such as principalship, the highest authority in an academic institution. It is common for teachers who have graduated with a doctorate to take on occupations that involve management, research, and budgetary work. In that being said, personal development is manifested through it, as it boosts one's ego and satisfaction.

5.2. Limitation
The program for participants in their doctoral education was not specified. Findings may be different if participants take a degree related to their specialization (e.g., language/literature teaching, science education, mathematics). Based on the participants' responses, they appeared to be taking an educational management degree because they seemed to aim for principalship in the future. In addition, the experiences of teachers in private institutions or HEI who are pursuing postgraduate education may also be explored for comparison of experiences.

5.3. Suggestion
1. Factors such as sex percentage, age range of participants, and average household income can be considered in future studies as additional criteria for participants. The researchers also suggested obtaining perspectives on female students to compare experiences among genders if there are emotional and mental differences in the classroom landscape.
2. The use of participants with varying numbers of units can significantly influence the outcome of the study. Classifying a wider set of participants based on how long they are currently attending doctoral education can get a wider view of a student's developmental experience in several stages within the program; and
3. Understanding the social and psychological background of each participant can produce more concrete themes in the discussion of their experiences in doctoral education. This additional information can reflect problems in the current program system more precisely and provide solutions that can accommodate all types of students.

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