

# Analyzing the Role of Teachers' Mentoring in Improving Senior High School Students' Research Competency

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**Abstract**— This qualitative study analyzed the role of mentors in the development of senior high school (SHS) students' research competency as beginning researchers. This also tried to understand the importance of the mentor-mentee relationship as regards the improvement of the aforementioned competency. Through narrative analysis, this study gathered experiences from selected learners of one of the public schools in Antipolo City, Rizal. In the selection of the participants, the researchers employed purposive sampling, whereas fifteen (15) SHS students, all in grade 11, were chosen. These students were purposely selected since (1) they were enrolled in the SHS of the school, (2) they did not have any research-related background prior to PR1, and most importantly, (3) they were all taking Practical Research 1 during the school year 2022-2023. Before initiating the data-gathering processes, the researchers sought the necessary permission from the school principal through formal letters. As per the analysis part of the study, the researchers applied thematic analysis to the audio-recorded interviews and other transcriptions. This analysis rendered several themes and categories that are eventually defined and discussed in parallel with the participants' verbatim responses. It was then concluded that the teacher-mentors' role is indeed crucial to how beginning researchers can assimilate the fundamental research content and eventually be able to apply it across all disciplines.

**Keywords**— Beginning researchers, mentoring, Practical Research, research competency, narrative analysis, senior high school.

## I. INTRODUCTION

In the Philippine context, the Department of Education (DepEd) commenced, in 2012, a huge curriculum shifts from the Revised Basic Education Curriculum (RBEC) to the K-12 Curriculum, which was then believed to be a step towards producing more globally competitive graduates and with the hope that it will help learners face the real world (Domondon et al., 2022; Sanchez et al., 2023). This shift made the Philippines meet the global standards set forth in secondary education, with the inclusion of kindergarten as a significant part of it (Okabe, 2013). As listed by the Philippine Business for Education (n.d.), this program is not just about prolonging the stay of learners in the school; it also ensures that the learners will be more prepared at the tertiary level, will be more equipped to join the labor force in or outside the country, and will be more competent in terms of the skills that are fit for the international market.

Together with this change, various challenges and other areas of opportunity emerged. These challenges may be inevitable; however, they can be used to further improve the system in general, which would be beneficial to both learners and teachers. Addressing these adversities, which could result in curriculum mismatches and other

possible implementation gaps, requires the involvement of the government with regard to continuous assessment and improvement of the program from the curriculum itself up to its execution within the classroom level (Trance et al., 2019; Rivera, 2017).

One of the salient features of the K-12 program is the addition of mandatory 1-year kindergarten and another 2 years at the secondary level, which is called "Senior High School (SHS)". Hence, the first 4 years of the learners in high school will be initially labeled "Junior High School (JHS)". In terms of the curriculum cycle, spiral progression was implemented for both elementary and JHS levels, while for SHS, a new set of subjects were introduced.

As stated in Republic Act 10533, otherwise known as the "Enhanced Basic Education Act of 2013", Sec. 5 (g): Curriculum Development, it was reiterated that "The curriculum shall use the spiral progression approach to ensure mastery of knowledge and skills after each level." Nonetheless, this act was adhered to by the DepEd and implemented nationally as reflected in DepEd Order No. 31, s. 2012.

In line with the subjects offered for the SHS, it was categorized according to the chosen track and strand of the learners. Since 2016, when the official implementation of SHS as an additional grade level started, learners have been required to take subjects that are appropriate to them. These subjects were grouped as (a) core, which is offered to all students regardless of track; (b) specialized, which are subjects that are uniquely given to students of every track and strand; and (c) applied, which is similar to core but is only intended to concentrate on the particular ways in which certain disciplines are applied to the learners' selected track and strand (DepEd, 2016; Senior High School in the Philippines: Curriculum Breakdown—Courses in the Philippines: College, TESDA, Online, Short Courses, n.d.).

As previously mentioned, SHS learners ought to take a new set of subjects that are relatively different from what they had at the JHS level. As a consequence of this, the SHS program received criticism concerning the over-congestion of the subjects (Jaudinez, 2019). Further, some subjects were perceived to be difficult since the majority of them do not have pre-requisite courses from elementary and JHS levels. The best example of this would be the SHS research subjects. SHS students are expected to take three (3) to four (4) research courses under applied and specialized subjects, namely: Practical Research 1, Practical Research 2, Inquiries, Investigations, and Immersion, and for STEM learners, the Research Capstone Project (Sanchez et al., 2023), which are all part of their academic requirements. Although students' English language competence and writing skills contribute to their academic excellence (Yasto, 2022) and can perhaps be considered a prerequisite skill in doing research, writing a thesis or any type of basic research still demands a more comprehensive understanding of the craft.

Research, regardless of the approach, is indeed a complex and very challenging subject (Sanchez et al., 2023; Caraig, 2022). It requires intensive planning and in-depth inquiry processes to achieve certain goals. This aids people in enhancing the quality of their lives in a manner that encourages support to alleviate their load of work (Roman, 2021). Similarly, it is a sort of active learning that helps the researchers develop their unique psychological traits, whereas the research process is seen as a collaborative effort between novice and expert researchers (Prosekov et al., 2020). This interaction is said to be much more beneficial to the former, for it

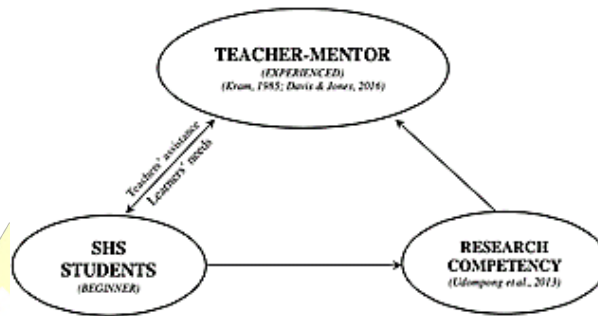
widens their knowledge, which leads to the production of new science-based ideas. Apparently, this entire procedure may be slowed down by the learners' lack of formal research writing knowledge (Yasto, 2022). As emphasized by Nazarova (2019), an individual's research competence is developed at the time he or she starts attending school, for this is the place where the attainment of the necessary skills in answering questions usually transpires. Zott et al. (2011), as cited by Sanchez et al. (2023), identified research as one of the most difficult subjects as perceived by students. Thus, close monitoring and extensive mentoring will be necessary for those learners who do not have those prior experiences in conducting even a simple research activity. As mentioned by Soltovets et al. (2020), "The very nature of the learning-intended partnership between those seeking knowledge and having vast experience in certain areas resonates with the concept of scientific research supervision" (p. 2).

To address this gap, the researchers conducted this study, which aimed to analyze the significance of mentors for beginning researchers in SHS and how it contributes to the development of their research competency. As defined by Prosekov et al. (2020), research competency is a combination of motivational, gnoseological, operational, and personal elements that have been developed to a degree that enables one to successfully apply the learned research skills and knowledge in real-world situations. Anent to the involvement of mentors in the development of such competency, active and continuous mentoring strategies had a big impact on how capable students thought of themselves as scholars (Davis & Jones, 2016). In mentoring, a person (the mentor) who is thought to have more relevant knowledge and experience and a person (the mentee) who is thought to be a beginner in the field communicate over a sustained length of time, usually in person (Landolt, 2012, as cited by Masahela et al., 2014). This inculcates the idea that mentoring is a two-way relationship of learning and constant communication.

This study assumed that the research competency of SHS learners who are considered beginning researchers is developed through the involvement of a teacher-mentor who is perceived as a more experienced one in terms of research, whose duty is to provide assistance to them. Subsequently, this anchors its framework on the construct of Kram (1985), where it was emphasized that mentoring is characterized as a relationship between an

older, more experienced mentor and a younger, less experienced individual (mentee) that aims to develop the career of the latter. This continuous assistance and monitoring by the teacher-mentor (Davis & Jones, 2016) give the learners the opportunity to meet the standard of becoming research-competent individuals. To add more, Udompong et al. (2013) refer to research competency as

the level of understanding and capacity of an individual to do research. Along with this, the definition was divided into two parts: (1) knowledge and capability of high school teachers in conducting action research effectively; and (2) knowledge and capability of high school students through scientific literacy, both of which have respective sets of core competencies.



**Fig. 1:** Framework of the Study on Research Competency, Teacher-Mentor, and SHS Students

Fig. 1 illustrates the relationship between the teacher-mentor, who is tagged as the experienced individual, and SHS students, who are identified as beginners in the field of research and need to be assisted. Furthermore, this relationship is concurrently related to research competency since the mentioned variables are anchored in its existence, more so, the development of it depends on these two variables (Teacher-Mentor and SHS Students).

All things considered, this study analyzed the role of mentors in the development of SHS students' research competency as beginning researchers. This also tried to understand the importance of the mentor-mentee relationship as regards the improvement of the aforementioned competency. Specifically, it answered the following questions:

1. What are the SHS students' experiences as beginning researchers in Practical Research 1 (PR 1) in terms of:
  - 1.1. understanding the concepts;
  - 1.2. crafting the necessary parts of the research report; and
  - 1.3. teachers' involvement as mentors?
2. How do teacher-mentors provide assistance to SHS students relative to the challenges they encountered in PR 1, as reflected in their experiences?
3. How does this teacher-mentor's assistance help SHS students write research and understand its processes?

## II. MATERIAL AND METHODS

As defined by Flick (2007), qualitative research is a manner of comprehending, depicting, and interpreting social phenomena by analyzing the experiences of individuals as well as the way they interact and communicate with each other. This qualitative study utilized narrative analysis since it aimed at exploring how the involvement of a mentor could impact the research competency of beginning researchers—in this case, SHS students. According to Mertova & Webster (2020), narrative analysis is built on human stories and seeks to capture the entirety of the situation. Thus, narrative analysis is a method that encourages people to narrate stories about their lives or situations with which they have direct experience (Bryman, 2008, as cited by Combo et al., 2022).

The study was conducted in one of the public schools in Antipolo City, Rizal, Philippines. The participants of the study were the 15 Grade 11 SHS students who were purposely selected based on the criteria that they are currently enrolled and taking PR1 subject during the first semester of the school year 2022-2023 and have no research-related background prior to taking PR1.

This study utilized semi-structured individual interviews as its primary data-gathering technique. To generalize the experiences and understanding of the selected participants on the subject matter, the researchers prepared a set of open-ended questions that were validated by several experts. Before initiating the data-gathering processes, the researchers sought the

necessary permission from the school principal through formal letters as part of ethical consideration. Subsequently, with the permission granted by the participants through informed consent forms, the individual interview sessions were audio recorded, which eventually helped the researchers scrutinize every single response. Each session lasted for a maximum of 10 minutes per participant. For further clarifications, follow-up questioning was conducted through another in-person interview and, for some participants, personal messages.

As per the analysis part of the study, the researchers applied thematic analysis (Alhojailan, 2012) to the audio-recorded interviews and other transcriptions. This analysis rendered several themes and categories that are eventually defined and discussed in parallel with the participants' verbatim responses.

### III. RESULTS AND DISCUSSIONS

As previously indicated, this research aimed at understanding the significance of the roles of teachers as mentors when it comes to improving beginning researchers' (SHS students) research competency. Consequently, after conducting comprehensive data analysis, several themes were generated, defined, and supported by the participants' responses, which were gathered through interviews.

#### *The senior high school students' experiences as beginning researchers in Practical Research 1*

Practical Research 1 (PR 1) is one of the applied subjects and one of the three (3) research subjects offered in all tracks at the senior high school level. This subject is the first being offered, and it provides an opportunity for the SHS learners to explore, become familiar with, and understand the basic concepts of qualitative research and eventually produce a well-written research project. It primarily aimed to enhance learners' critical thinking and problem-solving abilities through qualitative methods of research (Caraig, 2022). Generally, this becomes the training ground for most learners when it comes to being research-inclined individuals. Having appropriate tools and proper practice improves students' research learning (Camara, 2019) and makes them confident with the task.

The teaching style of the teachers significantly contributes to the experiences of the beginning researchers. An effective teaching style for a specific subject area is developed through a rigorous process

(Frunza, 2013). As this study revealed, the teaching styles of the teacher-mentors had been a factor in how learners, as beginning researchers, learned the concepts in research, more specifically in qualitative methodology. A participant mentioned that "Pag dating po sa pag-iintindi ng PR 1, hindi po sya ganon kahirap kasi naiituturo po ng teacher namin 'yung mga lessons ng maayos po.'" [Translation (T): When it comes to understanding Practical Research, it was not that hard since our teacher was able to discuss it well]. Another participant shared that, "Practical [research 1] is not an easy subject, but my teacher always explains the meaning and importance of it, so in the end, I am able to understand it little by little." With the construct highlighted by Davis & Jones (2016), this goes to show that effective teaching and continuous monitoring from experts (teacher-mentors) are indeed necessary in making sure that the research competency of beginning researchers is developed, especially since the subject itself is tagged as unfamiliar by some of them.

Self-Learning still plays a vital role in students' learning in research. One of the things that the new normal of education brought to the scene was the enforcement of self-learning as a way of acquiring the standards that are expected from the learners by the Department of Education. In effect, the practice of the said modality is still evident and concomitantly helpful for the learners in terms of comprehending the key concepts of research. "Kapag medyo di ko naiintindihan, binabasa ko ang mga notes ko at nag se-self-study ako nang sa ganun ay mas maintindihan ko pa talaga sya ng Mabuti." [T: If I do not understand the lesson, I tend to do a self-study by reading my notes]. Other responses were, "I did my own notes na komportable ako at madali ko lang maintindihan" [T: I did my own notes in such a way that I am comfortable with and that I will be able to understand it easily]; "I understand Practical Research through listening to my teacher's discussion and through understanding it on my own." These statements from the participants highlighted the fact that even though a majority of the schools had already transitioned to a face-to-face modality where teachers and learners are required to attend schools physically, it still became a habit for the learners to utilize self-directed learning to meet the gap along the process. This supported the assumption made by Garrison (1997), as cited by Abd-El-Fattah (2010), where they pointed out that self-directed learning urges the learners to be the ones who are proactively responsible in the cognitive aspect of their learning processes with the help of other people

around them who tend to validate their ideas. In addition, it was inculcated that self-directed learners substantiate extreme levels of responsibility as regards ensuring meaningful learning and continuous self-assessment. In this regard, the participants in this current research exhibit the ability to self-learn, for they were able to subconsciously do cognitive tasks when they thought they would need to.

Group activities as part of teaching-learning processes make the learners' experiences in research more meaningful. Student activities, whether group or individual, play a very significant role in ensuring holistic learning. More specifically, learning facilitators believed that group activities across subject areas are indications of a best classroom practice that promotes a learner-centered environment (Hung & Long, 2019; Jacobs & Ivone, 2020), for it allows learners to express their own ideas and judgments while engaging with peers or other individuals with whom they share similar learning goals. It was then mentioned by a participant that, "Ang isa sa mga di ko po makalimutang experience sa aming Practical Research 1 ay 'yung sa tuwing kami ay nag gu-groupings at lalo na yung gumawa ng game si Sir" [T: One of my memorable experiences in our Practical Research 1 class was during group activities, especially when there were games involved]. Through group or collaborative activities, the learners become more attentive and engaged with what is happening around them. Hence, another participant shared that, "Groupings, reporting. I miss the thrill of facing many people. Pati na rin 'yung group games! [T: also the group games]." As regards beginning researchers, providing them with activities that require their collaboration with other learners will surely entice them to explore and understand the research subject, thus making them even more confident in their craft. In order to make learning even more meaningful, collaboration is usually necessary (Jonassen & Strobel, 2006).

Beginning researchers find it hard to craft the basic parts of research. Experience and expertise are deemed significant if one wants to produce exemplary research; hence, this poses a huge challenge for beginning researchers as they start writing the basic elements of it (Kalman, 2019). Basic research is usually composed of an introduction (literature review), methodology, and results and discussions (Codina, 2022; Tabuena, 2020), whereas each of them must be well-written to ensure the cohesiveness of the idea. However, it was noted by some of the participants that it was a challenging experience

for them to complete these fundamental components of research considering that they are still novices with regard to how it should be done. It was then stated that "Hindi madali. Siyempre bagong gawain at nangangagapa pa kami" [T: It was not easy since it is new for us]. Another participant supported this argument by saying, "First, it is not easy for a newbie researcher because it costs a lot of time and serious studying to support your research. The hardest part of research for me is when you are finalizing your methods and materials because if you use wrong words that are not related to your research title [topic], then I'm sure it will affect your study." Despite the fact that these beginning researchers' experiences have revealed areas of opportunity for how they might craft their research, the guidance of their mentor has helped them become more aware of the correct and necessary process of research. Some responses to support this were, "Sa kabuuan, naging madali at mahirap siya. Madali kasi may mga guide na ibinibigay ang aming guro kaya ang gagawin nalang namin ay sundin ito" [T: Generally, it was easy and hard at the same time. It was easy because our teacher provided us a guide to follow in doing the activities and other tasks.]; "di talaga maiwasan na magkamali pero lagi naman kami ginagabayan ng aming teacher para magkaroon at makagawa kami ng maayos na research" [T: Committing mistakes during the research process is part of learning, and because of the continuous assistance provided by our teacher, we were able to create research projects].

Teachers' involvement provides a clear direction for where the students are headed with regard to research. Teachers serve as the core of teaching and learning for they are the ones who are in charge of the successful implementation of its whole process (Esguerra & Combo, 2021). As regards teaching research, it was corroborated with the idea that learners' experiences become more meaningful, especially when the teaching and learning process is evident. This is supported by the answer of a participant with the statement, "Practical Research is not an easy subject, but my teacher is always explaining the meaning and importance of qualitative, which is the first type of research that I learned." The teacher's comprehensive presentation of the topic teaches the participants a lot. The participant's experience is directed at the teacher, who is in charge of teaching the subject matter. As a result, it was determined to be a teacher-related problem. Studying the course will produce good results for the students if the teacher is an expert in it and uses the right

method to teach it. Students will, in short, find the subject to be more educational (Rabanal & Domondon, 2023).

### ***Challenges encountered by the senior high school students in Practical Research 1 as beginning researchers***

Being able to forecast students' problems in the conduct of their research would greatly aid an institution in planning improvement programs to suit specific learners (Versoza, 2019). Every learner, whether a high school student or a graduate school student, tends to encounter challenges in doing research studies. However, it must be noted that the difficulties of conducting research are usually different from those of other coursework and whatnot (Newhart & Patten, 2023). Exploring these challenges will help SHS learners overcome and address the difficulties as they pursue the craft. As per this study, the researchers were able to identify some common challenges that were experienced by the SHS learners in the process of learning and crafting basic research.

Research is not a familiar subject for some beginning SHS students. Due to the unfamiliarity of SHS learners with research, they tend to be overwhelmed; hence, some students are scared of carrying out research (Pearce, 2005). As stated, "Ang mga challenges ko sa subject na PR 1 ay talagang pakiramdam ko mahirap sya lalo na kasi gagawa kami ng research at dahil bago lang sya sa akin medyo noong una ay nahirapan ako pero nung naintindihan ko na sya para sa akin kaya ko na at madali na sya pero di mo talaga maiwasan na kabahan lalo na pag bubuo na ng research kasi may mga parts sya na kailangan tama ang gagawin mo at marunong ka din dapat mag paraphrase na sa ganoon hindi ka talaga ma plagiarism" [T: My main challenge in PR 1 is that, I initially thought that the subject is really hard to understand since it is a new one and we will be tasked to produce a research project. As time passed, though it was still hard since it could be subject to plagiarism, I was able to understand and cope with it]. Another participant said that "First it is not easy for a newbie researcher because it costs a lot of time and a serious study to support your research. The hardest part of a research is when you are finalizing your methods and materials because if you use wrong words that are not related to your research title, I'm sure it will destroy your study." Since beginning researchers tend to believe that they are unfamiliar with the subject, they may assume that they lack the expertise to conduct one. For this reason, the novice researcher may also be hesitant

to review and analyze related qualitative studies, which are some of the things needed to make present research more up-to-date, evidence-based, and comprehensive (Snyder, 2019; Paul & Criado, 2020).

SHS students find technical research terms difficult to understand. The information in scientific and technical literature is represented in terms of specialization-specific units that serve as gateways to more complex knowledge systems (Usmonov & Usmonova, 2019). Technical research terms can be very difficult to understand, especially for research beginners, unless further explained by the mentor. As answered, "May mga part na nakakalito" [T: There were parts in the discussion that were confusing]. This is also supported by the statement, "In the first quarter, I'm having a hard time understanding it. But when he discusses it one by one, I know now how to do research." As revealed by the study of Rabanal & Domondon (2023), the syntax, use of ambiguous terminology and phrases, and manner in which the teacher employs them in the classroom contribute to the difficulty of a subject. This emphasizes how significant and impactful the presence of a mentor is in making the learning experiences of beginning researchers more guided and meaningful as they explore and try to grasp the terms that are commonly utilized within the context of research.

Reviewing related literature and designing research methods are the most challenging parts of the research. Writing and reviewing related literature and methods are critical in establishing the connection of your topic. One of the most common difficulties in writing a review of related literature is organizing the huge amount of data that is generated, along with the redundancy in information (Cactus Communication, 2023). With this, a participant stated that, "Ang mga challenges ko po ay ung sobrang nahirapan kase po kaylangan maingat po kayo sa paggawa [n]g research at dapat din po may mga sapat kayong RRL (review of related literature) at higit pa po don kaylangan nyo rin pong magingat sa mga grammar" [T: Some of the common challenges I experienced were about RRL since it requires me to be critical in terms of its content, grammar, and the number of materials I need to analyze]. Another statement from a participant supported that, "Ahm sa pagbuo po ng research simula introduction hanggang materials and method, mahirap po kasi ang dami naming need basahin tapos ang hirap pong intindihin kasi ang lalalim ng mga literature na nkukuha ng grupo namin." [T: When it comes to

completing the parts of the research from introduction to materials and methods, I find it difficult since I need to read and comprehend so many articles that include very complex ideas]. Indeed, one of the most complicated and sometimes perplexing aspects of research development for beginning researchers is the literature review, which necessitates lengthy and complex methods (Chen et al., 2015).

### ***Teacher-Mentors' provision of assistance to the senior high school students on the challenges they encountered in learning research***

Teacher-mentors are models of teaching who support and monitor interns as they begin an intensive and sustained period of learning to teach in a context of practice (Michigan University, n.d.). Teacher mentorship plays a critical role in establishing learning for students. Unlocking challenges to further comprehend research will be encouraged with suitable support and guidance.

Presenting research samples as part of teachers' teaching strategies. The provision of research samples as a teaching strategy can greatly help SHS learners understand concepts and ideas when pursuing a study. According to the National Science Foundation (2022), real-world examples have practical implications for classroom knowledge and skills as they apply to students and society. These actual instances can inspire learners to consider their decisions and how they fit into a larger cultural context. As mentioned by one of the participants, "Ang practical research ay talaga namang mahirap at medyo kumplikado. Pero dahil sa gabay at paraan ng pagtuturo ng aming guro, nagiging madali siyang intindihin. Kaya, masasabi ko na isang epektibong guro ang aming PR1 teacher. Una, laging nagbibigay ng examples ang aming guro. Nagbibigay siya ng real-life situations kung saan nakikitaan o naa-applyan ng mga research concepts na idini-discuss, para mas maintindihan namin ang topic" [T: Practical Research is really hard and somewhat complicated. But because of the guidance and strategy of our teacher, it becomes easier to understand. I can say that my teacher in PR 1 is effective since he utilizes strategies in teaching, whereas examples and real-life situations, where PR 1 is being applied, are integrated within the process. Through this technique, we can understand the lesson]. This corroborates that the contextualization of the discussion of research concepts through the integration of real-life scenarios up to the utilization of actual conducted research were determined to be huge

factors in making the transmission of public research knowledge more effective. Correspondingly, the research conducted by Korkmaz & Korkmaz (2013) concluded that contextualization had favorable long-term effects on students' motivation and learning.

An in-depth discussion of research concepts familiarizes beginning researchers with the subject. Corrigan (2013) emphasized that a lecture as a strategy of teaching should meet students' educational needs to engage them in their learning. These basic research concepts, as well as the educational needs of SHS learners, are necessary to be properly unlocked and to establish a good foundation and understanding in the conduct of research. Participants support this by stating that "Maayos na pag gabay at pag turo ng mga concepts" [T: Continuous guidance and effective teaching] and "Sa maayos na pag explain at pag turo sa amin lalo na f-to-f (face-to-face) naman na ang mga klase" [T: Clear explanation and teaching of the concepts, especially during face-to-face classes]. Also, another participant said, "Nothing much because he's really good at teaching; he even has a lot of examples for every concept so we could have a better understanding."

The provision of timely feedback with constructive suggestions from experienced researchers helps beginning researchers write a research paper. According to the University of South Carolina (n.d.), feedback is any response regarding a student's performance or behavior. It can be verbal, written, or gestural. The purpose of feedback in the assessment and learning process is to improve a student's performance, not put a damper on it. Immediate provision of feedback will assist in further understanding and correction as the SHS learners create their research studies. As answered by the participants, "yung paggawa palang ng research title, nagkamali na agad kami sa word na ginamit na kinorrect niya which is malaking tulong. Sa paggawa rin ng interview questions, nagkakapaan lang kami kasi 'di kami sure if tama ba 'yung nagawa namin or hindi" [T: Our teacher's immediate feedback and suggestion helped us when we had a mistake during the formulation of our research title. This provision of immediate feedback by our teacher helped us well in constructing research and interview questions] and "He always makes sure that what we're doing is correct; he fixes our mistakes and suggests a better one; and he always reminds us of the deadlines." In their study, Kourgiantakis et al. (2018) were able to identify themes

that characterize how feedback affects students, including how it advances knowledge, sharpens abilities, fosters professional judgment, and promotes self-reflection. The provision of feedback is characterized as an effective way to further enhance the reflective learning of SHS students and to concomitantly promote students' deep understanding of research (Gupta & Bhadauria, 2022).

Provision of links to online libraries, Journals, and other reference-worthy reading materials as part of teachers' assistance. One of the responses provided by a participant after being asked about the assistance he gets from their teacher as regards research development was "Akala namin mahihirapan kami maghanap ng mga basis namin for our research. 'Yung para sa RRL. Buti na lang may mga provided online libraries si Sir. Minsan mahirap kasi need ng internet, pero oks na rin. At least hindi na namin need pumunta sa totoong libraries" [T: We thought it will be hard for us to look for the basis of our research. We are thankful because our teacher provided us with online libraries. Though there are possible internet constraints, it is still better since we do not need to go to actual libraries]. References such as

online articles, journals, libraries, and other research studies can assist current and future researchers in conducting their studies. According to Frontiers Education (2018), one of the key problems for educational technology researchers and educators is creating digital spaces that can better support and potentially address obstacles and resulting emotions like confusion without requiring a teacher to be available to assist students. For learners as beginning researchers, online library resources are an essential element of the research process. They begin this process by conducting initial research, such as consulting with their teacher and looking for possible references online (Quadri, 2013).

### *How teacher-mentors' provision of assistance helps senior high school students with the challenges they encountered in learning research*

As mentioned by most of the participants, the teacher-mentor's assistance helped them overcome the challenging experiences they had during the process of understanding the research subject. Table 1 provides a summary of how the assistance provided by the teacher-mentors addresses the challenges encountered by the beginning researchers [learners].

**Table 1:** How teacher-mentors' provision of assistance helps the senior high school students with the challenges they encountered in learning research

Challenge/s Encountered	Assistance from Teacher-Mentors	How teacher-mentors' assistance helps the beginning researchers write and understand research
<b>1. Research is not a familiar subject for some beginning SHS students.</b>	<ul style="list-style-type: none"> <li>Presenting research samples as part of teachers' teaching strategies</li> <li>An in-depth discussion of research basic concepts</li> </ul>	It makes beginning researchers familiar with the research concepts and the subject in general.
<b>2. SHS students find technical research terms difficult to understand.</b>	An in-depth discussion of research basic concepts	Understanding the technical research terms through comprehensive discussions helps the beginning researchers in writing their papers.
<b>3. Reviewing related literature and designing research methods are the most challenging parts of a research.</b>	<ul style="list-style-type: none"> <li>Provision of timely feedback with constructive suggestions from the expert</li> <li>Provision of links to online libraries, Journals, and other reference-worthy reading materials</li> </ul>	<ul style="list-style-type: none"> <li>Timely and constructive feedback expands learners' knowledge on proper reviewing of literature.</li> <li>Exposing students to online libraries, reference journals, and other research materials makes them more aware of the systematic way of reviewing literature.</li> <li>Research methodology plays a vital role in crafting research, hence, intensively discussing every part of it gives not only the beginning</li> </ul>



	<ul style="list-style-type: none"> <li>An in-depth discussion of research basic concepts</li> </ul>	<p>researchers but also their future readers an overview of their research projects.</p>
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#### IV. CONCLUSION

This study aimed at analyzing the role of mentors in the development of SHS students' research competency as beginning researchers. Further, it tried to understand the importance of the mentor-mentee relationship as regards the improvement of the said competency.

As provided by the results, the presence of a teacher as the mentor of beginning researchers significantly contributes to how the latter learn the discipline. The teacher's presence includes not only the teacher himself or herself but, more importantly, how he or she handles the class, delivers the necessary knowledge, and assesses students' research skills. In essence, it must be highlighted that teachers' pedagogical competence provided a wide opportunity for the learners to explore the craft even more. It will allow them to do tasks collaboratively and create meaningful experiences with others. On top of that, it can be concluded as well that the provision of immediate and constructive feedback or suggestions can be a contributing factor to the development of students' research competency.

Additionally, it can be accounted for that the learners' ability to understand research part-by-part, coupled with the challenges they experience along the way, is deemed dependent on how their teachers present the concepts to them. In the final analysis, the teacher-mentors' role is indeed crucial to how beginning researchers can assimilate the fundamental research content and eventually be able to apply it across all disciplines.

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