

Lived Experiences of Students and Teachers in Virtual Mentorship in Undergraduate Research: A Transcendental Phenomenological Study

Proponents:

Bejec, Analie C.

Federiso, Lanie Joy M.

Lurot, Alyssa Mae O.

Syting, Christian Jay O.

christianjay_syting@umindanao.edu.ph

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Abstract

This transcendental phenomenological study aimed to uncover the students' and teachers' lived experiences in virtual mentorship in undergraduate research. Ten participants were interviewed: Five (5) students and five (5) teachers. Using Colaizzi's strategy, in terms of lived experiences, the positive lived experiences of the students involved efficient feedback system, the use of varied materials, enhancement of self-efficacy among mentees, and enhanced class participation while their negative lived experiences involved lack of psychosocial support, the mentor's unavailability, and poor classroom engagement. On the other hand, teachers' positive lived experiences involved mentors' readiness in preparation for online mentorship, adapting communication and learning platforms, and students' strong sense of urgency while their negative lived experiences involved absenteeism, students' lack of participation, and a low sense of urgency among mentees. In terms of the insights shared, for students, they involved ensuring information accuracy, credibility, and writing proficiency while teachers said that they involved enhancement of research skills, cultivating creativity and efficient learning in research engagement, and strengthening the practicality of the research study. Nonetheless, despite the challenges, they still see the bright side of the advent of virtual mentorship in undergraduate research. Hence, this is helpful to pave the way for the students, teachers, and school administrators to see its benefits and drawbacks.

Keywords: *lived experiences, teachers and students, transcendental phenomenological, virtual mentorship in undergraduate research, Philippine*

INTRODUCTION

Many schools have adapted to virtual research mentoring since the SARS-CoV-2 (COVID-19) pandemic has imposed social distancing. Using online platforms as the medium of education has become the best way to conduct research mentorship. However, the shift from physical to virtual mentorship highlighted the students' and teachers' unforeseen challenges and experiences. It is then observed that in virtual research mentorship, students experience difficulty in feedbacking, limited time, and time incompatibility. Also, limited

access to technology and internet connectivity affected student-mentor communication, relationships, and productivity. The primary challenges highlighted the students' difficulties during virtual research mentoring.

The problem mentioned above is consistent with Speer, Lyon, and Johnson's (2021) study stating that students and teachers are significantly challenged in virtual research mentorship. Due to the limitations induced by the pandemic, the use of technology and access to the internet were also common problems encountered by the students, resulting in their inability to complete school tasks (Lynch, 2017). Undeniably, these experiences stem from the fact that they are not physiologically nor skillfully prepared for the sudden shift of learning models. It is found that these challenges faced by the students are the factors affecting the progress of their research papers (Mullen, 2021).

Furthermore, giving feedback plays a vital role in the productivity level of the students' output. However, some mentors are tough in giving meaningful feedback making the students uncomfortable asking related questions (Angel et al. 2020). Also, students received unsatisfactory, delayed, and too general feedback from their mentors, which highly affected the progress of their research papers (Hobson, 2020). As students receive unstated feedback, the study of Kumar and Johnson (2017) suggests that mentors should provide constructive feedback to their mentees by giving ample and useful examples to help them improve their output.

Additionally, Morales et al. (2018) stated that in conducting research in a virtual setting, undergraduate students struggled with their mentor's limited time, which might place their research development at heightened risk due to low-quality mentorship and being uncertain about their research tasks due to inadequate professional or psychosocial support in virtual mentoring. It was supported by Aucejo et al. (2020), which stated that limited time for research mentoring arises problems and challenges for undergraduate students because mentees are only allowed to work with their respective mentors, usually 5 hours a week. It is a great problem for the students since the scheduled time for virtual mentorship is their only chance to seek guidance. It may cause detrimental influences that affect the students' sense of productivity (Jeannis et al., 2017; Nasution et al., 2018). As a result, Gettel & Venkatesh (2021) concluded in their study that 29% of mentees have been negatively impacted by suspended meetings with their mentors, which caused the fall to offer mentees increased support and offset the loss of instructional research time. Hence, students of Erickson et al. (2021) suggest that research virtual mentorship requires more time than weekly meetings.

Moreover, failure to communicate due to time incompatibility or a mentor's unavailability can cause the students to feel off track. It can decrease the chance for the students to ask related queries that will be useful in their research paper (Limeri et al., 2019). Additionally, students reported that mentors gave insufficient time for guidance due to incompatibility of schedule and absenteeism. Many students view time conflict as a factor that will affect the totality of virtual research mentorship (Dahlberg and Winston, 2019). As a result, Nicholson et al. (2017) concluded that if one mentor cannot fill all the necessary roles for a mentee all of the time, it can cause a proximal effect on their research progress, which plays a powerful role in the development of a mentee's success. Thus, a lack of mentees' real-time interaction with their respective mentors due to time constraints hinders their ability to have their research established (Lerman, 2020).

In addition, limited resources of technologies in a virtual setting have been reported to be significantly a problem for the quality of research and students' other achievements (Drane et al., 2020; Suryaman et al., 2020). Furthermore, the preceding problem made the students suggest that the limited technology-mediated their virtual research. It is supported by the study of Corson et al. (2021) that the virtual research experiences they face are not only a challenge for undergraduate students but also hinder them from pursuing a career in research due to the limited resources of technology. As a result, mentees could not experience the mentor's advice and feedback (Fawaz et al., 2021) and scheduled meetings, which can affect the efficacy of their output (Speer et al., 2021). Additionally, due to the limited resources of technologies experienced by some undergraduate students, they missed the digital skills taught by their mentors, such as Zoom, Google Drive, and Canvas, that would assist them in research. This problem might confront students if research mentorship abruptly shifts to online, particularly those from countries with limited resources.

Also, a lack of internet connection, as stated by Blagg and Luetmer (2020), can exacerbate the problem of virtual mentoring if the ability of researchers to attend virtual research mentorship depends on computer accessibility and reliable internet connectivity. Additionally, Banks (2020) further stated that across the U.S., access to reliable internet remains an issue as well, where seven million—or 14% of—school-aged children live in homes with no internet. As a result, Speer et al. (2021) claimed that undergraduate mentees and graduate mentors indicated that their productivity worsened after their experiences became exclusively virtual. It was also supported by Candelaria et al. (2021) that limited access to internet connection is a common negative experience of the students while working with mentors. Students' negative experiences in virtual research mentorship affect mentoring relationships, communication, and productivity.

Although there have been few studies on students' experiences in virtual research mentorship (Erickson et al., 2021; Jeannis et al., 2017; Nasution et al., 2018; Limeri et al., 2019; Hobson, 2020; Kumar and Johnson, 2017; Speer et al., 2021; Candelaria et al., 2021; Menzel et al., 2019; Mullen, 2020), we have not encountered research that investigated experiences of students in virtual mentorship in undergraduate research in the Philippines. By this means, the paper sets out to determine the lived experiences of students and teachers in virtual mentorship in undergraduate research. Focusing on this idea will recognize the experiences of students and teachers; specifically, the positive and negative lived experiences. Hence, making this study relevant and useful and the need to conduct it is essential.

The completion of this study is of great help in terms of providing a reference for students and teachers coping with undergraduate research in a virtual environment. Moreover, it is evident from the studies presented above that students' encountered challenges and difficulties in virtual research mentorship. With this, generating ideas from the experiences of students and teachers can present essential and useful responses that will help students overcome the challenges mentioned above while also assisting mentors in strengthening their mentoring relationships.

This qualitative-phenomenological study aimed to seek reality from students' and teachers' narratives of their experiences in virtual mentorship in undergraduate research. More specifically, it aimed to unearth the positive and negative lived experiences of the students and teachers. The insights shared by the participants were also taken into account.

The scope of this study is centered on unveiling the students and teachers lived experiences in virtual mentorship in undergraduate research. The researchers limit their

participant to ten (10), the five undergraduate students who have been enrolled since the beginning of the implementation of blended learning and from various college departments of the University of Mindanao who have successfully passed the research. The selection of five teachers includes those who have 5 years of experience and those who have been teaching online since the implementation of blended learning. This study is conducted through an interview with the use of an interview guide. Although the researchers have attained the objective, some situations limited the study. To begin with, it would have been preferable if the researchers had carefully observed virtual mentorship throughout the semester. Second, a face-to-face interview rather than an online one would have allowed for a longer interview period with the participants. The study is qualitative, therefore different interpretations and conclusions could be reached by different researchers.

METHODS

This chapter presents the research design used in the study. This includes selection of the participants, research instruments, and procedures to be used in the study.

Research Participants

The participants of this study were the five (5) undergraduate students who have been enrolled since the beginning of the implementation of blended learning and who have successfully passed the research. The other five (5) participants were the research teachers; the teachers' selection includes those with five years of experience and those who have been teaching online since the implementation of blended learning. The students and teachers were from the various college departments of the University of Mindanao. Ruchhoft (2021) supports the number of participants, who explains that a sample size ranging from 5 to 50 participants is sufficient for qualitative studies due to its case-oriented analysis and in-depth nature.

Moreover, purposive sampling was realized in this study. According to Polkinghorne (1975), a purposive sampling technique involves purposely identifying and selecting participants who are especially related to the central phenomenon understudied. The researchers made sure that the chosen participants were qualified by conducting a pre-interview.

Research Instruments

This study will use an unstructured interview by asking open-ended questions to obtain responses from the participants. For a productive and efficient gathering of responses, this study will use an interview guide, which some experts will validate. It will then be followed by an interview of the five (5) participants in this research after the tool is verified and revised. The researchers will use the verified interview guide as a reference, asking follow-up questions when necessary. The participants will be interviewed virtually through Google Meet.

Research Design

Qualitative research used a qualitative research design. Qualitative research is an approach that uses the subjective experiences of the participants to gather information. It involves collecting and analyzing non-numerical data. Furthermore, qualitative research allows researchers to connect rich data from the participants who directly experienced the

phenomenon, which can provide insights into a problem to generate new concepts for research (Bhandari, 2020).

Kersten (2020), phenomenology is an approach that explores and understands people's everyday life experiences as a phenomenon, specifically the transcendental or psychological phenomenological study. It is a qualitative study employing transcendental research. According to Moustakas (2019), it focuses less on the researcher's interpretation and more on describing the participants' experience. In other words, it is perceived as if for the first time. The researcher has to be aware of the need for bracketing and concentrate on the participants' descriptions.

The first step to beginning the data gathering procedure is to look at potential research participants. Subsequently, consent forms are given to the participants to request their involvement in the research process. Since the pandemic will bring limitations, there will be a scheduled virtual interview using Google Meet. The participant's responses will be recorded and then analyzed using thematic analysis. It is a systematic method that includes identifying and categorizing specific statements into themes based on their embedded meanings (Creswell, 2013). The researchers will review the responses several times to achieve the accuracy of the interpretation of the qualitative data.

Trustworthiness of the Study

In this study, to ensure the validity and trustworthiness of the findings, Lincoln and Guba (1985) proposed four criteria for ensuring the trustworthiness of the research findings: credibility, conformability, transferability, and dependability are ensured in the study. Credibility is defined as the accuracy and reliability of the information gathered (Mills et al., 2010). To assure the credibility of this study, researchers seek the expertise of tenured professors in the field of Language and Education to examine the results of the thematic analysis and to validate the interview script. In terms of confirmability, Korstjens and Albine (2018) define it as the objectivity of the researchers. It is achieved by interpreting the participants' responses without incorporating any subjective perceptions and providing supporting literature to support the analysis. As for the transferability, Ramsay (2010), the degree of transferability is based on how clearly and closely two settings are similar. It is easier to transfer the information the more related the data and points are.

Thus, the researcher exemplified and elaborated the study's purpose and findings, allowing future researchers to compare if similar contexts and phenomena have been investigated. Also, to ensure dependability, the researcher detailed steps, such as the participant selection process and other study aspects.

Results and Discussion

The primary focus of this chapter is to discuss the findings of the lived experiences of students and teachers in virtual mentorship in undergraduate research. These are presented using themes derived from the participants' responses, with detailed analysis and supporting literature to answer the two research questions.

Lived Experiences of Students and Teachers in Virtual Mentorship in Undergraduate Research

In this study, the lived experiences involved the positive and negative experiences of students and teachers in virtual mentorship in undergraduate research. Participants were five (5) undergraduate students from various courses who had engaged in virtual mentoring and five (5) mentors with five years of combined experience as a research mentor and adviser. Using interviews, several themes have then emerged as shown in Table 1 and Table 2. These comprised the positive and negative experiences of the students and teachers as comprehensively discussed below.

Positive and Negative Lived Experiences of Students in Virtual Mentorship in Undergraduate Research

The positive lived experiences of students involved the following: An efficient Feedback System, The Use of Varied Materials, Enhancement of Self-Efficacy Among Mentees, and Enhanced Class Participation. While the negative lived experiences of students involved the following: Lack of Psychosocial Support, Mentor’s Unavailability, and Poor Classroom Engagement. To comprehensively discuss the positive and negative lived experiences of the students, below are the following:

Table 1.

Lived Experience of Students in Virtual Mentorship in Undergraduate Research

Basic Themes	Organizing Themes	Global Themes
POSITIVE LIVED EXPERIENCES OF STUDENTS		
Mentors promptly responded to mentees' queries in emails [ST4] Mentors quickly answered mentees questions and clarifications in group chat [ST5]	Asynchronous Messaging Channels as Additional Platforms for Communication	Efficient Feedback System
Recommend not to include unrelated studies to support the claim [ST1] Mentors praise the content of the research introduction [ST2] Commend students sentence structure [ST5]	Ease in Highlighting Strengths and Weaknesses of Student Papers	
Use of visual presentations [ST5] Importance of recorded video meetings [ST3, ST4] Sample files as reference [ST3]	Adequate Learning Materials	The Use of Varied Materials
Conduct online forums [ST5] Provide immediate quiz results, scores, and feedbacks [ST2]	Technology Based Activities and Assessments	

Students as independent learners [ST2, ST3, ST4] Allow students to discover and resolve a problem [ST4]	Cultivation of Self-Directed Learning Among Students	Enhancement of Self-Efficacy Among Mentees
Allow Brainstorming of ideas [ST2, ST3, ST5] Conduct group discussion on research title [ST2]	Establishment of Interactive Online Activity	
Allow students to participate in discussions [ST1] Permit students to raise questions throughout the discussion [ST2]	Interactive Classroom Discussion	Enhanced Class Participation
Allow research members to collaborate [ST2] Allow research members to engage in group open discussion [ST1]	Interactive Classroom Engagement	
NEGATIVE LIVED EXPERIENCES OF STUDENTS		
Unable to encourage students during trying moments [ST3] Not receiving words of encouragement to pursue our paper [ST4]	Poor Affective Stimulation	Lack of Psychosocial Support
Unable to provide justifiable grade [ST1] Unable to provide high rating as a final grade [ST3]	Lack of Reward-based Motivation	
Mentor is not present to offer more commentary or clarifications [ST3] No presence of the mentor to provide additional input or explanations [ST4]	Absence of Mentor	Mentor's Unavailability
Delayed replies about queries [ST2, ST3,] No immediate response with clarifications [ST4]	Late Responses	
Discussion does not include a question-and-answer portion [ST1] Mentor simply discuss the procedure [ST5]	No Interactive Topic Discussion	Poor Classroom Engagement
Most of the activities are done individually [ST3]	Lacking Interactive Activities	

The usual tasks are carried out alone [ST5]		
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Positive Lived Experiences of Students

Efficient Feedback System. It refers to a process in which students make sense of information about the work they have completed and utilize it to improve the quality of their subsequent work (Dawson et al., 2019). Efficient feedback strengthens its focus on developing students' understanding of quality and their capacity to create high-quality work. It is demonstrated by the organizing themes below:

Asynchronous Messaging Channels as Additional Platforms for Communication. This refers to a full range of tools by the mentors to promote interaction between mentees and to improve the learning process Moorhouse & Wong (2021). Asynchronous communication has extended so far to the point where it enables students to discuss related subjects and work together on projects. Most importantly, it also allows the integration of widely-used and readily available apps for the mentors and mentees to use. This can be seen by the responses below:

...thankful mi sa among mentor kay paspas sya makareply sa among emails. Kaya in terms sa communication, wala mi problem.

...we are thankful to our mentors because she was responsive to our emails. That's why in terms of communication, we don't have a problem. [ST4]

...ah, pag naa man gud mi questions or kanang wala nasabtan sa iyang gihatag na instruction, kanang i'mention ra namo among adviser sa among gc. Then, kato nag response sya and give more detailed information.

...whenever we have questions regarding the research paper, we just mention our adviser in our group chat and he gives answers and asks if there is anything we are concerned about. [ST5]

In the statement of ST4 and ST5, teachers are responsive to their queries with the help of the communication channels such as Messenger and Gmail. This dilemma stems from the fact that these channels became a primary method of communication that helps the mentees to interact with their mentors without sucking up their extra time. It serves as an interactive platform for the students and teachers to discuss student performance and output and for the students to raise any concerns or difficulties they were experiencing. Additionally, online learning materials, including PPTs, videos, e-books, and articles, can also be conveniently shared by mentors. Asynchronous messaging channels as additional platforms for communication are a great system for efficient feedback, especially for mentors' conducting a virtual mentorship. The mentors use these channels to give feedback, comment, and reaction on the mentees' output and to guarantee that mentees are producing

better work. Proper communication between the students and teachers can indirectly foster the performance and growth of the students.

It is aligned with Perveen's (2016) findings that Asynchronous learning encourages mentees to ask questions that require long answers. The written form of communication offers more opportunities to reflect and express ideas more freely than face-to-face oral communication. Mentees are more prone to clarify instructions and raise questions using these asynchronous channels, allowing them to use their higher-order thinking skills as they can keep thinking about their problem for an extended period. Moreover, it fosters discussion with peer groups that helps build critical thinking, and shyness is reduced due to distant mode, alleviating mentors' fear. Therefore, using asynchronous communication channels promotes independent and self-paced learning. With this, Kebble (2017) stated that using these asynchronous messaging channels promotes interactions within online learning communities and strengthens connections among mentees, including the mentors' involvement. As a result, increased opportunities for student interaction and communication along with their mentors and a chance to have more in-depth conversations and ask insightful questions as a technique. It is also supported by Alawamleh (2020), who unveiled a similar case using asynchronous messaging channels as an advantage for students to collaborate with other online students and overcome constraints of online communication.

Ease in Highlighting Strengths and Weaknesses of Student Papers. It pertains to clear and useful information on student learning outcomes that can be utilized as indicators of students' learning-related strengths and weaknesses, and it would be easy for the mentors to find, categorize, and evaluate a particular performance indicator that will specify success or failure in students' learning outcomes. Research paper writing can recognize one's abilities in creativity, reading comprehension, vocabulary, and writing structure Hiemstra et al. (2019). The following responses can draw it:

...ahm, what I appreciate sa among mentor is gina tudluan gyud mi nya na dili iinclude ang mga unrelated studies sa among RRL pag mag pasa nami sa among output.

...ahm, what I appreciate about our mentor is that he taught us to not include the unrelated literature in our study whenever we will submit our output. [ST1]

...naka received pud mig compliment sa among mentor, ah example is gi praise nya ang among introduction na gihimo sa research.

...we received a compliment from our mentor, ah example is he praised the content of their search introduction we made. [ST2]

...katong gi check sa among mentor among paper, na happy sad mi ato kay gi praise niya amoang pag structure sa sentence.

...when our mentor checked our paper, we were happy because he praised the sentence structure we made. [ST5]

The full script of ST1 disclosed that their mentor taught them not to include unrelated literature in their study to produce quality work. When a mentor identifies a mentee's areas of weakness throughout the writing of their paper, it provides effective feedback and paves the road for mentees to strengthen their paper. Since the mentor could highlight the mentee's weakness, the mentee can now work on his or her strengths and allow mentees to improve their area of weakness. In the full manuscript, ST2 also revealed that his mentor complimented the research introduction they made, which inspired them to complete their research paper. Mentees become more efficient and motivated on the academic track by highlighting their strengths. In the statement of ST5 displayed above, her mentors also complimented their sentence structure. Praise is one of the simplest and most effective strategies for involving and inspiring students; it will turn around their behavioral challenges and improve students' attitudes toward learning. Complimenting mentees' strengths and highlighting their weaknesses is efficient feedback for it motivates students to strive for improvement and deal with their shortcomings.

It is aligned with the findings of Capriola (2019) that mentees will learn how to survive and eventually excel in academe if they have a deep understanding of their strengths and weaknesses. As they learn more about the inner workings of their skills, it will also help to increase their sense of self-awareness and allocate more time to enhance their strengths. Instead of letting obstacles stop them from growing, they can start looking for opportunities to do so. Moreover, Yussif (2022) propounded in their study that mentors can help mentees to learn and grow in the right areas by understanding their strengths and weaknesses. As a result, mentors can utilize the appropriate instruction and help students to achieve their objectives. Slavit and Egbert (2017) unveiled a similar case wherein mentors are better equipped to assist mentees when they know their paper's strengths and needs and use their funds of knowledge to support their learning.

The Use of Varied Materials. It refers to the content or information conveyed within a course. These contain the course's lectures, readings, textbooks, multimedia lessons, and other materials. These resources can be utilized in traditional and virtual classrooms Fidalgo and Santos (2018). It is certainly salient for online courses, which depend on a thorough and deliberate collection of educational resources that students will access, examine, absorb, and refer to as they move through a course. The following organizational themes establish this theme:

Adequate Learning Materials. It pertains to learning materials aligned with the learning objectives and assessments. Also, learning materials should be accessible and reader-friendly on multiple devices Shaw (2018). Mentors ensuring mentees who require the use of assistive technology can access the learning materials without impediment and making it accessible across multiple platforms, such as smartphones, tablets, and other operating systems, will give mentees opportunities to study and set them up for success. The following are responses that establish this theme:

...pag mag gmeet si sir, ga present syag powerpoint while
ga discuss sa amoa.

*...when we had a Google meeting, our mentor used visual
presentations while discussing. [ST5]*

...pag naay time na absent ko sa meeting kay mawala ang internet, importante jud ang recorded meetings kay mapaminawan nimo ba kung unsa ilang gi discuss or naa ba announcements

...if there are times that I was absent during a meeting, recorded video meetings are important because I can listen to the discussion or if there are announcements made. [ST3]

...aw ohh importante kaayo uy, labi na pag naay announcements

...oh yes of course! It's very important especially when there are announcements. [ST4]

...ga send among adviser ug sample files para ma guide mi and para makita pud namo ang work sa previous batch

...our adviser sent sample files as reference for us to be guided and see the work of the previous batch. [ST3]

In [ST5], the participant disclosed that mentors used visual aids like PowerPoint during discussions to make mentees relate to and comprehend the content. Compared to other visual aids, Microsoft PowerPoint makes engaging and expert presentations. It is a popular choice for presentations since it can add various graphic elements to the slides to help the audience concentrate and remember the information discussed. Additionally, by using these visual presentations, mentees will be guided through the process of making their paper. According to [ST3 & ST4], recorded video meetings play a vital role in their learning. When they are not available for the actual discussions, they can use these recorded meetings and access them whenever they want at their own pace. Also, meetings are recorded to ensure that information and instructions are not forgotten, and mentees can review the meeting minutes later. It shows how recorded video meetings are easier to access for everyone, with features like playback, speed modification, and closed captioning. Meanwhile, [ST3] disclosed that his mentor was able to send sample files as a reference. Through this, mentees will be guided through the research paper process and allow them to figure out ways to get done with their paper with fewer mistakes.

This factor is ascertained by Blake (2022), who determined that teachers use different materials and content to engage students and suit their needs. To be completely engaged, mentees must relate to the information in authentic ways and find themselves reflected in the materials to address the needs of various students; teachers choose the materials for educational activities. The selection of materials to use in class might be a challenge. That is why mentors must decide if the material needs to be further adapted to fit the mentee's needs. In her study, Bukoye (2019) revealed that the use of varied materials allows the mentees to engage with words, symbols, and concepts in ways that enhance their reading, listening, problem-solving, viewing, thinking, speaking, and writing skills, such as well as their ability to use media and technology. Without effective instructional

materials to support creative output in contemporary disciplines like science and technology, among others, effective teaching may not be possible. The quality of those materials directly impacts the effectiveness of instruction; knowing where to look for the appropriate teaching materials is an important ability for mentors to possess, Chukwuma (2022). Therefore, the use of varied materials should be consistent with educational components, the readability of instructional materials, the structure of instructional materials, the pace of content, the convenience of use, and the durability of materials—the comprehensiveness of mentees and mentor resources.

Technology-Based Activities and Assessments. Measuring learning is a necessary part of every mentor's work. Every teacher must include measuring learning in their work. In order to successfully prepare mentees for the real world, mentors must assess students' comprehension, and parents must be aware of how well students are performing. Technology-based activities and assessments can help coaching and teacher evaluation, Chang et al. (2020). These technologies capture video and other representations of instructional traits like teamwork and collaboration. The following are responses that establish this theme:

...ahmm aside sa naa mi gc na didto mi mag communicate, among adviser pud kay ga gamit online forums. Like didto sya ga post ug announcement and pwede pud mi mag reply didto if naa mi questions or concern, ana raman.

...ahm aside from the fact that we have group chat to use in communication, our mentor also conducted online forums wherein he posts announcements and then we can also reply to that and raise questions or concerns. [ST5]

...nice man gud sya kay naa gud dayon result sa inyong quiz, automatic imong score ba and pag mag submit kag output, naay comments didto.

...it is nice because the result of our quiz was immediate and whenever we submitted our output, the comments were visible and real-time. [ST2]

In [ST5] and [ST2] displayed above, the participants shared the same sentiments as the mentors using varied materials. [ST5] shared that her mentor used an online forum for interaction and real-time updates such as announcements. Mentees have the freedom to express themselves in online forums, and their communication skills are improved by seeing how others assemble their thoughts and form opinions. Mentees are free to carry on conversations about the subjects most interested them. As a result of their interactions with their peers, participants saw improvements in their personal and academic lives. The objective is for the students to respect this type of professional interaction and actively seek it out among their peers with technological communication. Meanwhile, [ST2] shared that using these technology-based materials makes quiz results and feedback immediate and evident. Also, when feedback is given in real-time and continuous, it is more relevant, and it can be applied right away and strengthens the mental connections of mentees to the

learning material, which improves the effectiveness of mentees' learning. When mentors know that using these technology-based activities and assessments, the mentees' learning will be effective; then it will be a big help for all the other teachers and mentors to adapt to these various instructional materials as a tool to deliver the content successfully.

It is aligned with the findings of Shana (2022). She affirmed that using online forums and technology-based activities and assessments will make mentees expand on the class discussions, improves critical thinking abilities, increase cross-communication and cooperation, and foster greater cognitive and exploratory learning. Adding to this, Neelakandan (2021) stated that the online forum is the heart of e-learning since it makes it simple for students from various regions to connect and share knowledge. On top of that, technology-based activities and assessments foster collaborative learning, which gives eLearning courses more uniqueness. It is further supported by Marbas (2022) asserted that the purpose of instructional materials, also known as educational resources, is to advance students' knowledge, skills, and talents while ensuring that they are assimilating information and advancing their general growth and upbringing. Additionally, it provides all students in a class with the chance to share experiences necessary for new learning. It aids in making learning more lasting by clarifying crucial concepts to pique and maintain students' interests.

Enhancement of Self-Efficacy Among Mentees. Albert Bandura defined self-efficacy as "the belief in one's skills to organize and execute the courses of action required to manage upcoming problems." Self-efficacy is a person's belief that they can succeed in a specific circumstance Cherry (2020). These ideas, according to Bandura, influence how people feel, think and act. As Bandura and other researchers have shown, self-efficacy can influence everything from psychological states to behavior to motivation. What goals we decide to pursue, how we go about achieving those goals, and how we evaluate our performance are all influenced by self-efficacy. It is manifested by the organizing themes below:

Cultivation of Self-Directed Learning Among Students. The result of designing a learning environment that gives students the freedom to choose the subjects they want to master is self-directed learning, as described by Robinson and Persky (2020). The self-directed learning approach is a fundamental change for a mentor because it shifts them from being a purveyor of information to taking on the roles of learning facilitator, motivator, and designer of the learning situation. Also, self-directed learning fosters a sense of autonomy in the mentee and a feeling of purpose in the educational process. Below are responses exemplifying this theme:

...since kay online man gud amoang research bali murag independent na pud mi mismo sa amoang own learning gud, example dba if naa mi question initiative na namo mag seek ug answer. Mag ask mig questions sa among classmates or mangayo mig sample file sa among kaila, ana ra.

...since our research was conducted online, we tend to be independent learners of our own learning. Example is whenever we have questions, we seek answers from our classmates and ask for sample files from our colleagues, that's it. [ST2]

...mahulog gyud na na independent learners mi kay kami-kami ra ga solve if naay problem which good man sab gud. We benefit from this since we are able to stand alone and don't rely on our mentor all the time.

...we are considered as independent learners since we solve problems on our own, which I find good. [ST3]

...maka benefit man sab mi kay maka stand alone mig amua ba, dili all the time mag rely mi sa among mentors.

...we benefit from this since we were able to stand alone and don't rely on our mentor all the time. [ST4]

...naa man pud advantage sa amua gud ang research online dili kay puro disadvantages lang, hmm para sa akua lang huh kay ma resolve namo ang problem na kami-kami lang. Same atong nagka problema mi sa among research, na tam lang pud namo to by checking the sample files na gihatag sa amua.

...there is still an advantage and not just several drawbacks with our research, though it was conducted online. Hmm for me the advantage was we were able to resolve a problem along with the making of our research paper with ourselves. The same thing when we had a problem before, we figured it out together by simply checking the sample files we received. [ST4]

In [ST2, ST3, & ST4] presented above, they have shared that they became independent learners while dealing with their research studies online. Furthermore, the participants act independently, make wise choices without the assistance of their mentors, and seek answers on their own. It's crucial to help them become autonomous learners to improve academic achievement, keep mentees motivated, and encourage mentees' boundless inventiveness and capacity for learning. When learning takes place alone, mentees frequently have more control over their time. They may choose how and when to spend their time, and with the correct guidance, they will make an informed choice. Learning to study independently entails a greater sense of personal ownership and responsibility for both success and failure. Mentees may experience a high sense of pride when they witness significant academic progress, which can be very motivating and can enhance their self-efficacy.

This is supported by Mirzawati et al. (2020), who stated that the direction of the positive relationships between self-efficacy and self-directed learning indicates that the student's self-directed learning increases with self-efficacy. On the other hand, the lower the student's self-efficacy, the lower the student's self-directed learning. Since self-directed learning significantly influences students' motivation for academic success and sense of self-efficacy. Teaching certain techniques before the class begins can significantly improve

student performance. Saeid (2016). One of the manifestations of self-directed learning is the exhibition of Self-Efficacy in Learning Coros (2021). Studies examining the relationship between self-directed learning and self-efficacy in learning typically supports the notion that the two concepts are significantly related.

Establishment of Interactive Online Activity. Interactive online learning is not something that just happens. It is the end result of a methodical, deliberate development process. A professional should be knowledgeable about online learning guiding principles before developing an eLearning course, according to Cujba (2020). Interactive online activities encourage student participation and engagement with the teachings or material by eschewing one-way communication or independent learning. Below are responses manifesting this theme:

...ay kuan kanang hmm ga brainstorm mi sa among grupo, naa man mi group chat so didto mi ga exchange ug mga ideas namo.

...oh hmm ah we do brainstorming in our group, We have a group chat to exchange ideas. [ST2]

...mas maayo man gud nang ga share mi sa among ideas kay abtik ang dagan sa amoang paper ba.

...it is much better if we share our ideas because the making of our paper will be quick [ST3]

...a brainstorming man mi, ganahan ko kay lingaw man gud ang grupo. Dili nimo ma feela ng stress sa research ba.

...oh, we brainstormed. What I like about it, is that it was fun and I don't feel the stress of our research paper. [ST5]

...oo kana na remember nako tong ga buhat pami ug research title, kuan kanang group discussion among gi buhat ato, ga discuss mi kung unsa na topic among i' conduct na maka relate mi.

...yes, I remembered when we were still choosing a research title, we did a group discussion to come up with a topic that we can all relate to. [ST2]

In [ST2, ST3, & ST5] presented above, the participants shared that they do brainstorming to share their ideas within the group. Mentees can think more freely and without concern for criticism when brainstorming. In order to address difficulties and come up with novel ideas, brainstorming promotes open and continuous collaboration. The brainstorming process enables mentees to consider problems and potential solutions critically, make connections, and exchange ideas with others. Moreover, it facilitates learning and enhances self-efficacy as mentees participate actively. In [ST2] presented

above, the participant shared his positive experience of having group discussions in making their research paper. Group discussion is the best method for enhancing learning. It is simple to use, effective, and frequently seen in achieving the learning objectives. The students respect it the most as a method of knowledge transfer and opinion generation. The impact of these conversations on students is beneficial in terms of subject exploration, active participation, critical thinking, and social and communication skills development.

It is aligned with the findings of Surjono et al. (2019), who asserted that the effectiveness of interactive online activities encourages mentees to be active, engaging, and collaborative with their peers. Through these exercises, students can learn transformative thinking, deepening material, contemplation, and critical thinking. Nguyen (2017) further explained that these interactive online activities are meant to provide teachers with ideas for designing and implementing learning activities for the teaching and learning process and revealed that interactions between students have a stronger effect on learning outcomes for mentees. Further, McIntyre & Mirriahi (2021) added that establishing an interactive online activity in a lesson can have several advantages for teachers and students. However, success depends on how well the activity and the technology are incorporated into the learning process and how well they suit the learning context.

Enhanced Class Participation. It refers to students' participation in class in which learning is significantly impacted. Students gain the ability to communicate their ideas clearly to others by speaking up in the classroom, Shore (2018). Additionally, students are learning how to get information to deepen their understanding of a subject when they ask questions. For teachers, class involvement is a useful teaching resource. By listening to their questions, the teacher can determine what pupils do not grasp and may modify training accordingly. The following organizing themes further develop this idea:

Interactive Classroom Discussion. The term "interactive classroom discussion" refers to lectures in which the instructor uses engagement strategies and breaks the lecture at least once a lesson to involve the students in a hands-on activity, Witherspoon et al. (2016). Engaging students through interaction with the lecture material, the teacher, and their peers is the aim of interactive discussion. The interactive classroom discussion strategies enable students to apply what they have learned or provide a context for upcoming lecture material, and the engagement triggers capture and keeps students' attention. Here are some responses that fit this theme:

...pag naa mi meeting ga participate jud mi, minsan gani pag walay maningog sa klase kay amoang mentor na jud and manawag just to make sure na kasabot ba ang tanan or wala na jud ba clarifications.

...we participate when we have a meeting, and sometimes when no one is speaking up then our mentor will choose names to make sure that everyone understood and there are no further clarifications. [ST1]

...ayy oo naga ask jud mig questions labi nag wala mi kasabot ba unya libog kaayo, mao nang after sa discussion kay ga raise jud mig hand sa among meeting.

...ohh yes, we definitely ask questions especially if the instructions are too hard to understand. We really raise our hands at our meeting. [ST2]

In [ST1] presented above, he disclosed that they participated in their discussions, which made the class interactive. Interactive classroom discussions are regularly linked to better student outcomes, including increased attention, interest in the subject matter, and satisfaction. Participating mentees are more committed to their studies and more eager to participate in class. Through this, class participation is enhanced. Also, the mentor called random names of her mentees as a technique to make sure that they understood the discussion or instruction given. Calling mentees by name shows respect, makes them feel valued as individuals, and encourages shy students to participate in class discussions. In [ST2] presented above posited that they ask questions during a discussion to get clarification on any concepts they had trouble understanding. Mentees need to be able to speak up in a group in a classroom discussion. They could need to provide details, pose inquiries, or make a case for an alternative course of action. Speaking up in a group is one of those abilities best acquired via practice; it is not something people learn by reading about how to do it. It is also one of those abilities that benefit from feedback. Students will require feedback if participation is used to teach them this public speaking ability.

Indeed, mentees can extend their learning outside of the classroom through engaging discussion with their peers and the instructor, whether entirely face-to-face, blended, or online. Interactive classroom discussions involve active administration by the instructor, preparatory time, and summaries of the topics addressed, much like face-to-face talks do. Even shy and hesitant mentees can find the time to participate in the online discussion, which is an advantage, Deakin (2016). In higher education, having an interactive classroom discussion is crucial. Besides removing the obstacles to communication between students and professors, it also gives students and their classmates a forum for productive dialogue. With the ability to post messages to discussion threads, interact with other mentees and the mentor, and receive feedback, interactive classroom discussions have proven to be effective for involving students outside of the classroom and fostering a deeper understanding of the material being studied (Onyema et al. (2019). This factor is supported by Novicki (2018), who propounded that interactive classroom discussions in the entire class might motivate mentees to share their knowledge and explain the material in their own words. Although discussions are typically not good for covering much material, they can be educational and inspire students to finish their research and get ready to participate in the class.

Interactive Classroom Engagement. Interactive classroom engagement in education relates to how attentive, curious, interested, upbeat, and passionate students are when learning or being taught, as well as how motivated they are to learn and advance in their education, Hughes (2021). In general, the idea of "classroom engagement" is based on the idea that learning tends to benefit when students are curious, interested, or inspired. Below are responses typifying this theme:

...akong mga ka grupo ga collaborate jud mi uy, labi na about sa mga instruction sa among adviser and ang mga kulang sa among paper.

...we really collaborate in our group especially about our mentor's instruction and the things needed in our paper.
[ST2]

...ang ganahan nako sa virtual mentorship kay ga participate jud ang tanan sa discussion, wala koy ma feelna barrier sa klase. Open-discussion jud sya.

...what I like about virtual mentorship is that everyone participates in the discussion. I don't feel any barrier, open-discussion indeed. [ST1]

In (ST2) displayed above, it can be inferred that the participant collaborated with his group members to do the things needed on their paper. Group collaboration considers the mentees' perspectives, ideas, talents, and experiences. When people cooperate openly, procedures and objectives converge more closely, increasing the likelihood that the group will accomplish its objective. When everyone cooperates and shares their ideas, it will be easier for the mentees to understand their mentors' instructions. The statement of ST1 where he shared that they are engaged in group open-discussion, which can be a great way to increase student motivation, develop intellectual flexibility, and promote democratic behaviors. They give mentees the chance to hone various abilities, such as the capacity to state and defend opinions, consider opposing viewpoints, and gather and assess the evidence.

It is consistent with the proposition of Isaac et al. (2018) in his study; he postulated that measures of interactive classroom engagement seek to identify a component of the learning environment that may impact the formation of democratic values and how much support they receive from their mentors. It is aligned with the findings of Reeve et al. (2019) that interactive classroom engagement is a variety of behavioral, emotional, cognitive, and agentic activity that aims to support students' academic growth and gratify their objectives. In his study, Hake (2022) unveiled that Interactive Engagement (IE) in the classroom is accomplished by challenging mentees to think or act in a way that needs to be thought. Frequent and thoughtful interaction is critical; engaging students in the classroom improves their concentration and focus and encourages them to use more sophisticated critical thinking (Kampen, 2020).

Negative Lived Experiences of Students

Lack of Psychosocial Support. It refers to the teachers' lack of psychosocial support for students who have faced difficulties in online learning (Dhital et al., 2019). In the study, this is a global theme elicited by the respondents, which has two sub-theme; Poor Affective Stimulation and Lack of Reward-based Motivation. Poor Affective Stimulation focuses on teachers who are unable to encourage students during trying moments and on students who do not receive words of encouragement from pursuing their papers. While Lack of Reward-based Motivation focuses on teachers unable to provide justifiable grades and high ratings as a final grade, this can be observed below from the responses of the respondents to the subthemes:

Poor Affective Stimulation. The inability to function as an internal or external experience evokes an affective response. Teachers have a role in stimulating students' learning outcomes, so if those are not met, it indicates poor affective stimulation (Sakiz et

al. 2017). In a study, it is one of the sub-theme of the lack of psychosocial support. That pertains to the context that teachers cannot provide psychological support since they cannot give any encouragement or responses that meet the students' expectations. It can be seen by the responses below:

...most of the time kay kanang wala kaayo mi madawat nga words encourage sa mga panahon nga nagalisod mi sa among paper which is very import especially para makafeel pud ka nga kaya ragyud nimo.

...most of the time, ahm, we are unable to receive words of encouragement during our trying situations, which i think is very important most especially because it will make you feel that you will be able to go through the situation you are in. [ST3]

...tung mga times gud nga unsa...kana gung naglisod nami tapos ang uban samoa nag duha duha na nga magpadayon, wala gyud mi nadunggog nga words of encouragement biskan man lang ingnan mi nga “sge ra gang kaya ra kaayo na”.

...when we were suffering and undecided about whether to continue working on our paper, no words of support were offered. [ST4]

According to the respondent in [ST3], their teacher did not encourage them to pursue their papers, which suggests a lack of psychosocial support. The teachers' affective responses to the demands of students who require guidance are deficient. In respondent [ST4] response, a similar assertion was found. Despite their discomfort and uncertainty over their tasks, they received no words of encouragement.

The study's conclusions counter Tiersma's (2021) assertion that students who generally perform well but appear to be having particular trouble with their schoolwork may struggle with familial or relationship issues. For students to obtain more insight into optimizing their duties, teachers could gently inquire about how the students' lives are going and offer words of support. Another method to ascertain just what kind of encouragement a struggling student would benefit from hearing is by talking with their teacher, and by doing so, they can be directed. However, the study showed that teachers' affective responses to their expectations of students who require guidance are inadequate. Even after the students had told the teachers that they needed assistance and were presently in discomfort and confusion, no words of encouragement were given to them.

Lack of Reward-based Motivation. It pertains to a lack of reciprocity in students' efforts to do their tasks. Individuals are primarily driven to take actions that result in a reward or appreciation since people are mainly driven to undertake choices that will improve their current prospects. However, having no reward or reciprocity will not justify their actions, affecting people's emotional stability and making them lose motivation to do anything. In the study, a lack of reward-based motivational interaction between students and teachers indicates a poor or lack of psychosocial support. Lack of Reward-based

Motivation is one of the sub-theme under the global theme of Lack of Psychosocial Support. It can be seen by the responses below:

...ang maka sad lang gud nu, kay bisag parta ba namo nga pag paningkamot gamay gihapon kaayo mi ug grado gud nga nadawat.

...even after spending so much time and effort on our research paper, we are still unable to receive a score that is acceptable. [ST1]

...luya pud gyud kaayo samot na tung pag pasa namo nga gamay ra kaayo mig grado nga nadawat.

...after submitting our paper, we were disappointed that we did not receive a higher grade. [ST3]

In [ST1], the respondents justified why they felt their time and effort in writing the thesis paper were not adequately rewarded. Even though they gave it their all, the teachers unjustly gave them low grades, which shows that they lacked reward-based motivation. Because respondents believe that teachers have not been compensated for their time and effort with prizes but rather with unsatisfactory grades, they believe that teachers are deficient in giving psychosocial support. It agrees with what was also said by the [ST3] respondent. In contrast to their expectation of receiving good scores given their efforts and time spent writing the paper, the respondent claims that the teacher awarded them a lower score than anticipated. The lack of a higher score for trying and giving their all left many unhappy. The lack of connection between teachers and students in the classroom suggests a lack of reward-based motivation.

These conclusions are reinforced by the study by Black and Allen (2018), which found that the more people chase the reward, the more unintentionally positive learning habits are formed. Rewards encourage this desire to pursue it, which prompts effort and outcomes. Like Hakimin (2018) and Damayanti et al. (2021) said, students may unwittingly develop a healthy learning habit as they continue to pursue rewards. Rewarding quenches curiosity, which in turn motivates output and performance. It illustrates how students are motivated to learn through reward systems and how they become demotivated if their expectations are not met. Based on their evaluations of the sub-themes of low affective stimulation and lack of reward-based motivation, the respondents were asked to identify the overall theme of a lack of psychosocial support. The respondents' poor affective stimulation validated their teachers' lack of psychosocial support in helping them complete the assignment. The teachers' poor affective stimulation and lack of reward-based motivation reflect their inability to support students during difficult times and their failure to develop the necessary skills for offering fair evaluations of the grade. It resulted in disappointment and sadness that affected the students' mental health. Under an undergraduate research paper's virtual guidance, the implications of the study were assessed to validate students' real-world experiences. The concern as mentioned above is consistent with Speer et al. (2021), which discovered that virtual research mentoring presented challenges and difficulties for students. Additionally, Kumar and Johnson (2017) suggest that mentors give their mentees constructive criticism by giving suitable and effective

examples to help them improve their performance as soon as they receive unsatisfactory input.

Mentor's Unavailability. It pertains to teachers' lack of ability to deliver adequate inquiry-based learning to a student who needs it. It describes the teacher's unavailability to mentor the students, allowing them to understand as they learn from the mentorship with a teacher (Attard et al., 2021). In a study, this is a global theme elicited from the respondents and formulated into two sub-themes that can validate the mentors' unavailability: Absence of Mentor and Late Responses. The responses in the sub-themes below can reflect it.

Absence of Mentor. It pertains to the failure of students to communicate with their mentor due to time constraints or the mentor's unavailability. It can cause students to feel off track and reduce the opportunity for students to ask pertinent questions about their research work (Limeri et al., 2019). The study is one of the sub-theme under the global theme of mentors' unavailability, which focuses on mentors' or teachers' inability to provide enough time for guidance due to scheduling conflicts and absences. It can be seen by the responses below:

...naa pud mga panahon ba nga pag naa miy mga pangutana
or gusto e clarify kay medyo libog gud sya, maglisod mi kay
everytime mag seek mi ug help wala among mentor.

*...when we have questions or trouble comprehending what
has to be done, our mentor is not around to provide
commentary or clarification. [ST3]*

...ou wala gyud sya para mag provide sa amoa ug extra input
arun mas masabtan pa namo unsaon pag buhat sa certain part
sa among study.

*... yes, our mentor was not present to offer clarifications or
extra input for us to fully understand those confusing parts in
our study [ST4]*

In [ST3], the respondent revealed that they need their mentor for guidance when they have questions or trouble comprehending what has to be done. However, teachers are most often not around to provide commentary or clarification. Students complained that mentors do not give enough time for guidance due to scheduling conflicts and absences. This is consistent with the statement of [ST4], where the respondent stated that the mentor is not available to offer clarifications or extra input. The implication of the findings showed that the time constraints would have an impact on the overall effectiveness of virtual research mentorship.

As stated by Nicholson et al. (2017), if a single mentor cannot complete all of the necessary roles for a mentee all of the time, it can have a proximal influence on their research progress, which plays a decisive part in the growth of a student's performance. However, the findings of the study show that, as a result of time constraints, students' ability to do research is hampered by a lack of real-time interaction with their particular mentors or instructors. Giving feedback is critical to the productivity level of the students' output, but because some mentors are difficult to reach for them to provide meaningful feedback, it makes students feel uneasy about asking related questions.

Late Responses. A late answer is defined as failing to respond to a message for more than a few hours. Limited time for response among mentors in research mentoring of students causes concerns and obstacles because students are only allowed to work with their particular mentors for 5 hours per week on average (Aucejo et al. 2020). In the study, it refers to the inability of mentors to give prompt responses to students when needed, which hampers the students' limited time to do their research papers. This is one of the sub-theme under the global theme of Mentor's Unavailability and focuses on describing students' difficulty with being neglected in their inquiries. This can be seen by the responses below:

...ou oy, dugay dugay pud gyud bag-o mi makadawat ug response gikan sa ila. Kanang mag send mi karun nu, mag take pana ug pila ka oras ug usahay gani adlaw bag-o mi makadawat ug reply.

...it would take some time for our mentor to reply when we sent inquiries or requests for clarification. [ST2, ST3]

...pag gud naga pangayo mi ug tabang pag malisodan mi sa among paper or ma confused mi unsa ang tama buhaton, kay ang mga pangutana nga among gisend sa among mentor kay dugay kaayo matubag

...whenever we seek help when we are struggling with our paper or get confused with what to do, our inquiries sent to our mentor are not promptly answered. [ST4]

In [ST2, ST3], the respondents stated that it usually takes some time for the teachers to reply to their inquiries or requests for clarification, which essentially affects their working days on the paper. Findings were also shown in the response of [ST4], which states their inquiries as students were not promptly answered during the necessary time. As a result, it can be observed that it is a great trouble for the students since the scheduled time for virtual mentorship is the only chance for them to seek guidance.

It was supported by Jeannis et al. (2017), who stated that the late response of mentors might have a detrimental influence, which affects the students' sense of productivity. In addition, due to the limits imposed by the pandemic, students frequently had difficulties using technology and gaining access to the internet, resulting in an inability to do schoolwork (Lynch, 2017). Essentially, it influences the advancement of students' research work.

The global theme of Mentor's Unavailability was elicited from the respondents based on their assessment of Mentors' Absences and Late Response subtheme. As revealed by the respondents, Mentors' Absence validated the Mentor's Unavailability or their failure to communicate with students due to time constraints or the mentor's unavailability. On the other hand, the Late Response elicited by the respondents indicated the Mentor's Unavailability for prompt response to their inquiries. That was analyzed from the data gathered. The implications of the findings are consistent with prior studies that stated that Mentor's Unavailability could cause students to feel off track and reduce the opportunity for students to ask pertinent questions about their research work (Limeri et al. 2019).

Furthermore, students receiving unsatisfactory, delayed, and overly broad comments from their research mentors significantly impact their research work's progress (Hobson, 2020).

Poor Classroom Engagement. It refers to the poor teachers' engagement to motivate and mentor students that can be measured based on the amount of attention, interest, curiosity, or discussion they provide to help the students (Cents-Boonstra et al. 2020). Poor classroom management was elicited from the students' responses regarding their mentorship, which focuses on describing the two sub-themes: No Interactive Topic Discussion and Lack of Interactive Activities. It can be observed below from the responses of the respondents on subthemes:

No Interactive Topic Discussion. It refers to the teacher's incapacity to give one of the most satisfying moments in mentoring students and engaging them with the topic. Interactive discussion leads to a robust conversation wherein students are deeply involved in the content and contribute (Haerens et al., 2017). However, this study focused on the lack of teachers' engagement with mentoring the students in the interactive topic discussion. It is one of the sub-themes under Poor Classroom Engagement, which can be reflected by the responses below:

...kasagaran pud sa among na experience kay inig naay discussion kay mere discussion lang gyud sya, walay opportunity sa amoa ginahatag nga makapangutana or para maka clarify man lang kung asa mi galibog.

...there isn't time for questions and answers during the discussion. [ST1]

...masapot gani mi usahay kay igo rami ginahatag ug format or ug unsay buhaton pero dili kaayo sya naga ingon ug unsaon pag buhat atu na part.

...typically, we are just given the format or steps to follow, not the actual procedures. [ST3]

...maabot gani mi sa point nga sige kami kami nalang kay huna huna namo usahay nga if naa mi pangutana e search nalang namo kaysa mag huwat mig response.

...there are some things we do on our own since asking for help would be pointless if we didn't get it all the time. [ST5]

In [ST1], the respondent revealed that there is no time for questions and answers during the discussion with their teacher. It indicates the Poor Classroom Engagement of teachers as there is no interactive topic discussion. It is consistent with the statement of [ST3], which says that their teacher only provided the given format or steps to follow but did not teach the procedures for conducting the research and how to write each chapter. In [ST5], the respondent also stated that since they know asking for the help of their mentor is pointless, they do it on their own, even if they do not get it all the time.

Findings supported by the study of Cents-Boonstra et al. (2019) revealed that teachers in low-engagement lessons appeared to use demotivating teaching behavior at the start of the lesson. It indicates the teachers' Poor Classroom Engagement, as no interactive topic discussion was observed in the students' responses. Ironically, they also revealed that teachers displayed more chaotic teaching habits in classrooms where students were least engaged. Teachers are more probably challenged to do action and engage with students when they are less motivated than students who are motivated and do not need further guidance than those who are not motivated. However, that does not excuse the behavior of teachers in conducting a non-interactive lesson or topic discussion. In addition, Balaji and Chakrabarti (2010) proposed that engagement in online forums is necessary to promote a sense of involvement and interconnection that will help students and teachers collaborate on subject-matter inquiry and establish successful relationships.

Lacking Interactive Activities. It pertains to the lack of interactive action and communication between teachers and students in activities (Sun et al., 2022). The study, Lack of Interactive Activities, focuses on the interaction of teachers in guiding the students in doing research papers. It is one of the sub-theme under "Poor Classroom Engagement of Teachers," which focuses on describing the lack of interaction between teachers and students in online classes or mentorship. It can be reflected by the responses below:

...ug kabalo mo, kasagaran sa mga activities kay ginabuhat namo sya individually which is ang maka disappoint nga part

...and you know what most of the activities are done individually, which make it more disappointing [ST3]

...usually kay kami kami ragyud gapaningkamot mahuman ang ginahatag sa among teacher sa amoa nga mga buluhaton, wala mi'y madawat man lang nga tabanag or assistance from them

...usually it is the usual tasks that are carried out alone. no help and assistance were being provided [ST5]

In [ST3], the respondent stated that most of their activities are done individually, which implies the lack of interaction of teachers in guiding the students. Undoubtedly, these problems prove the students' challenges in virtual research mentoring. In [ST5], the respondents also stated the same things, wherein they do their usual tasks alone with minimal teacher support. Alternatively, rather, it can be inferred that since teachers are unresponsive, students promptly teach themselves as they have no choice but to complete the paper. The implications of the data validated the Poor Classroom Engagement of teachers in providing interactive activities.

The assessment of the virtual environment by Morales et al. (2018) corroborated the study's findings. The undergraduate students battled with the mentor's limited time, which might put their research progress at risk owing to poor mentorship. They expressed uncertainty about their research duties due to insufficient professional or psychosocial support in virtual mentoring. It is strongly advised that mentors give their students constructive criticism by providing plenty of relevant examples to help them improve their work and to engage in interactive activities and topic discussion. Due to the restricted

technological tools available, virtual research experiences are challenging for undergraduate students and a roadblock to pursuing a career in research. According to Corson et al. (2021), students' virtual study experiences were less interesting and interactive than their teachers. Because of this, mentees may miss out on scheduled meetings, mentorship, and feedback (Fawaz et al., 2021), which could decrease the effectiveness of their output (Speer et al., 2021). Poor classroom management calls for intervention so students can be helped with their research paper writing.

Positive and Negative Lived Experiences of Teachers in Virtual Mentorship in Undergraduate Research

Positive lived experiences of the teachers in virtual mentorship involved the following: Mentors' Readiness in Preparation for Online Mentorship, Adaptation of Communication and Learning Platforms, and Students' Strong Sense of Urgency. While the negative lived experiences of teachers involved the following: Absenteeism, Students' Lack of Participation, and Low Sense of Urgency Among Mentees. To comprehensively discuss the positive and negative lived experiences of the teachers, below are the following:

Table 2.

Lived Experience of Teachers in Virtual Mentorship in Undergraduate Research

Basic Themes	Organizing Themes	Global Themes
POSITIVE LIVED EXPERIENCES OF TEACHERS		
Making a timeline for all virtual activities [T3] Scheduled outline for the research plans and task [T4]	Activity Guide Preparation	Mentors' Readiness in Preparation for Online Mentorship
Attending a mentoring training program [T2, T3] Participate in a research mentorship webinar [T1, T4]	Availability of Mentoring Workshops	
The use of group chats and other platforms for Convenient communication [T1, T2] Connect to mentees through various platforms for faster communication [T3, T4]	Distance Mentorship Communication Platform	Adaptation of Communication and Learning Platforms
Using of Google Meet and Learning Management System for discussions and assessments [T1, T4] Utilization of online platforms for consultations [T2, T3, & T5]	The Use of Online Learning Platforms	

Mentees never missed deadline [T1] Mentees are proactive in turning their papers on schedule [T2]	Ability to Meet Research Deadlines	Students' Strong Sense of Urgency
Mentees make good strides toward completing their paper [T1] Mentees initiates to begin the advancement of their own paper [T2]	Ensure Research Progress	
NEGATIVE LIVED EXPERIENCES OF TEACHERS		
Mentees are unavailable in consultations due to some fieldwork [T3] Mentees are unavailable during consultation requests [T4]	Absence of Mentees from Consultations	Absenteeism
Mentees are unavailable in meetings due to some obligations [T1] Some mentees are unable to attend meetings because of commitments at home [T3]	Absence of Mentees from Scheduled Meetings	
Unwillingness to reach out mentor for further research queries [T1] Shy or lack of confidence to engage in mentoring [T4]	Poor Engagement in Virtual Mentoring	Students' Lack of Participation
Unparticipative in virtual meetings [T2] Unattentive in scheduled research consultations [T3, T4]	Inadequate Interaction in Virtual Mentoring	
Failed to finish the research paper within the allotted time [T3 & T4] Mentees missed deadlines and unable to adapt situational demands [T4]	Inability to Meet Research Deadlines	Low Sense of Urgency Among Mentees
Mentees do not make good progress towards finishing their paper [T5] No initiative in making their own paper's progress [T3 & T4]	Failure to Ensure Research Progress	

Positive Lived Experiences of Teachers

Mentors' Readiness in Preparation for Online Mentorship. It refers to the action or process mentors go through to prepare. Preparation is an essential element of

good mentoring. It focuses on preparing valuable materials and activities for the mentor's use (Meador, 2019).

Activity Guide Preparation. It pertains to the preparation of the mentor before performing the activity. It includes formulating target outcomes, gathering necessary materials, establishing sets of instructions, and determining how students will interact with the activity. Moreso, mentors, need to prepare a framework for all of the activities as their guide. The framework can help mentors to have an overview of the task (Answer, 2019). It can be observed from the responses below:

...we are required to prepare man gud a timeline para sa mga activities para han-ay and smooth ang flow ng pag mementor knowing na nasa virtual setting tayo ngayon.

...we are required to prepare a timeline for the activities to have a smooth flow of mentoring knowing that we are in a virtual setting. [T3]

...merong tayong tinatawag na scheduled outline para sa mga task and other activities na ipagawa natin sa mga mentees.

...we have what we called a scheduled outline intended for the tasks and other activities that you plan to conduct for your mentees. [T4]

T3 stated they must make a timeline for their activities to have a smooth mentoring flow. One function of creating a timeline is to have an overview of the activities prepared by the mentors for the entire session. It would correspond to T4's statement that he also has a scheduled outline for the task and activities. Hence, using a timeline for activities will contribute a positive outcome to mentors for having an overview of what to do during class sessions.

The claim above is supported by Kyriacou (2018). The benefit of preparing or planning enables the teachers to try new teaching approaches. In addition, creating a timeline for all the tasks can relieve daily stress because you already have a guide for all of your activities. Hence, creating a timeline would be a great help for the mentors. Moreover, Merrit (2016) stated that teachers would be more likely to accomplish many important things, including activities for the entire class session, with the help of having a timeline for tasks or target activities. Also, Sudhakar (2017) stated that planning and preparation are essential teaching processes. Teachers who create an outline for lessons and activities will have a greater chance of good classroom management and will more likely develop effective teaching strategies. Thus, the importance of creating a timeline for activities and other tasks can bring positive results to teachers and can make them fully prepared when conducting the lessons and activities.

Availability of Mentoring Workshops. It refers to the workshops offered by the department participated by the mentors to enhance their mentoring skills. In addition, mentoring workshops are held to develop effective mentoring strategies to achieve a healthy mentor-mentee relationship. Also, its goals are to establish a framework for

developing particular mentoring abilities and to ignite a passion for a department-wide mentoring community (Welch. et al., 2014). It can be observed from the responses below:

...mag attend ug training program para sa mentorship offered by the research coordinators.

...attend a mentoring training program offered by the research coordinators. [T2]

...usually ga attend ko ug training about mentorship.

...I usually attend training about mentorship. [T4]

...naga participate ko sa mga gina conduct sa mga coordinators na mentorship webinars.

...I used to participate in mentorship webinars conducted by the coordinators. [T1]

...kanang if naay webinars about mentorship, kay ga join and participate jud ko.

...if there are webinars offered about mentorship, I used to join and participate. [T4]

In the full script, T2 and T4 revealed that they always attend a mentoring training program offered by the research coordinators in their department. Training like this can enhance mentoring skills and, at the same, can develop effective mentoring strategies. Also, it can instill an enthusiasm for the collective mentoring community. It is linked to the statement of T1 and T4, who expressed that they were also participating in mentorship webinars conducted by the research coordinators of their department. It shows that mentors like them want to enhance their mentoring skills and learn more about mentorship. A mentor is more likely to learn important lessons such as developing good mentor-mentee relationships, effective strategies in mentoring, and many more that he can use with his mentees when he actively participates in workshops or webinars about mentorship department offers.

It is supported by Gandhi (2014); workshops about mentoring were focused on training the mentors about the techniques to foster mentees' diversity. Also, it was focused on techniques designed to improve the effectiveness of mentor-mentee relationships. Moreover, standardized mentoring support programs can give triple productivity for the mentors. Trained mentors can be more effective in terms of interaction and giving support to their mentees. Also, it cultivates effective mentoring skills (Raj et al., 2018). Furthermore, mentoring involves a personal-professional relationship to an educational process. It supports the learning, experimentation, and experience of mentees. Training or workshops are being offered to increase the effectiveness of mentoring skills (Mullen & Klimaitis, 2019). Hence, workshops and training can contribute a lot to the mentors. It is

highly needed and important as it helps the mentors to learn and enhance their skills and capabilities.

Adaptation of Communication and Learning Platforms. It refers to the helpful tools adapted and utilized by the teachers to conduct classes using online platforms. To support their online tools, including Google Meet and Zoom, where they usually conduct discussions and consultations. Also, the use of group chat as a medium for communication is highly appreciated since mentors can easily provide instant announcements (Berry, 2019).

Distance Mentorship Communication Platform. It pertains to the online platforms teachers use to communicate with their students. The use of online groups, for example, Facebook group chat, is prominent in the new mode of education. Teachers can provide immediate updates or announcements to their students and improve students' communication and engagement (Cunha et al., 2016). It can be observed from the responses below:

...naga gagamit mi ug group chat for communication, instructions, clarifications, ug updates.

...we used groupchat for communication, giving instructions, clarifications, and updates. [T1]

...aside from meetings via gmeet, naa sad mi group chat para dali ra ma reachout ang mentees for updates.

...aside from meetings conducted through gmeet, we also gave group chat for easily reaching out to the mentees about the updates. [T2]

...naga gamit ug lain-lain na mga platforms for communication, like gmeet, email, group chat and many more para dali ra mag connect sa mga mentees.

...using various platforms for communication, like, Google meet, email, group chat and many more para dali ra mag connect sa mge mentees. [T3]

...with my mentees, naa mi dalawa na ginagamit na platforms for faster communication, we have Google meet for meetings and group chat for urgent updates.

...with my mentees, we are using two platforms for faster communication, we have Google meet for meetings and group chat for urgent updates. [T4]

The statement of T1 highlighted that he used group chat for communication, to provide instructions, clarifications, and updates. It would correspond to the statement of T2, where he highlighted that aside from using other online platforms, he uses group chat to disseminate updates easily. Indeed, the use of group chat in virtual teaching is highly

used due to its convenient contribution on the part of the teachers. Also, in the full script of T3, he shared that he uses various platforms such as Google meet, email, and group chats to easily reach out to the students. It is linked to the statement of T4, where he shared that they are also using two platforms for faster communication: Google meets for virtual meetings and group chat for urgent updates.

It is supported by Mtshali et al. (2015); online chats as online support for teaching and learning is a technological innovation in education. It helps teachers and students to extend their opportunities to interact with one another. Moreover, it helps teachers enhance the student experience by allowing them to engage and enforce connections. Also, Iffasso (2018) highlighted that the purpose of online platforms for communication, for example, group chat, is to share important information. Also, it encourages everyone to participate; being responsive will give a clear idea that someone has received and understands the shared information. Lastly, Donnellan et al. (2022) highlighted the importance of using online platforms for communication (Facebook chat, Whatsapp, Google Hangouts) as a supplement for teaching. These platforms allow teachers to share necessary and urgent information with the class easily. In addition, students can easily access shared information anytime. Thus, the use of online platforms for communication in virtual teaching is very prominent. It makes it very easy for the teachers to communicate important information to their students.

The Use of Online Learning Platforms. It refers to the webspace for educational content and resources for students, which offers lectures, materials, and opportunities to meet and chat with other students. It is also useful for teachers to keep track of their student's development. It is convenient because students can access it anytime and anywhere. (Josep, 2022). It can be observed from the responses below:

...kuan ginagamit nako ang Google meet ug Learning Management System (LMS) para sa mga important discussions and usahay for assessments, like, assignments or katong mga important papers na need na nako icheck.

...I used Google meet and Learning Management System (LMS) for important discussions and sometimes for assessments, like assignments or those important papers that I have to check. [T1]

...ang ginagamit nako for discussions kay ang google meet, while for assessments. kay usually ang Learning Management System (LMS), mag post lang kog quiz, assignments etc.

...I used Google meet for discussions, while for assessments, usually I used the Learning Management System (LMS). I will just post a quiz, assignments etc. [T4]

...ginagamit jud namo ang klase-klase na platforms for consultations, usahay if need mag meet kay mag gamit mi ug Google meet or Zoom or forum sa Learning Management System (LMS).

...we really use various platforms for consultations, at times if we need to conduct a virtual meeting, we use Google meet or Zoom or conduct a forum in Learning Management System (LMS). [T2]

...gamit kaayo ug dako kaayong tabang ang pag use sa mga online learning platforms, kana ang amoang ginagamit if kailangan mag conduct ug meeting for consultations. Sa Learning Management System (LMS) dihaa sad nila ma access ang mga course materials na magamit nila.

...online platforms are very useful and helpful to us, we use those as our means if we need to conduct a virtual meeting for consultations. They can also access the course materials in the Learning Management System(LMS). [T3]

...kanang mga online learning platforms, like, Google meet and Zoom, even atoang Learning Management System (LMS) kay dako kaayog help sa akoo and to my mentees kay mao mana among gina utilize para sa consultations labaw na karon na virtual setting ta.

...those online learning platforms, like Google meet and Zoom, even our Learning Management System (LMS) are really helpful for me and for my mentees because we use it for our consultations since we are in a virtual setting. [T5]

In the full script, T1 and T2 revealed that they used online learning platforms such as Google meet and Learning Management System (LMS). They used it for their online discussions as well as as a way of assessing their students' progress. It is linked to the statement of T2 and T3, and they shared that they use online learning platforms for consultation and to allow students to access the course materials they can use. Also, the statement of T5 describes how helpful it is on his part and for his students since they are conducting classes virtually.

The above statement was supported by Anglia (2021), stating that online learning platforms, besides offering educational content, are also convenient for both teachers and students. It is an excellent learning experience for students as technology advances and the mode of education changes. Additionally, it emphasizes the value of online education for students because it can lead to new opportunities and assist them in building skills that will be useful in their future careers. Moreover, Gautam, 2020 highlighted the contribution of online learning platforms in accessibility. Teachers can record the online lectures reference for students' reference. It also offers efficient ways, including helpful tools such as document files, videos, presentations, and many more, to help the teachers deliver the lessons. Also, online learning platforms can help teachers to improve students' academic achievements. The use of online learning platforms contributed satisfaction on the part of teachers, for they can conduct various assessments that would help them monitor their

students' progress. It also strengthens the student-teacher relationship due to purposeful interaction (Abuhassna et al., 2020). Hence, online learning platforms bring great contributions on the part of the teachers as well as to the students. It is indeed helpful for teachers to use online learning platforms as they supplement teaching.

Students' Strong Sense of Urgency. It pertains to doing what needs to be done immediately, without being asked. Also, to begin working on things without waiting for someone to say so. It is more likely to value time, become proactive, avoid delays, value the target goals, and mind the possible consequences if the goal is not achieved (Pandey, 2018).

Ability to Meet Research Deadlines. It refers to completing a task on time and completing it the correct way. By establishing goals and by valuing time, it is possible to avoid late submissions. It can develop time management, increase productivity, and boost the sense of accomplishment (Todorov, 2017). It can be observed from the responses below:

...gina pasa man sad nila ilahang mga papers on time or ahead of time, so macheck nako early tapos if naay revisions kay ma apply dayon nila and pacheck nasad.

...they will submit their paper on time or ahead of time, so I'll be able to check it early and if there are revisions, they will apply it immediately and submit again for checking. [T1]

...so far wala koy problem in terms of deadlines kay ang akoang mga mentees kay naga submit jud on time or prior the submission date.

...so far I have no problem in terms of deadlines because my mentees are able to submit on time or even prior to the submission date. [T2]

The statement of T1 shared that his students usually submit their papers on time or ahead of time, and because of that, he has the chance to check the papers early. If things need to be changed, they still have time to revise it and resubmit it. It is linked to the statement of T2, where he also shared that he does not have problems in terms of deadlines because his students manage to submit their papers prior to the submission date. Hence, these statements showcase that their students value time and are goal-oriented individuals.

Koch et al. (2017) stated that deadlines are frequently utilized as commitment strategies to prevent late submissions. With this, students are more likely to meet obligations and accomplish goals. Setting deadlines will help the teacher keep the students' performance on the track. Moreover, aside from it can increase a sense of productivity and develop time management, it also provides a sense of satisfaction. Students will be more responsible if there is a deadline. Hence, the bigger the chance to avoid procrastination. It is one of the best practices that will lead the students to do their tasks and submit them on time (Sharma, 2021). Also, it helps in learning how to manage time properly. It is like a training mechanism that trains the brain to create timelines and workflow. It will motivate an individual to perform the task and secure to submit it on time (Rollings, 2019). Thus,

setting deadlines will encourage students to practice meeting the submission date. With this, teachers will be at ease when it comes to checking the output of the students.

Ensure Research Progress. It pertains to effective ways of tracking progress while performing a certain task or project. It involves the person's ability and willingness to complete the research task. With this, teachers will not have a hard time monitoring the progress of their papers (Lantsoght, 2014). It can be observed from the responses below:

...I have observed that my mentees are willing to finish their research paper. I can say that they are striving hard, and really putting their efforts para matapos nila.

...I have observed that my mentees are willing to finish their research paper. I can say that they are striving hard, they really put their effort just to finish their paper. [T1]

...well, what I am proud about my mentees is that they will execute initiative, for example, if I will not be able to reply immediately, instead of waiting for my response kay they will ask other groups or ecompare nila ang paper nila sa akoang gihatag na sample documents as guide.

...well, what I am proud about my mentees is that they will execute initiative, for example, if I will not be able to reply immediately, instead of waiting for my response they will ask other groups or compare their paper to my given sample documents as their guide. [T2]

In the full script, T1 shared that he can see that his mentees are striving hard and willing to finish their research paper by exerting efforts. From that statement, we can infer that the students are persistent. It is linked to the statement of T2, where he shared that his mentees possess initiative skills and are willing to explore and collaborate with others. To conclude, students were willing to perform and complete their papers on time. Also, it can positively affect the teachers as they encounter mentees who possess this type of behavior and skills.

Making sure to work on a certain task and see it through to the end is a sign of ensuring the progress of their paper. Regardless of receiving corrections and comments, as long as the student is persistent in achieving what he wants is considered to ensure progress. It develops character and allows students to think of possible solutions to deal with this kind of situation (Gerstein, 2018). Also, boosting student motivation will make them more eager to complete the tasks. They will also become motivated to consult others and share ideas on how to do the task. It will increase students' engagement and allow them to explore independently (Yarborough & Fedesco, 2020). Additionally, effective mentoring will increase students' persistence. It implies that students will be willing to perform and complete the task more smoothly if the teacher is effective. Also, if the students are willing to complete the task with or without the supervision of their teachers, teachers will not have trouble monitoring the students' progress (Stewart et al., 2015).

Negative Lived Experiences of Teachers

Absenteeism. This refers to the habitual tendency of skipping out on a task or commitment without a valid excuse. Also, it refers to a student being absent from class for a period of time. This is considered a continuous problem in many schools across the world (Birioukov, 2017).

Absence of Mentees from Scheduled Meetings. It pertains to students who are not present during scheduled meetings. While no specific time length is recommended, synchronous meetings are usually done two to three days a week, but it varies from school to school. Not being present during the scheduled meetings will cause the students difficulty grasping concepts taught during sessions (Gegenfurtner et al., 2019; Northenor, 2020). It can be observed from the responses below:

...there were times that some of my mentees kay dili ka attend sa consultation time kay ang uban working students or dili vacant ana na time. Ako nalang sila gina inform through chat about the parts that need improvement.

...there were times that some of my mentees kay dili ka attend a consultation time because some are working students or they are not vacant during that time. I will just message them about the parts that need improvement. [T3]

...in times that we really have to conduct a virtual consultation due to the request of my mentees, still some were unable to attend kay dili sila available. With that, I will just put some comments in their paper since they are unable to attend.

...in times that we really have to conduct virtual consultations due to the request of my mentees, still some were unable to attend. With that, I will just put some comments in their paper since they are unable to attend. [T4]

The statement of T3 describes that, at times, he encounters situations where his mentees cannot attend his consultation time due to personal reasons like working students or simply because they are not vacant during that time. It was also linked to the statement of T4, where he also shares his experience that some mentees were unable to attend when they really had to conduct virtual consultations. To conclude, mentors experienced challenges regarding absences, particularly during a consultation, where they mostly discussed the things that needed to be changed. Mentees' participation is highly needed by the mentors, particularly during consultation.

Research consultations are important meetings with mentees and mentors. It is where mentors provide specific research assistance. It is also the best time for mentees to raise specific questions, clarifications, and other important information they want to know (Kani, 2021). However, there are times when students are unable to attend meetings. It will negatively affect teachers since they will miss the opportunity to discuss important and helpful points with those students and have to create a new meeting schedule or find other ways to inform them about their feedback or comments. (Weißberger & Forbush, 2018). With that, absences can have negative effects on students as well. It is like losing the opportunity to gain an important discussion point in class. It can also factor in low marks,

which will cause further teacher concerns (Wierman, 2021). Thus, being absent during consultation can negatively affect teachers and students. Also, teachers will have to extend their efforts to address this situation.

Absence of Mentees from Scheduled Meetings. It pertains to students who are not present during scheduled meetings. While no specific time length is recommended, synchronous meetings are usually done two to three days a week, but it varies from school to school. Not being present during the scheduled meetings will cause the students difficulty grasping concepts taught during sessions (Gegenfurtner et al., 2019; Northenor, 2020). It can be observed from the responses below:

...kanang sa isa ka semana, usually naga meet me ug kaduha or katulo lang. Pero naa gyapon dili maka attend samoang scheduled meeting tungod kay ang uban students kailangan maglihok sa balay or sa trabaho nila maong naga secure jud ko ug recordings kay aron mawatch sa uban na wala ka attend kay ang uban maglisod ug sabot sa mga concepts.

...usually we meet twice or thrice a week only. However, there are students who cannot attend the scheduled meetings due to some household chores or due to their work, that's why I used to secure recordings in order for those students who are unable to attend to still watch the recorded meeting because others will have trouble understanding the concepts. [T1]

...kaning uban students kay dili jud sila maka attend samoang scheduled meetings kay ang uban naay need buhaton sa balay or mga sugo, so akong ginahimo kay ga record jud ko ug meetings kay aron naay mareview tong mga wala ka attend aron masabtan nila ang topic at the same time accessible sa tanan na gusto mag watch usab as reviewer sa discussions.

...there are students who are unable to attend the scheduled meeting because they have to do their task at home, so I always secure to record the meeting so that they can review and understand the topic that we discuss at the same time. It can be accessible for all if they want to watch it as a reviewer. [T3]

In the statement of T1, he shared his experience that during the scheduled meetings, there are still students who are not able to attend due to personal reasons such as work or even daily tasks in their home. Moreover, he always secured recorded meetings that he used as a reviewer for his absent students. This is linked to the statement of T3, where he also experienced the same situation. Some of his students are not able to attend their meetings. He also recorded the discussion for his students to review.

Attending a scheduled class plays a vital part for both teachers and students in educational advancement. However, by not being able to attend a class, you will have a

higher chance of having poor academic performance. Indeed, absences have a negative impact on the academic achievement of students, and it will urge educators to come up with substitutes that can assist students in catching up on missed discussions and activities (Walters, 2022; Ahmad et al., 2018;). Attendance has been an issue for many teachers since the pandemic happened. There are many reasons why students cannot attend a class, including poor internet connectivity, confusion about how to access online classes, being not in the mood, personal issues, health issues, and lecture issues. This may affect their academic performance (Rijavec & Miljkovic, 2015; Robbins, 2021). Lastly, Ferlazzo (2020) stated that the most effective strategy to deal with students' absences in class is to provide interventions, make students engage in learning, and provide more social support. Hence, absences from class can have a negative impact on both students and teachers. With this in mind, educators are challenged to truly think of ways to assist students in making up for missed activities.

Students' Lack of Participation. It refers to the poor engagement of students during discussions or activities. In Addition, it is defined as a lack of focus in learning and being inactive in class. Also, there are times when students refuse to be involved or participate in the learning process, which makes teachers feel uncomfortable (Djoub, 2019).

Poor Engagement in Virtual Mentoring. It pertains to poor attention, interest, investment, effort, and involvement in virtual learning. Teachers have struggled with low student involvement and finding ways to raise it is challenging. Also, a student's attitude is a factor affecting their engagement in class. Hence, it is important to understand and provide ways to make students stay involved with their mentors during meetings (Tour, 2021; Hassan & Atan, 2012). It can be observed from the responses below:

...naay uban igo lang mu-ingon ug wala nay questions pero ug naa nay malibogan or malimtan kay di na ganahan mangutana usab mag hulat pa na ako ang mag initiate ug pameet usab masayang ang time. Tapos ug ako na ang mangutana kay wala gihapon naga engage makawalag gana magpadayon ug discuss.

...other mentees will just say they don't have questions anymore during consultations, but when they are confused or forget what I have discussed, they will not ask questions via chat, they will just wait for me to conduct another meeting with that time will be wasted. Also, if I will be the one to raise questions, still no engagement and it will cause me to feel unmotivated to continue discussing. [T1]

...kuan kanang naay uban mentees na grabe ka ulawun tapos walay confidence, even mag raise ug question during consultation time kay mag duha-duha pa, makawala sa mood usahay. Kanang naga make way najud ko para naay engagement mahitabo, naga mention nakog names, naga throw nakog jokes pero wala gihapon.

...other mentees are super shy and have no confidence, they are hesitant even in raising a question during consultation time, and at times it affects my mood in class. Even though I did my best to make the students involved in my discussion by mentioning their names or even throwing jokes, still no engagement. [T4]

In the full script, T1 stated that he is experiencing poor engagement with his mentees during his online discussion. He further emphasized that even when his mentees are confused about the previous sessions, they do not ask questions; instead, they wait for him to hold another meeting. Moreover, this is linked to the statement of T4, where he also shared that his mentees are too shy or have no confidence to raise questions. Thus, poor engagement does not only affect a student's performance in class but also affects the student-teacher relationship.

It is supported by Morin (2022), highlighting that students are prone to poor engagement in online learning. They may be present during meetings but are not engaged as students. Barriers to student engagement in online learning are usually due to personal reasons, including stress and anxiety, discomfort with the new learning environment, and lack of structure and support. Additionally, Norman (2020) pointed out that student engagement has been a challenge in virtual teaching. It can be harder for teachers to maintain students' attention and engagement in a virtual setting. It is difficult for teachers to make students focus on the topic because they are distracted by many things that would catch their attention, such as internet games or films. Student engagement is a significant necessity for teaching and learning to be successful. One reason behind students' poor engagement is their poor learning habits. Even if increasing students' engagement is not only the responsibility of the teachers, it is still crucial for the online teachers to deal with. To conclude, teachers would have to extend their effort to deal with students' poor engagement in online learning. As a result, teachers will need to devise strategies to promote the involvement of students in online meetings as a result (Werang, 2022).

Inadequate Interaction in Virtual Mentoring. It refers to the short interaction of students with their co-students and teachers in an online learning environment. It is a common problem encountered by teachers and a common challenge faced by students. It highlights the difficulty of teachers and students in knowing how to manage poor interaction in class (Banks, 2020; Kusumasuci, 2016). It can be observed from the responses below:

...naay times during samoang meetings naa juy students na dili naga interact, yes, I got the idea na basin naminaw lang jud sila maong hilom pero even mangutana ko ug nakuha ba nila akong gipang discuss kay halos di maningog so mag duha-duha ko ug naminaw ba and nagets ba jud nila. Dili sad naga communicate if wala ba nila nagets ang topic.

...there were times during our meetings, there are students who are not interacting, yes, I got the idea that they might just listening that's why they are silent, but even when I ask them if they got what I am discussing, still no response so I am hesitant if they really listening and understand my discussion.

They don't communicate with me if they don't understand the topic. [T2]

...kanang naay times during sa consultations kay naay uban students na dili naga pay ug attention nor interacting with us, mailhan man nako labaw na ug wala naga respond sakoa, ang uban magsalig lang kay naay recordings mao siguro dili naga interact. Dili sad sila naga share ideas or communicate to me or sa uban mentees nako.

...there were times during our consultation, there were students who were not paying attention nor interacting with us. I can really see that they were not responding. Others are too complacent because of the recordings. Maybe this is the reason why they don't interact. Additionally, they don't share ideas or communicate with me or even my other mentees. [T3]

...dili jud na malikayan na naay wala naga pay ug attention during meetings or interacting with other mentees labaw na virtual lang ang way para maka discuss daghan kaayog pwede mahimong distractions. I don't know if they really understand my discussion during consultation time. So kato mailhan nako na wala jud sila naka focus kay wala naga raise ug questions.

...we cannot avoid that there are students who are not paying attention during meetings or make some interaction with other mentees, especially that we are conducting it virtually, there can be many factors for distractions. I don't know if they really understand my discussion during consultation time. I can tell if they are not focusing on our meetings because they are not raising questions. [T4]

In the full script of T2, he shares that he encounters students with poor interactions in class. He further describes that his students are not responding when he asks a question or communicating with him to the point that he is hesitant to continue if his students understand his discussion. It is linked to the statements of T3 and T4, where they also share the same experience. They have observed students that interacted little in class discussions, paid little attention, and were unresponsive. Moreover, T3 highlighted that students are too complacent about recorded lectures, which can be a reason for not interacting in class.

It is supported by (Willermark 2021; Sun et al., 2022), whom she highlighted that students reduced contact with their teachers by disappearing behind the screen and not showing interest in interacting with others. Teachers and school leaders had to deal with immediate approaches to raising students' interaction in virtual classes because teacher-student interaction is an important factor influencing students' learning performance. Furthermore, teachers are encouraged to conduct an evaluation process to address

interaction problems. In addition, social interactions in online classes are considered a challenge for students. It can be a factor preventing them from successfully learning in online classes. Also, teachers suffer from poor teacher-student interaction, which will cause them to feel ineffective. Indeed, it is difficult for teachers to figure out how to handle their difficulties (Azmat & Ahmad, 2022). Lastly, Ivanec (2022) pointed out that students who lack academic, social interactions are the ones who have difficulties in online learning.

Further, factors affecting the academic social interaction of students are the transition and adjustment in online learning and the impact of the pandemic on their lives. Aside from students who are suffering from the effects of poor interaction, teachers are also experiencing negative impacts from their teaching experience. They have to provide approaches that could support students' learning and boost academic social interaction. Thus, inadequate interactions in virtual teaching can affect both students and teachers since they are driven to propose possible ways to prevent factors affecting student interactions. Teachers are more likely to suffer while addressing poor student interaction in online teaching.

Low Sense of Urgency Among Mentees. This refers to enabling oneself to complete a task without considering its importance to the point where you fail to meet your objectives as a result. Also, it highlights the idea of not working on a certain task as soon as possible. It does not put any pressure on the user to complete the task immediately or on time (Demarco, 2017).

Inability to Meet Research Deadlines. It refers to having trouble meeting research task deadlines. The avoidance of performing a task that must be completed by a specific deadline is the cause of missed deadlines. As a result, delaying starting a task is much more prone to have negative consequences (Gayino, 2019; Lauren, 2011). It can be observed from the responses below:

...kung naay maka pass on time naa sad mga students na late mag pass ug papers. With that akoang sariling shedule kay maapektohan

...if there are students who can pass on time, there are also students who cannot. With that my own schedule of tasks will be affected. [T3]

...naay mga students jud na makapasa sa ilang paper beyond the deadline siguro tungod kay naka encounter ug mga dili ma control na situations. Masabtan man ngano late sila makapasa depending sa reason pero akoang schedule sad ang dehado since daghan sad kog need mahuman na task.

...there are students who pass their paper beyond the deadline, maybe because they encounter situations that cannot be controlled. I can understand why some of them submit their papers late but it depends if their reason is valid, but my schedule will be affected since I do have a lot of tasks to accomplish. [T4]

In the full script of T3, he shared that some students submit their output beyond the submission date. He further shared that his schedule would be affected due to that situation. It is linked to the statement of T4, where he shared the same experience. Some of his students submit their papers beyond the due date, impacting his schedule. Thus, from the statement above, it is evident that teachers encountered difficulty dealing with their schedules due to the students' behaviors regarding the submission date.

It is aligned with the statement of Hong et al. (2021) that students who are under online learning are prone to postpone and delay their academic work and ignore their academic responsibilities. Online learning influences an individual to embrace self-regulated learning. It relates to why students delay their academic tasks, including task strategy, mood adjustment, self-evaluation, environmental structure, time management, and help-seeking. It might lead to ineffective online learning. In addition, Melgaard et al. (2021) highlighted that in online learning, students are prone to delay their tasks and submit their output beyond the due date; this could also lead to procrastination. It may be associated with various academic issues, including lower quality of work and lower marks. The student's inability to finish their tasks before the deadlines affect the teachers, particularly their performance at work, such as balancing their schedules and managing their workload. It is important to teach students how to manage their time properly. Also, reminding students about the submission date will more likely prevent them from submitting their papers late (Garcia & Gregory, 2015; Gonzales, 2019). As a result, teachers have dealt with late submissions even before. However, it has become a significant problem in the current learning environment. Indeed, it affects not just the student's academic performance, but it has an impact on teachers' profession as well.

Failure to Ensure Research Progress. It refers to not making enough progress when completing research activities. It is also defined as the inability to monitor progress in completing a task. As a result, the development is stagnant, which indicates that the task cannot be finished (Munger, 2022). It can be observed from the responses below:

...some students, even though gihatag na nako tanan makaya nako like maghatag ug advice unsaon paghimo, giprovide na nako ang sample documents as their reference, tanan posible na ways kutob sakong matabang, still wala gyapon progress sa paper nila. Even sila dili nila mamonitor ilang kaugalingong progress.

...some students, even though I provided the best that I can, like giving advice on how to do the paper, I provided sample documents as their reference, all possible ways that I can help, still there is no progress with regards to their paper. They themselves cannot secure their own progress. [T5]

...naa sad koy mga mentees na wala juy initiative na mag start though they already have an idea on how to begin the introduction since they have learned it during their highschool years. Hulaton pajud nila na ako ang mag provide ug sample, dili sila naga explore, mag consult sa laing groups or mag research unson pag himo. Makaingon sad ko based sa akong pagcheck na wala jud progress ilang paper.

...I also have mentees who don't take initiative to start the paper though they already have an idea on how to begin the introduction since they have learned it during their highschool years. They will just wait for me to provide a sample, they don't explore things, they don't ask other groups or research on how to do it. What's worse is that I can really tell upon checking that their paper has no progress at all. [T3]

...kung naay mga students na naga make ug initiative bahalag di sure basta kay naga lihok sila total pag consultation pwede raman ipa usab ang mga need iparewise, syempre naa sad mga type of students na dili jud naga initiate, purely naga rely sa akua kay kuno ako ilang mentor, dili sila naga explore. Also, they always fail to ensure development sa paper nila because they are too dependent on me.

...if there are students who take initiative, though they are not sure about it as long as they are working, besides during consultation time, those parts that need revision will be changed. Also, they always fail to ensure development in their paper because they are too dependent on me. [T4]

The statements of T5 and T3 highlighted their experience that students cannot make sure of their papers' progress despite doing the best they can offer. Also, T5 pointed out that he even provided sample papers as a reference for his students. Moreover, T3 shares that some of his students are not exploring on their own or consulting other students. It is also linked to the statement of T4, where he describes his students as too dependent on their mentor. He further shared that some of his students fail to ensure the development of their papers. Thus, from the statement above, teachers are experiencing a hard time dealing with the students in terms of failing to ensure progress on their research tasks. Also, teachers are impacted by some students' actions, such as not venturing out on their own and overly reliant on their mentors.

Michelle (2021) stated that due to the transition of online learning, many students have to adapt to the new learning environment. With this, the students can experience serious negative effects, such as being unable to develop communication skills as well as being unable to interact with other students. Moreover, procrastination can also be a factor in not ensuring progress in a certain task. Online learning environments also give students a sense of independence in managing their time. However, if they cannot do it effectively, it will damage their academic responsibility because they will not complete their coursework. Also, less direct contact has a negative effect on a student's capacity to communicate with teachers and receive prompt assistance. It can also be why a student fails to complete a task (Kokemuller, 2021) successfully. It is not just the students who are being affected by the negative impact of online learning. Teachers are also experiencing challenges in teaching virtually. Teachers are alarmed by students' performance in online learning, particularly when dealing with coursework. With this, educators have to adjust their instructional strategies. It is to ensure student achievement. Also, it will help teachers

practice monitoring those students who are at risk. Aside from that, it will also help teachers to evaluate their teaching effectiveness and be more likely to avoid dealing with students' unwanted behaviors (Marette, 2022; Selvaraj, 2021). To conclude, the transition to online learning impacted both teachers and students. Teachers face significant difficulties regarding how students execute in carrying out and securing to complete a task. An answer to the problem can be found by assessing the teacher's effectiveness and the student's performance.

Insights Shared by Students and Teachers in Virtual Mentorship in Undergraduate Research

Based on the conducted analysis, several insights have emerged, as shown in Table 3 and Table 4. The insights shared by the students for fellow students, teachers, and administrators involved the following: Ensuring Information Accuracy, Ensuring Information Credibility, Writing Proficiency. While the insights shared by the teachers for students, fellow teachers, and administrators involved the following: Enhancement of Research Skills, Cultivating Creativity and Efficient Learning in Research Engagement, and Strengthening Practicality of Research Study.

Insights Shared by the Students. It relates to the students' perceptions while participating in virtual mentoring for their undergraduate research. For further explanation, themes are presented below with sample responses from the respondents:

Table 3.

Insights Shared by Students in Virtual Mentorship in Undergraduate Research

Basic Themes	Organizing Themes	Global Themes
INSIGHTS SHARED BY STUDENTS		
Learned how to make and use interview questionnaire for collecting data [ST1] Learned how to properly utilize online platform as medium for recorded interviews [ST 5]	Utilization of Research Tools	Ensuring Information Accuracy
Following systematic procedures to avoid bias [ST1] Using methodical method to prevent researcher influence [ST2]	Ensure Data Reliability	
Learned how to find related literatures to support the findings [ST5] Learned how to recognize and check that literatures were related [ST4]	Ensure Relevant Literatures	Ensuring Information Credibility
Learns how to assess online information [ST3] Ensures sources are reliable [ST4]	Enhancement in Information Evaluation	

<p>Improve sentence construction by emphasizing grammatical principles during online discussions [ST1] Avoid grammatical errors by highlighting basic grammar rules during consultations [ST2]</p>	<p>Improve Writing Conventions</p>	<p>Writing Proficiency</p>
<p>Learns how to connect ideas by linking related information together during virtual meetings [ST1] Learns how to organize ideas by teaching how to connect main points during consultations [ST2]</p>	<p>Improve Organization of Ideas</p>	

Ensuring Information Accuracy. It refers to making sure that the information is accurate and error-free. It also pertains to the quality of accuracy, completeness, timeliness, and usefulness of the information. Also, to ensure that the information has a reliable reference (Somasundaram, 2021).

Utilization of Research Tools. It refers to using applicable research instruments that can be useful to researchers. It helps researchers to be guided and makes the task easier. Research tools vary according to the type of research. Quantitative research tools include questionnaires for data collection interviews, while qualitative methods used in data collection include observation, discussions, and reviews of documents (Bhosale, 2022; Pandey, P. & Pandey, M., 2015). It can be observed from the responses below:

...ang akong na observe kay at least naa na mi idea unsaon ang sakto na pag collect sa data like paghimo sa questionnaire, though need pa iparewise ni sir, but at least we have an idea already about it and advantage napud siya samoa.

...I have observed that at least we already have an idea on how to properly collect the data, like in making a questionnaire, though our mentor wants us to revise it, at least we have an idea already about it and I think it is a big help and advantage for us. [ST1]

...napansin nako samoa kay naga search jud mi about unsaon pag make sure na accurate ang information na among mga gipang include. Tapos kuan nagagamit mi ug mga platforms sa pag gather sa data to really ensure na gafollow jud mi sa methods.

...I have observed that we really do research about how to make sure the information we include is accurate. Also, we used platforms to gather data to really ensure that we are following the methods. [ST5]

The full script of ST1, where he shared his experience that they already have an idea on how to make a questionnaire, makes him feel that it is an advantage for them. It is linked to the statement of ST5; he shared that they research how to ensure their information's accuracy. Also, he pointed out that they use platforms to gather data to ensure that they follow the methods. Thus, ST1 and ST5 use research tools to ensure information accuracy. Furthermore, it shows that they follow the advice of their mentors as well as the methods of their studies.

It is supported by Ali & Bhaskar (2016), stating that the planning, designing, data collection, analysis, inference of meaningful interpretation, and reporting of the research findings are all statistical approaches used in a study. Without research tools, it is difficult for a researcher to obtain accurate information. It is why the utilization of research tools is essential. Furthermore, researchers should know how to use research tools such as statistical tools for those who are dealing with quantitative research. Research tools are important to provide quality assurance of the work and avoid mistakes in analyzing data. It also helps researchers to avoid bias and secure data precision (Ahmed & Begum, 2015). Also, qualitative research tools are important because they help researchers gather accurate data, particularly through data collection tools such as interview questionnaires, observations, discussions, and many more. It will help researchers, particularly in analyzing and interpreting the data. Moreso, the findings will be accurate, far from the influence of researchers (Cleland, 2017). In conclusion, research tools play an important role in research. It will help researchers to be guided on the steps to take when conducting research. Also, it will assist researchers in generating accurate data.

Ensure Data Reliability. It refers to ensuring the data's consistency across various records, programs, or platforms. It also describes the reliability of a data source. Trustworthiness and integrity are the foundation of reliable data (Middleton, 2022). It can be observed from the responses below:

...ay naga follow jud mi sa katong procedures na gi advice samoang adviser para walay mali tapos maka make sure jud mi na reliable jud amoang study.

... we make sure to follow the procedures that our adviser told us so that we can avoid errors and we can make sure that our study is reliable. [ST1]

...kanang gigamit namo tong kuan gina follow namo ang naka state sa method namo po kay ang ingon samo adviser ifollow jud to para ma avoid daw among influence sa pag analyze, for example, sa mga responses sa among participants.

...we used to follow what is in our methods because that is what our adviser told us and to avoid our influence in analyzing, for example the responses of our participants. [ST2]

The statement of ST1 highlighted his experience in ensuring data reliability by following his mentor's advice to follow the procedure of their study. It is linked to the statement of ST2, where he also pointed out that they were following the method of their study, as their mentor told them to avoid researcher influence in analyzing the responses from their participants. It suggests that ST1 and ST2 value their mentor as they follow the instructions given to them as well as by sticking to the systematic procedures of their study. It also indicates that ST1 and ST2 are great researchers for doing what is prescribed, making their research reliable.

The statement above was supported by Carroll (2022), stating that reliability in research refers to the extent to which the findings of a particular study can be repeated or replicated under the same circumstances. A study with high reliability provides consistent results. Furthermore, reliability is one factor that helps us decide whether or not to believe the study's findings—a study that provides inconsistent results or results that indicate low reliability. Also, one criterion of good research is reliability. It is a fundamental criterion for assessing any measurement tool or equipment for high-quality research.

Furthermore, reliability emphasizes the stability of the results and the authenticity of the results (Mohajan, 2017). Additionally, Taherdoost (2016) highlighted that in doing research in a world that is becoming more digital, it is important to ensure the reliability of the research instruments so that the findings will also be reliable. Thus, a key component of research methodology is the accuracy and consistency of research tools (surveys/questionnaires). Overall, a research paper's basic and essential foundation assures data reliability. Hence, it is expected that the researchers will adhere to a methodical process to produce accurate and reliable findings.

Ensuring Information Credibility. It refers to ensuring the information is credible by critically evaluating the sources. Additionally, guaranteeing credibility entails verifying the author, the relevance and significance of the information, and its reliability and accuracy. Lastly, ensure that it is unbiased and supported by evidence (Buttram et al., 2012; George, 2022).

Ensure Relevant Literatures. It pertains to making sure to discover useful and relevant studies that can support a study. It explains how the proposed study relates to earlier studies. Lastly, it demonstrates the novelty and importance of the research problem (Aktar, 2021). It can be observed from the responses below:

...isa sa mga nakat-onan nako sa paghimo ug research po kay ang pag pangita ug mga studies na related and maka support samoang study. Kuan sad po kanang nakat-on sad ko sa mga dapat ipang consider pag mangita na ug related na studies, like dapat reliable ang source and macredit ug tarong ang informations.

...in doing research, I have learned how to find studies that will support our study. I also learned to consider important points in finding related studies, like sources must be reliable, and the information must be properly credited.
[ST5]

...ang pinaka gina consider jud namo po kay medyo strict man amoang adviser labaw na sa mga gipang provide namo

na studies as support samoang topic kay dapat we really make sure na related and dapat dili plagiarized ang mga information.

...we really make sure to consider, since our adviser is somehow strict when it comes to the information that we provided as a support in our study, we really have to make sure that information is related and not plagiarized. [ST4]

The statement of ST5, where he shared that he learned how to find related information that can support their study, also shared that he learned the things to be considered in securing credible sources. It is linked to the statement of ST4, where he shares the same experience. He highlighted that they have to ensure that all the information they provide is related to their research problem. He also added that information must not be plagiarized.

It is supported by Kim (2019), related literature that guides the researcher to offer a new contribution to the field that will also benefit other researchers. Also, the literature should summarize sources and critically examine and evaluate published studies. By ensuring to provide related literature, researchers assure the readers that they did not neglect the fundamentals of research. Also, in finding relevant literature, students must know the educational search engines that will help them find reputable sources. Moreover, it will help researchers avoid plagiarism. Also, by ensuring relevant studies, researchers can have a greater chance to rationalize their research topics (Heinrich, 2017). Lastly, it is indeed difficult to identify valid information. Researchers must recognize the sources. It can be done by securing the accuracy of information.

Additionally, remember never to display bias when identifying sources; even if sources are well-known, evaluation should still be done (Blank, 2021). It can infer that students value the fundamentals of research. Moreover, they ensure to follow research guidelines to produce accurate findings. Indeed, providing relevant information from reliable sources would make their research successful and useful for others.

Enhancement in Information Evaluation. It refers to the improvement in assessing information. By evaluating information, researchers ensure the accuracy and reliability, credibility, timeliness of the information, and objectivity or bias. Enhancement in information evaluation will encourage the researchers to think critically and value the purpose of the research (Hjorland, 2012; Radom, 2017). It can be observed from the responses below:

...in terms sa pag evaluate sa infromations na amoang ipang include, kay gina follow namo tong amoang list na dapat namo ipangconsider. For example, dapat updated ang information, naka cite ang authors and source also gina assess ang sources.

...in terms of evaluating the information that we include in our study, we really follow our list of considerations. For

example, information should be updated and authors are cited as well, also, examining sources. [ST3]

...sa pag pangita ug mga studies po na mag support samoang topic sa research po kay always jud namo gina assess ang mga information like gina check ang sources, as much as possible na ang information na amoang ipang support kay naka base sad sa isa ka research study. Also, check also the websites if reliable source ba jud, dapat naka indicate ang authors and ang date sad dapat giconsider, dapat latest ang information.

...in finding studies that will support our research topic, we always assess information by checking the sources. As much as possible, all information that we include shall be based on a research study as well. Also, checking the websites if it is a reliable source, authors should be indicated, and the date must be considered, information should be latest. [ST4]

In the full script of ST3, he shared that they evaluate all the information they include in their study. He further highlighted that they consider the research guidelines by examining the sources and authors and ensuring that the information is current. The statement of ST3 demonstrates how much they value the principles of research. It is linked to ST4, where he shares the same experience with ST3. ST4 and its members always assess information by checking sources and authors and ensuring that the time is updated.

Seeking information is one of the most challenging parts of conducting research. Researchers shall undergo procedures to provide accurate and reliable information. They can achieve this by evaluating the information (Brecht, 2020). With evaluating information, researchers will make errors like disinformation; hence, researchers need to acquire improved information evaluation skills. Also, researchers are more likely to be organized with their thoughts if the information is being assessed.

Furthermore, evaluating information and its source will make the study credible (Clark, 2022). In addition, Clemons (2019) pointed out the importance of fact-checking the information. It is being done to ensure the use and to present accurate and reliable information. Lastly, since information can be easily spread, it is important to secure the quality of the information that we will be using and presenting. To conclude, it is necessary always to take information evaluation into account. It will help researchers have accurate information and make others acquire reliable information from their papers. Overall, improving information evaluation will increase the chance for students to attain credibility.

Writing Proficiency. A "Writing Proficiency" is one in which the development of writing skills is an integral part of the course objectives. Mastering the technical and formal requirements of the genre, such as using source references and citations, is only one aspect of becoming proficient in academic writing. It also requires the capacity for more abstract thought, such as the ability to critically evaluate vocabulary choice and language usage in an academic context (Wagbara, 2022). To fully elaborate, the organizational themes below

are the following:

Improve Writing Conventions. Writing conventions are a collection of agreed guidelines for language usage and written English. Spelling, punctuation, capitalization, grammar, and paragraphing are examples of conventions. In other words, we act in a particular manner to enable the reader to understand what we are attempting to convey Kautzer (2020). Below are the responses typifying this theme:

...syempre as English major student depat mapansin gyud nimo inyong sentence construction especially sa pag gamit ug punctuations and all.

...of Course as an English major student, you can really observe your sentence construction and on how to use punctuations and such. [ST1]

...before mi magpasa kay gina proof read namo kung okay na ba ang grammar, kay para sa consultation expected na wala kaayoy comments among adviser.

...before we submit our paper, we make sure that the grammar is fine. So that during consultation, we expect that the comments of our adviser are minimal. [ST2]

In [ST1] presented above, the participant disclosed that their sentence construction is improved because it adds clarity and interest to their writing. On top of that, as a major English student, it is a must to observe concise and clear written expressions of ideas. It entails refining and diversifying their writing styles, leading them to be proficient in writing. By evaluating their sentences with sentences from others, mentees can examine sentence length, diversity, parallelism, and other syntactic structures. Although numerous ways exist to construct a phrase while adhering to grammatical principles, students need a predetermined format for the first sentences they learn.

In [ST2] presented above, the participant shared that they made sure that the grammar in their paper was correct to minimize their advisor's commentaries during consultations. Upon doing this, mentees will prevent misunderstandings and misinterpretation and avoid grammatical errors or omitting punctuation because it might also alter the message's meaning, which could lead to misunderstandings. It can be possible that the audience will not understand what someone is trying to express.

Calderwood (2021) affirmed this, stating that educators now prefer to teach writing conventions as a component of the writing process. Students are urged to write starting in early childhood classrooms, and mentors practice using a certain writing convention after mentors have taught a lesson on it by penning their essays. Students' work gets more recognized and mature as they grasp more writing conventions. Moreover, Kumar (2020) revealed in her study that the standard written conventions are directly related to the broad list of grammar, usage, and mechanics rules to make writing effectively clear, and comprehensible. Further, precise sentence structure, usage, and mechanics are all part of

conventions. Grammar errors, if they occur, do not prevent the reader from understanding the concepts being given because the writer is in charge of the conventions that are appropriate to the writing process, Cali and Bowen (2007).

Improve Organization of Ideas. The organization of ideas, incidents, facts, or details in a paragraph, essay, or speech refers to their placement in a speech or composition in a way that makes sense. It is sometimes referred to as the disposition of the elements, as in classical rhetoric, Nordquist (2019). In his book "Metaphysics," Aristotle described it as "the order of that which has parts, either according to place or potential or shape." Below are the responses typifying this theme:

...nah, tungod jud sa research beh kay makabalo bitaw kag connect sa imong ideas ba sa mga related information, tabang jud kaayo bing.

...nah, because of research I learned to connect my ideas into the related information. I'll tell you, it was so helpful. [ST1]

...aside ana kay every consultation bitaw, kay ma trigger jud kag organize sa imong ideas based sa main points sa literature. Mao nang gina took advantage jud namo nang consultations.

...aside from that, we also felt triggered to organize our ideas based on the main points in the related literature, that's why we really take advantage of the consultation time. [ST2]

In [ST1] presented above, he said he learned to connect his ideas by linking related information during virtual meetings. It means that, in the process of writing a research paper, the ability of the mentee to connect ideas is improved. The mentee is more specific about the relationships between clauses in a sentence or between sentences using connectives. The participant knows diverse phrases and words have different purposes when linking concepts and arguments. Moreover, [ST2] shared that he also learned to organize his ideas by connecting main points. Organizing ideas allows mentees to stay focused and expand main points into paragraphs using the information found in the related study. Learning to arrange ideas in a logical sequence when writing will reveal how analytically and critically the mentee's thinking operates.

It is aligned with the study of Tosuncuoglu (2018), who stated that organizing ideas influence how we perceive the world, think, and behave. The quality of the organizing idea is determined by how much reality it reveals. Ruegg & Sugiyama (2013) likewise stressed that mentees must arrange their ideas in a logical sequence when writing. The exercises for each course reveal how analytically and critically someone's thinking operates. The only direct communication they may have with their instructor in some courses will be through

the tasks they complete. Spending time organizing thoughts will help make a favorable impression. Moreover, Ualiyeva and Murzalinova (2016) avowed that organizing ideas includes deciding what material should be included with other information, what should come first, or second, and how to create a logical flow from one topic to another. Moreover, making these decisions can be challenging.

Insights Shared by the Teachers. It refers to the teachers' notions while they essentially supervised the students' undergraduate study. For further explanation, themes are presented below with sample responses from the respondents:

Table 4.

Insights Shared by Teachers in Virtual Mentorship in Undergraduate Research

Basic Themes	Organizing Themes	Global Themes
INSIGHTS SHARED BY TEACHERS		
Mentees improved ability to extract information from reliable sources [T4] Enhanced ability to assess online information [T3]	Improvement in Information Evaluation	Enhancement of Research Skills
Enhanced capacity to do detailed and methodical investigation of information [T1] Enhanced capacity to adhere and carry out systematic procedures [T5]	Ability to Follow Systematic Processes	
Enhanced mathematical and problem-solving skills [T4] Enhanced curiosity which develops mentees analytical skills [T3]	Enables Efficient Learning Through Research Participation	Cultivating Creativity and Efficient Learning in Research Engagement
Develop creativity within mentees research experience [T5] Mentees learned to think creatively by taking part in ongoing research [T2 & T3]	Fostering Creativity Through Research Experiences	
Develop interest to explore unique topics during virtual meetings as main research subject [T4] Learns to discover possible topics that needs to be addressed as research subject during virtual sessions [T3]	Exploration of Unique Research Topics	Strengthening Practicality of Research Study

<p>Figure out systematic ways on how to conduct research during consultations [T4] Discover a methodical approach to follow when conducting the study during meetings [T2]</p>	<p>Implementation of Tactical Research Planning</p>	
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Enhancement of Research Skills. The capacity to look for, find, extract, organize, assess, and use or present information that is pertinent to a given issue is referred to as having research skills. Academic research is a particular kind of research that entails a thorough and meticulous investigation of a certain field of study. In response to a specific research question or idea, it entails a thorough search, investigation, and critical analysis. It frequently requires a lot of reading, Ibarra et al. (2019). To fully elaborate, the organizational themes below are the following:

Improvement in Information Evaluation. For research studies, to obtain knowledge as a student from various sources, including books, newspaper and magazine articles, specialized databases, and websites. It is crucial to assess each source and look at them to see how reliable the information is, including Mandalios (2022). Common evaluation criteria include purpose and intended audience, authority and credibility, correctness and reliability, currency and timeliness, and objectivity or bias. Below are the responses typifying this theme:

...sa sge nakog check sa ilang paper I noticed na nag improve silag pangitag information sa reliable sources.

...what I have observed in my mentees, was that they knew how to get information from reliable sources. I've been checking their paper, and I can say that they really improved. [T4]

...kabalo ang akong mga estudyante I am proud to say na kabalo na jud sila mag assess ug information online, dba sa kabusy nila mangitag study they enhanced.

...you know what, I am proud to say that my students enhanced their ability to assess information online even though they are too busy. [T3]

The full script [T4] said that he observed mentees' improvement in extracting information from reliable sources. It can be inferred that mentees hone their skills to recognize credible sources, which will help them become effective communicators and leaders. Also, this ability to extract information from reliable sources is helpful in their paper to improve validity and reliability, reduce bias, and provide uniformity for systematic reviews.

In [T3] shown above, the participant disclosed that in the long run, mentees work on their paper and enhance their ability to assess online information. Students' ability to distinguish between information of high quality and that of low quality will improve the more online texts they encounter and compare. Students must take into account textual cues that can guide them in assessing the credibility of the material they encounter. In contrast to the majority of paper-based publications, readers who access information sources from the internet, for instance, should be aware that such information may not have been through clear review policies or quality control.

Hamalainen (2021) elaborated that the need to comprehend the function of information evaluation when readers conduct online research has increased due to the open nature of the internet, where virtually anybody can share their opinions. Therefore, it is crucial to assess authors' knowledge by paying attention to their backgrounds, connections, and positions (Britten et al., 2018). When accessing entire texts, more proficient users of numerous sources evaluate the information on several criteria, such as quality, authenticity, relevance, and reliability, while keeping the reader's current reading objectives in mind. It is also important to consider the venue's publishing policies, such as who is permitted to create the texts that make up a website and how the content's veracity is guaranteed (Braasch et al., 2013).

Ability to Follow Systematic Processes. An ability to follow systematic processes makes an effort to compile all empirical data that complies with a procedure created to address a particular research issue. In order to provide more reliable results that may be used to guide decision-making, researchers that do systematic reviews employ specific techniques to avoid bias (Seal, 2021). Below are the responses typifying this theme:

...ahh sa panahon karon nu, hilabi na na online ang klase, what I have observed in my research students is they hmm kuan kanang sa information bitaw, they are detailed and knows how to investigate information.

...ahh, in this time especially the class is online, what I have observed in my students is that they enhanced their capacity to do detailed and methodical investigation of information.
[T1]

...oh yes, independent gyud ang pagtuon sakong estudyante sa ilang research, ga follow pud intawn sila sa procedure mao nang sa among meetings, I don't have any problem in terms of that.

...ohh yeah, my students independently learned to adhere and carry out systematic procedures. That's why in our scheduled meetings, I don't have any problem in regards to that.
[T5]

In [T1] presented above, the participant shared that mentees enhanced their capacity to do a detailed and methodical investigation of information which means mentees learned to develop an approach that matches research objectives, the methods used in a particular field, and the theories or principles behind them. In other words, it concerns the methodical design of a study by a researcher to guarantee accurate and trustworthy outcomes that meet the goals and objectives of the investigation. Detailed and methodical investigation of information will assist mentees in finding, picking, processing, and analyzing information on a subject and give them the chance to assess the general validity and dependability of a study.

In [T5] presented above, the participant revealed that his mentees enhanced their capacity to adhere to and carry out systematic procedures. It entails that mentees organize their research according to a well-defined set of rules, with certain processes to be followed in a specific order. It helps mentees reduce bias in the review process and ensure that methods are not unduly impacted by the findings of studies they locate. Further, making a strategy or following a procedure will frequently save mentees time and effort because they will not be wasting time on activities that will not eventually make the activity easier or quicker to complete.

It is confirmed by Tawfik et al. (2019). They stated that a systematic process involves scientific research that emphasizes objectivity and collecting a wide range of data for analysis so that the researcher can conclude. Regardless of the study method, this procedure is used in all research and evaluation projects (scientific method of inquiry, evaluation research, or action research). Moreover, the mentees need to follow a systematic process because research is an organized, methodical process of locating solutions to questions. It is systematic as it follows a set of distinct steps that end with conclusions and is organized because the conclusion was reached using a predetermined structure or technique James (2019). Furthermore, Hall (2006) echoed the same sentiment about the systematic process being efficient when a researcher is looking for an explanation that is theory-oriented. However, it can produce evaluations of the relative influence of causal variables.

Cultivating Creativity and Efficient Learning in Research Engagement. It refers to teachers' expectations of students to have creativity and gain learning in engagement from mentorship. It focused on the notion that student engagement has been enhanced through research that affects their creativity (Loudon & Gordon, 2019). In the study, this is a global theme elicited by the respondents, which has two sub-themes; Enables Efficient Learning Through Research Participation and Fostering Creativity Through Research Experiences. It is manifested by the organizing themes below:

Enables Efficient Learning Through Research Participation. It pertains to teachers' expectations for students to learn efficiently through research participation. This means that to enable efficient learning, it is enhanced by participation in research that can help restore and protect memory while also improving math and problem-solving skills (Klang et al., 2021). In a study, it is one of the sub-themes of Creativity and Efficient Learning in Research Engagement. This can be seen by the responses below:

...masaya din kami kasi we were able to share our knowledge to students lalo na sa part na may kailangan silang e analyze, na enhance talaga yung mathematical and problem solving skills nila.

...we are happy that we were able to impart our knowledge, mostly on the part where they needed to make analyses, they really have enhanced mathematical and problem-solving skills. [T4]

...ou naman talaga ding na enhanced ang way nag pag iisp ng mag bata, which helped them develop their analytical skills

...yes, the ability of the child to think was enhanced , which did help develop mentees analytical skills. [T3]

According to [T4], research can enhance students' mathematical and problem-solving skills because brainstorming and aiming to address the research problems of their works with practical ways like statistics could help them foster mathematical and problem-solving skills. It is aligned with what the [T3] has also stated: research benefits students because it can enhance curiosity, which develops mentees' analytical skills.

Biwer et al. (2020) have suggested that for students and teachers to foster effective learning strategies, they must first build a cooperative and collaboration in their engagement. Interaction and collaboration aid in developing and improving student performance and accomplishment results. As such, plan activities that allow students to cooperate and collaborate to learn and grow from one another. Collaborative learning can increase students' confidence and self-esteem while developing higher-level thinking skills and enhancing curiosity.

Fostering Creativity Through Research Experiences. This refers to teachers' expectations of students' creativity based on their reflections on their collaborative project experiences (Raymundo, 2020). In the study, it focused on developing students' outcomes of fostering creativity through reflection on their experiences in doing collaborative research projects. It is also one of the sub-themes under Creativity and Efficient Learning in Research Engagement. This can be seen by the responses below:

...masasabi ko din talaga na we were really able to develop yung creativity ng mga bata throughout their experience.

... I can really say that we were able to develop creativity within mentees research experience. [T5]

... yung mga ginagawa nila para sa pag conduct ng kanilang study at yung mga na impart sa kanila, eh nakatulong sa kanilang makapag-isip ng mas magandang paraan para sa ikakabuti ng kanilang study.

...the things that they do in conducting their study and the knowledge that we have imparted to them, those things were able to help them learn to think creatively [T3]

This refers to teachers' expectations of students' creativity based on their reflections on their collaborative project experiences (Raymundo, 2020). The study focused on

developing students' outcomes of fostering creativity through reflection on their experiences in collaborative research projects. It is also one of the sub-themes under Creativity and Efficient Learning in Research Engagement. This can be seen by the responses below:

This is aligned with the findings of Crilly (2019), which focused on the notion of fostering creativity through online creative, collaborative group projects. Findings revealed that respondents' reflections on their experience were positively connected to known outcomes associated with creative abilities. Students appreciated the experience and gained a deeper comprehension of the subjects.

Enables Efficient Learning Through Research Participation as one of the global themes was manifested in: Enables Efficient Learning Through Research Participation and Fostering Creativity Through Research Experiences. Researchers support both themes by discussing the importance of collaborative group projects. Through that, students are expected to foster effective learning strategies (Biwer et al. 2020) and creativity (Amaya et al. 2018). Also, fostering creativity through research experiences not only leads to progress but also changes the way mentees relate to the world (Glaveanu et al., 2019). Findings imply that students can foster creativity and efficient learning through collaborative research participation and experiences.

Strengthening Practicality of Research Study. It pertains to strengthening the validation of the project's practicality, effectiveness, and acceptability among students so they can enhance their learning in their subject matter (Hess, 2019). The study focused on the shared insight of teachers who elicited two sub-themes: Exploration of Unique Research Topics and Implementation of Tactical Research Planning. It is manifested by the organizing themes below:

Exploration of Unique Research Topics. It pertains to the importance of establishing a new research topic because discovering new phenomena is a trademark of research projects that address research problems (Allen, 2017). The study refers to the shared insight of teachers that discussed the need to explore a new or unique research topic as part of students' subject matter. It is also one of the sub-themes under Strengthening Practicality of Research Study. It can be seen by the responses below:

...speaking of progress, i can say na the mentee were able to develop interest during our virtual meetings sa paraan ng kanilang pagsisiyasat ng magandang topic na pwedeng gawin main subject ng kanilang study.

...develop interest in exploring unique topics during virtual meetings as the main research subject. [T4]

...during our virtual sessions, natuto din silang magdiscover ng possible na pwedeng maging topic sa study na kanilang e co-conduct.

...learns to discover possible topics that need to be addressed as a research subject during virtual sessions. [T3]

In [T4], the teacher shared insight regarding how students must develop an interest in exploring unique topics during virtual meetings as part of their main research subject requirement. It may be attributed to the fact that students cannot conduct a study without a title, and discovering new phenomena is a trademark of research projects that address research problems. Also, according to [T3], students need to learn and discover possible topics to be addressed as part of research subjects during virtual sessions.

It can be supported by the website of Gust (2022), which states that in conducting research, coming up with the topic and narrowing down the focus of interest of the phenomena is the first step of planning how to conduct the research project for students. It is said that the most pleasant and stressful aspect of beginning research is delving into a topic. Thus, the first thrills of investigation and suspicion are terrific, but they can rapidly transform into an equally intense sense of being overwhelmed by the enormity of the undertaking. Also, Walker (2018) states that beginning to explore a topic in greater depth is up to individual preference, just as each student discovers a topic in their unique way. However, teachers usually strongly advise students to take advantage of all the facilities and services available to create new phenomena to explore and study. It will provide the institution with the maximum depth and breadth of information. Further, the hardest part of writing a research paper can be coming up with a topic. Thus, it also contributes to knowledge development and facilitates learning for the researchers by enabling them to establish a research topic that will benefit the public by bringing crucial information and awareness (Snipp and Mueller, 2021; Zarah, 2022)

Implementation of Tactical Research Planning. It relates to the learning and doing teachers anticipate their students to accomplish and learn when planning their research projects. They must comprehend and learn from their teachers how to implement and conduct the study to understand their strategies for writing their research paper. (Pickton, 2013). The study is one of the sub-theme under Strengthening Practicality of Research Study, which focuses on teachers' shared insight about how the students can develop the implementation of tactical research planning. It can be seen by the responses below:

...sa mga consultations na aming ginagawa virtually, yung, ang mga estudyante ay nakapag discover din ng mga systematic na paraan ng pag conduct ng kanilang study.

...during the consultations which were done virtually, the students were able to figure out systematic ways on how to conduct research during consultations. [T4]

...they were able to discover yung mga applicable na methods na they can follow when conducting their study kapag nag memeting kami.

...they were able to discover a methodical approach to follow when conducting the study during our meetings. [T2]

In [T4], the teacher shared insight about how the implementation of tactical research planning starts with figuring out the systematic ways to conduct research during consultations. It was also validated by the statement of [T2], who shared the same experience where his students discovered a methodical approach to follow when conducting the study during meetings.

With that, Lander et al. (2019) stated that the academic paper style provides an appropriate framework for teaching and acquiring research skills. Sharing thoughts and experiences with other students can help students gain confidence in their research abilities. Active participation in practical activities to consolidate skills boosts confidence and enjoyment. A phased procedure for gaining practical expertise in data collection and analysis would improve this concept. Additionally, it will help the students build a thorough understanding of the study, get interested in choosing topics, and develop a clear rationale for their choice. It demonstrates why having a research plan is important. Additionally, it will act as a road map for the mentors' careers, enabling them to showcase their academic goals and objectives (Devault, 2019; Austin, 2002). Moreso, implementing a research plan can be vital for students and teachers to conduct successful research. It will allow students to discover and follow methods that can be useful in their research (Bhosale, 2022).

CONCLUSION

This study has unveiled a spectrum of positive and negative lived experiences among students and teachers engaged in virtual mentorship for undergraduate research. Positive experiences for students encompass an efficient feedback system, the use of varied materials, enhanced self-efficacy among mentees, and improved class participation. In contrast, teachers' positive experiences revolve around mentors' readiness for online mentorship, adaptation to communication and learning platforms, and a strong sense of urgency among students.

Conversely, negative experiences for students involve the absence of psychosocial support, mentor unavailability, and poor classroom engagement. For teachers, negative experiences are associated with absenteeism, students' lack of participation, and a low sense of urgency among mentees. Furthermore, insights shared by students focus on ensuring information accuracy, credibility, and writing proficiency. Teachers, on the other hand, emphasize the enhancement of research skills, cultivating creativity, efficient learning in research engagement, and strengthening the practicality of research studies.

In this research, we have come to understand that virtual research mentorship presents both advantages and challenges for students and teachers. Addressing the concerns raised by students, such as the need for support and attention, is crucial to their participation and learning process. Similarly, teachers must confront the challenges of virtual mentorship by reevaluating their mentoring methods to improve student engagement and performance. Thus, it is essential for both teachers and students to actively collaborate in the virtual mentorship process to prevent unfavorable outcomes, recognizing that mentoring in a virtual environment demands their mutual commitment and effort.

In addition, this research extends its recommendations to school administrators, emphasizing the importance of research-related programs, research training, and research conferences. These initiatives empower students and mentors, fostering vital research and mentoring skills while kindling students' interest in exploration and innovation. In essence, our study not only illuminates the lived experiences of those engaged in virtual mentorship but also offers valuable guidance and suggestions for future improvements, with the hope of enhancing the educational journey for all stakeholders involved.

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