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# Challenges Encountered by Technical Vocational Livelihood Learners in Enhancing Research Output: Basis for an Intervention Plan

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**A B S T R A C T :**

To develop effective interventions that enhance the research skills of TVL learners, it is essential to first understand the challenges they face. This study explores the specific difficulties encountered by TVL track students at Pitogo Community High School in conducting research. The objective is to identify these obstacles as a basis for designing targeted intervention strategies that will support learners in improving their research performance and advancing their academic and career growth. A mixed-method quantitative research design was employed to thoroughly examine the challenges experienced by TVL students in research activities. The study focused on current Grade 12 students enrolled in the Technical-Vocational-Livelihood (TVL) track at Pitogo Community High School to ensure relevance and accuracy of findings. Structured questionnaires with close-ended items and Likert scales were used to collect data from a larger sample of respondents. These tools aimed to quantify the frequency and extent of the challenges faced, as well as students' perceptions of existing support systems. The study adopted purposive sampling to select participants most likely to have experienced the issues under investigation, enhancing the reliability and focus of the findings. Descriptive statistics were utilized to analyze the survey results. Findings revealed that TVL-HE students, mostly males aged 16–18, encountered significant challenges related to limited resources, time constraints, and difficulties in group collaboration. However, these challenges showed no statistically significant differences based on age or sex. The study recommends the integration of Media and Information Literacy (MIL) in the TVL curriculum through hands-on activities such as fact-checking, workshops, and student-led media programs. Encouraging students to use social media for educational and civic engagement, verify information before sharing, and participate in capacity-building initiatives can further enhance their research capabilities and critical thinking.

Keywords: challenges encountered, research output, intervention plan

## 1. Introduction

Every teacher's goal for learners at every level of education is to be as involved as possible in the cognitive and physical learning process. It is no secret that a learner who is passively taking notes, listening to a lecture, and maybe answering an occasional question is not at their most engaged. When teachers ask their learners to engage in an activity during the learning process that involves all their senses, it activates the learning centers of their brains. This active participation adds up to a potent mix that significantly improves learning. Teachers can utilize kits, lab equipment, and immersive technology to enhance the learning experience and increase student engagement.  When doing hands-on activities, the learner learns by doing. When doing mind-on learning, however, the learner thinks about what she or he is learning and doing (Douglas, 2022).  In the ever-evolving field of education, research is crucial for helping students develop their critical thinking, problem-solving, and innovative skills. However, learners enrolled in the Technical Vocational Livelihood (TVL) Track at Pitogo Community High School confront particular difficulties in improving their research output. TVL learners participate in a curriculum that is skills-based primarily and hands-on, which may not expose them to the same level of rigorous research procedures as students in more academically focused programs.  Their capacity to provide high-quality research outputs, which are becoming increasingly required in both academic and professional contexts, is severely hampered by this gap. These learners face a variety of obstacles, from a lack of expertise in research methods and restricted access to research resources to problems with data analysis and interpretation. TVL learners' capacity to succeed in this field is further complicated by the requirement to strike a balance between the development of practical skills and academic research. The capacity to produce high-quality research outputs is not only a prerequisite for academic credit for Pitogo Community High School students enrolled in the Technical Vocational Livelihood (TVL) Track, but it is also a critical talent that can significantly improve their prospects for employment in the technical and vocational domains. These students, however, face particular challenges that limit their research capabilities, which may have long-term implications for their academic performance and future employability.

It is important to examine the obstacles faced by TVL students in order to improve their research productivity for several reasons. First, it sheds light on the particular challenges these students encounter, which could include limited access to research resources, inadequate training in research techniques, and the difficulty of striking a balance between the demands of academic research and the development of practical skills. Educators and policymakers can identify weaknesses in the current educational framework and create targeted initiatives to address them by gaining a deeper understanding of these

challenges. Second, TVL students' personal and professional development depends on their developing research skills. The capacity to undertake research is a vital talent that can set these students apart in the job market in an increasingly knowledge-driven industry. This study can help them develop their research competencies, which will enhance their overall academic achievement and professional preparedness by enabling them to recognize and resolve the challenges they confront. Lastly, the significance of this research lies in its potential to inform the development of an intervention strategy specifically tailored to meet the needs of TVL students at Pitogo Community High School. In addition to helping these students overcome their research obstacles, such a scheme would ensure that all students, regardless of their chosen pathway, have the opportunity to excel in research, advancing the larger objective of educational justice. Therefore, the goal of this study is to close a significant gap in the literature and lay the groundwork for important educational reforms that will help TVL students at Pitogo Community High School and beyond.

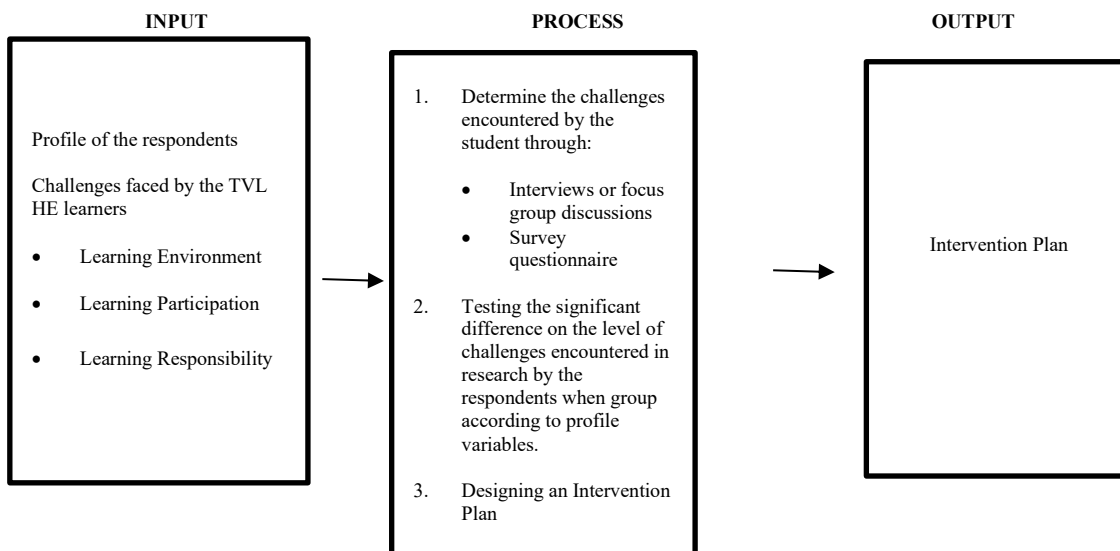**Figure 2**

*Research Paradigm*



Figure 1: Research Framework

## 2. Objectives of the Study

Generally, this study aims to design an intervention plan.

Significantly, this study aims to:

1. Describe the profile of the respondents as to:

   1.1 age,

   1.2 sex.

2. Determine the perception of the respondents on the level of challenges faced in terms of:

   2.1 Learning Environment,

   2.2 Learning Participation, and

   2.3 Learning Responsibility.

3. Find out if there is significant difference on the perception of the respondents on the challenges faced when they are grouped according to profile.

4. Based on the result, propose a research intervention plan to assist the learners in overcoming the challenges.

## 3. Materials and Methods

The research utilized a *quantitative mixed-method design* based on the *Input-Process-Output (IPO) Model* to explore the challenges faced by Grade 12 Technical-Vocational-Livelihood (TVL) students at Pitogo Community High School in conducting academic research. This design allowed the researchers to gather both broad quantitative data and rich qualitative insights, ensuring a comprehensive understanding of the issues under study.

The *quantitative aspect* involved the use of structured surveys and questionnaires featuring close-ended questions and Likert scales, which enabled the researchers to measure the frequency and intensity of challenges experienced by the learners. These instruments aimed to assess learners' perceptions of their research experiences, including difficulties with topic selection, data collection, analysis, and writing, as well as the adequacy of support systems and available resources.

To further validate and deepen the findings, the *qualitative component* of the study included *Focus Group Discussions (FGDs),* where students shared their personal experiences and insights regarding the research process. These discussions were facilitated using a semi-structured interview guide in a neutral setting to encourage open and honest communication. The qualitative data helped uncover critical factors influencing research outcomes, such as time management, peer collaboration, and access to research tools.

The *respondents* of the study were *Grade 12 students enrolled in the TVL track*, selected through *purposive sampling*. This method ensured the inclusion of participants who were directly engaged in research activities, thus enhancing the relevance and accuracy of the findings. While purposive sampling focused on those most likely to provide meaningful data, efforts were also made to introduce a degree of randomness to improve the *representativeness* of the sample and reduce bias. During the *conceptualization* phase, the researcher followed institutional protocols, submitting the research proposal to the Dean's Office and defending it before a panel of experts. Feedback from the defense was used to refine and enhance the quality of the study. For the *implementation* phase, permission was formally obtained from the Superintendent of the Division of Quezon and the school head of Pitogo Community High School. Following approvals, the researcher conducted *pilot testing and validation* of the research instruments to ensure reliability and clarity before administering the questionnaires to the student-respondents.

The *data gathering process* involved distributing the validated questionnaires, providing adequate time for respondents to complete them, and collecting the responses for analysis. Simultaneously, the researcher facilitated FGDs to gather more nuanced qualitative data. All responses were transcribed, consolidated, and analyzed to identify common themes and patterns.In terms of *data analysis,* the study employed *descriptive statistics* such as frequency counts, percentages, means, and standard deviations to summarize survey responses. Furthermore, *Analysis of Variance (ANOVA)* was used to determine if there were significant differences in the challenges faced by learners based on key demographic variables such as age, sex, and academic performance. The combination of quantitative and qualitative data was *triangulated* to enhance the credibility and robustness of the study's findings. Strict *ethical standards* were followed throughout the research process. Participants were informed about the nature and purpose of the study, the risks involved, and their right to withdraw at any point. Consent was obtained from all participants, and confidentiality was maintained. Both *primary and secondary data* were used appropriately, and data usage was approved through formal permissions.

Overall, this methodologically rigorous study ensured that the voices of TVL learners were accurately captured, and the findings are intended to guide the development of targeted interventions and strategies that enhance the research capabilities of vocational high school students.

## 4. Result and Discussions

**Part I. Profile of the Technical-Vocational-Livelihood (TVL) Learners**

**Table 1**

**Profile of the TVL learner-respondents in terms of Age**

| Age | Frequency | Percentage |
| --- | --- | --- |
| 16 to 18 | 55 | 82.1% |
| 19 to 21 | 10 | 14.9% |
| 22 and above | 2 | 3% |
| Total | 67 | 100% |

The table presents the age distribution of Technical Vocational Livelihood (TVL) track learners at Pitogo Community High School, with the majority (82.1%) being between 16 to 18 years old. According to the Department of Education (2016), the Senior High School program is designed for learners aged approximately 16 to 18, supporting the prevalence of this age group among TVL learners. This demographic trend highlights the alignment of the TVL track with the standard educational progression set by the national curriculum guidelines. This suggests that most students facing challenges in research output are within the typical senior high school age, possibly indicating limited prior research experience.

As observed by Laguador (2014), students at the early stages of their academic journey often show low confidence and preparedness in conducting research due to insufficient exposure and experience in previous grade levels. This lack of foundational knowledge and skills contributes to the difficulties SHS students encounter when engaging with the more complex tasks required in research writing and output. The smaller percentages of older students (19 to 21 years: 14.9%, 22 and above: 3%) may suggest that older learners have either different challenges or additional responsibilities affecting their research performance.

**Table 2**

**Profile of the TVL learner-respondents in terms of Sex**

| Sex | Frequency | Percentage |
|---|---|---|
| Male | 47 | 70.1% |
| Female | 20 | 29.9% |
| Total | 67 | 100% |

The table shows the Sex distribution of Technical Vocational Livelihood (TVL) track learners at Pitogo Community High School, with a majority (70.1%) being male and a smaller proportion (29.9%) being female. As highlighted by UNESCO-UNEVOC (2018), males tend to outnumber females in vocational education and training programs, particularly in technical fields, due to societal norms and traditional gender roles that influence educational and career choices. This suggests that the challenges encountered in dealing with research output may be more prevalent among male students, possibly due to differences in academic engagement or research-related skills. The lower percentage of female learners might indicate that their challenges in research differ, potentially influenced by gender-specific factors such as learning preferences or access to resources.

**Part II. The Challenges Encountered by Technical Vocational Livelihood Track Learners of Pitogo Community High School**

**Table 3**

**The Challenges Encountered by Technical Vocational Livelihood Track Learners of Pitogo Community High School in terms of Learning Environment**

| Learning Environment | Mean | SD | Interpretation |
|---|---|---|---|
| 1. *Difficulty o*n the learning materials resources needed for my research project. | 4.11 | .640 | Often |
| 2. *U*nable to perform research due to limited access to *computers, the internet, and relevant software in school for conducting research.* | 3.79 | .769 | Often |
| 3. *I*nsufficient schoo*l's study areas, classrooms, and laboratories conducive to working on my research tasks.* | 2.83 | .672 | Sometimes |
| 4. *Difficulty to seek guida*nce *from my teachers on how to conduct research and complete research projects.* | 3.00 | .784 | Sometimes |
| 5. *Failure to collaborate with my classmates on group research tasks which resulted to u*nsatisfactory output. | 3.51 | .724 | Often |
| 6. *I*nsufficient *training in research skills alongside technical skill development.* | 3.83 | .753 | Often |
| 7. *Limited time allocated in our schedule to focus on research work and projects.* | 3.81 | .652 | Often |
| 8. *Provisio*n for research workshop or training session that helps me *improve my research skills are limited (e.g., data analysis, and academic writing).* | 3.77 | .577 | Often |
| 9. Less Exposure to research oriented environment that can motivated us to engage in research projects. | 3.55 | .607 | Often |
| 10. *Limited financial resources to purchase or access materials needed for completing my research projects.* | 3.77 | .824 | Often |
| **Overall Mean** | **3.60** | **0.70** | **Often** |

*Legend: 4.50-5.0 (Always); 3.50-4.49 (Often); 2.50-3.49 (Sometimes); 1.50-2.49 (Rarely); 1.0-1.49 (Never).*

Table 3 presents the mean, standard deviation, and interpretation of challenges related to the learning environment concerning research output among Technical Vocational Livelihood (TVL) track learners. Table 3 indicates that Technical Vocational Livelihood (TVL) learners "Often" encounter challenges related to the learning environment when conducting research, with an overall mean of 3.60.

The most pressing issue identified was the significant lack of access to essential research materials, with a mean rating of 4.11. The statement "Sometimes, we do not have access to the internet or updated research materials, making it hard to complete our work." underscores a critical barrier faced by students in public schools, where limited resources hinder their academic progress. Supporting this observation, Dizon and Torres (2021) concluded that inadequate access to current academic resources severely impairs the research capabilities of these learners. The implications of this deficiency are profound, as it not only stifles students' ability to engage with contemporary scholarship but also perpetuates educational inequities. Addressing this issue is vital for fostering an environment where all students can thrive academically and develop the necessary skills to succeed in an increasingly information-driven world. Enhanced access to research materials is essential for empowering learners and promoting equitable educational opportunities.

Technological challenges were also evident, with limited access to computers and the internet receiving a mean of 3.79. As shown, the respondents believed, "Our school has limited internet… we are allowed to print, but we should provide the paper or pay." Villanueva and Santos (2023), highlighted that digital poverty remains a barrier for learners in resource-limited schools, especially for data gathering and writing processes.

Time constraints also play a significant role, especially in a curriculum like TVL that combines academic and practical training. With a mean of 3.81, many students voiced the difficulty of balancing tasks as supported by the statement "balancing my academic tasks and research can be quite challenging, especially with the hands-on training and practical activities in TVL." Ramos and Castillo (2022), echoed this, emphasizing that time allocation directly influences student research performance.

Another area of concern was peer collaboration, particularly in group settings. The statement "being a leader of our group in research, I am challenged… my members are not so cooperative" reflects the difficulty in managing group dynamics and ensuring shared responsibility. According to Baldovino and Cruz (2020), effective research collaboration requires structured mentoring and clearly defined roles, which are often lacking in group projects at the high school level.

In contrast, the lowest-rated challenge was insufficient school study areas (Mean = 2.83), indicating that this was relatively less disruptive compared to others. Despite these challenges, many learners acknowledged teacher guidance as a source of support. However, as Hernandez et al. (2024), pointed out, even with strong teacher involvement, learning environments must be enhanced through financial aid, ICT access, and skill-based training to bridge existing gaps in research capability.

**Table 4**

***Challenges Encountered by Technical Vocational Livelihood Track Learners in terms of Learning Participation***

| | Indicators | Mean | SD | Interpretation |
|---|---|---|---|---|
| 1. | *Whe*n called to *participate in class discussions related to research methodologies and practices but failed to deliver due to difficulty i*n expressing my ideas. | 3.83 | .930 | Often |
| 2. | *Hesita*nt to ask *questions when I encounter difficulties with my research projects due to fear of judgeme*nt. | 3.67 | .725 | Often |
| 3. | I seldom ever ask my lecturers for suggestions on how to improve the way I present my research because of fear of criticism. | 3.50 | .841 | Often |
| 4. | In group research tasks, I struggled to collaborate with my classmates and make a meaningful contribution to the project. | 3.70 | .853 | Often |
| 5. | Spending time on research assignments and projects outside of the classroom is not a high priority. | 3.52 | .823 | Often |
| 6. | I find the research-related workshops or training provided by the school to improve my research skills uninteresting. | 3.31 | .940 | Often |
| 7. | Engaging in discussions and peer reviews with my classmates to enhance the quality of my research doesn't appeal to me. | 3.67 | .587 | Often |
| 8. | The initiative to use additional resources *(e.g., books, and online materials)* to enhance research isn't engaging for me. | 3.65 | .879 | Often |
| 9. | Participating in research activities that relate to my TVL track and future career is uninteresting to me. | 3.37 | 1.012 | Often |
| 10. | Regularly applying the feedback and guidance from my teachers to improve my research output is not a top priority for me. | 3.65 | .844 | Often |
| | Overall Mean | 3.59 | 0.844 | Often |

*Legend: 4.50-5.0 (Always); 3.50-4.49 (Often); 2.50-3.49 (Sometimes); 1.50-2.49 (Rarely); 1.0-1.49 (Never)*

Table 4 presents the challenges encountered by Technical Vocational Livelihood (TVL) track learners of Pitogo Community High School in terms of learning participation, with an overall mean of 3.59 ("Often"), indicating that students frequently struggle in this area. The highest-rated challenge was the difficulty in expressing ideas during class discussions on research (Mean = 3.83). The statement, *"I feel nervous when starting and sometimes frustrated because of deadlines and revisions"* reflects low confidence and communication barriers, which are critical for research participation. David, Tolentino, and Villanueva (2022), emphasized that TVL students commonly experience hesitation and low self-efficacy when engaging in research tasks, particularly when speaking in front of peers or authority figures. Another significant issue was the reluctance to ask questions due to fear of judgment (Mean = 3.67). The presence of such anxiety can hinder learners from seeking feedback and improving their work. According to Ramos and Francisco (2021), implementing learner-centered strategies and teacher scaffolding effectively reduces reluctance and improves student discourse and performance in research contexts.

Group collaboration challenges (Mean = 3.70) also emerged strongly. Statement, *"My members are not helping me,"* and *"Working with group on research is challenging because we have different schedules and responsibilities"* illustrate the struggle with shared accountability in research tasks, especially in group settings. Martinez and Cruz (2023), advocated for structured peer mentoring and collaboration protocols to help learners build trust, accountability, and shared responsibility in group research work.

While most items were rated "Often," the least experienced challenge was finding research-related workshops uninteresting (Mean = 3.31). Though still moderately high, this suggests learners may see some value in workshops when implemented effectively. According to Vygotsky's Social Development Theory (1978), learning occurs most effectively through social interaction. Therefore, workshops, if designed to be collaborative and interactive, can become an essential tool for enhancing research skills and student participation.

In support of this, Delgado and Reyes (2023), reported that interactive, student-centered research workshops led to significant improvement in student engagement and interest in research. When learners feel that the activities are relevant, practical, and tailored to their needs, participation levels increase.

**Table 5**

***The Challenges Encountered by Technical Vocational Livelihood Track Learners in terms of Learning Responsibility***

| Learning Responsibility | Mean | SD | Interpretation |
|---|---|---|---|
| *1. Taking responsibility for completing my research tasks on time without relying heavily on others is disregarded* | 3.43 | .838 | Often |
| 2. Research projects come with requirements that need to be met, but I haven't prioritized seeking clarification, nor have I ensured that I fully understand them. | 3.85 | .743 | Often |
| 3. Gathering and organizing the materials and resources for my research work is quite challenging. | 3.62 | .901 | Often |
| 4. Taking full ownership of the research process or relying entirely on my classmates for group work is not something I do. | 3.58 | .837 | Often |
| 5. Making an effort to follow the research methodology and guidelines given by my teacher is not a high priority. | 3.53 | .803 | Often |
| 6. I struggle to take the initiative to revise and enhance my research output based on feedback and critiques. | 3.74 | .822 | Often |
| *7. Inconsistently manage my time effectively to balance research work with other academic and personal responsibilities.* | 3.76 | .740 | Often |
| *8. Hesitant to hold myself accountable for the quality of my research output and strive to meet academic standards.* | 3.85 | .839 | Often |
| 9. Looking for opportunities to improve my research skills through additional readings, tutorials, or workshops is not significant. | 3.89 | .741 | Often |
| 10. Taking responsibility for addressing issues that emerge during my research process is not a major concern. *(e.g., data collection, and analysis) and finding solutions.* | 3.43 | .838 | Often |
| Overall Mean | 3.67 | 0.810 | Often |

*Legend: 4.50-5.0 (Always); 3.50-4.49 (Often); 2.50-3.49 (Sometimes); 1.50-2.49 (Rarely); 1.0-1.49 (Never).*

Table 5 indicates that Technical Vocational Livelihood (TVL) learners "often" struggle with aspects of learning responsibility, as reflected in the overall mean of 3.67. This suggests that students encounter recurring challenges in managing and taking ownership of their research-related tasks.

The highest-rated items are Item 2 and Item 8, both with a mean of 3.85, indicating that learners frequently fail to seek clarification on research requirements and show hesitancy in holding themselves accountable for academic standards. The statement, *"I am not confident with the methods we are using, and I don't always ask for help because I'm afraid it might seem like I don't know what I'm doing"* aligns with De Guzman and Reyes (2024), who reported that TVL learners often avoid taking initiative due to limited confidence and lack of familiarity with academic expectations.

In another response, *"I tend to delay starting my research, leading to rushed work,"* the issue of poor time management (mean = 3.76, Item 7) was highlighted. Effective time management is a key trait of self-regulated learners, and its absence can compromise research quality. This finding is supported by Ramos and Lucero (2021), who found that among senior high school students, time mismanagement is a common barrier to research productivity—especially in strands like TVL that demand practical and academic integration.

Additionally, the challenge of taking the initiative to revise based on feedback (Item 6, Mean = 3.74) remains a significant concern. A participant admitted, *"I struggle to revise our paper after feedback because I'm not sure how to improve it."* This reflects a lack of ownership and skill in self-editing, which are essential aspects of responsible learning and academic maturity. According to Santos and Bermejo (2023), the ability to internalize and apply constructive feedback is a strong indicator of student responsibility in research contexts.

Learners also reported that seeking further learning opportunities (Item 9, Mean = 3.89) was not a priority. One respondent stated, *"I want to improve my knowledge in research and statistics, but I don't know where to start or what to read."* This reflects a gap in motivation and direction—both essential to self-directed learning. Dela Peña and Lim (2022), emphasized that schools need to provide accessible enrichment programs and scaffolded resources to cultivate students' initiative in expanding their research competencies.

In contrast, the least prevalent challenges were seen in Items 1 and 10 (both Mean = 3.43), although still interpreted as "Often." This suggests that while some students are beginning to take more responsibility in handling tasks and solving problems, consistency remains an issue.

**Part III. Significant Difference between the Challenges faced by the TVL HE Learners in Improving Research when they are Grouped According to Profile Variables**

**Table 6**

*Test of Difference Between the Challenges Faced by the TVL HE Learners in Improving Research when they are Grouped according to Demographic Profile*

| Challenges | Sex | | Age | |
|---|---|---|---|---|
| | F- Value | P - Value | F - Value | P - Value |
| Learning Environment | 1.686 | .199 | 2.126 | .128 |
| Learning Participation | .457 | .502 | 1.972 | .149 |
| Learning Responsibility | 2.210 | .142 | 549 | .580 |

*Legend:   Significance Level (α) = 0.05      Sig. < 0.05 – Significant difference      Sig. ≥ 0.05 – Not significant*

The F-test analysis presented in Table 6 examines whether there is a significant difference in the challenges faced by Technical Vocational Livelihood (TVL) Home Economics (HE) learners in improving research skills when grouped by their demographic profiles, specifically sex and age.

The results indicate no statistically significant differences across both demographic variables in all three domains: Learning Environment, Learning Participation, and Learning Responsibility. All p-values exceed the significance threshold of 0.05, implying that neither age nor sex significantly affects the challenges encountered by the learners.

In terms of *Learning Environment*, the p-values for sex and age are 0.199 and 0.128, respectively, both indicating no significant difference. This is consistent with the findings of Arban et al. (2024), who identified systemic barriers such as curriculum design, resource constraints, and instructional readiness as key challenges within the TVL track, regardless of the learner's age. Similarly, Ryoo et al. (2020), found that while gender may influence track selection (with males more inclined toward TVL and females toward academic strands), it does not significantly affect the nature of challenges encountered in research.

Regarding *Learning Participation,* the F-values and p-values (.502 for sex and .149 for age) again show no significant difference. Mendoza et al. (2023), echoed this by emphasizing that both male and female students experience similar obstacles in research, particularly in the area of data analysis and technology use. One respondent noted that "using technology, like spreadsheets and research tools, to organize and analyze data are the skills I need to improve," underscoring the universal need for enhanced digital literacy among TVL learners.

For *Learning Responsibility*, results also revealed no significant difference by sex (p = .142) or age (p = .580). Supporting this, Bahurudin and Luster (2015) reported no notable sex-based differences in academic performance in education colleges in Borno State, reinforcing that sex may not be a defining factor in academic challenges.

The findings suggest that the challenges in improving research among TVL HE learners are not significantly influenced by age or sex. This implies the necessity for universally designed interventions that address common, systemic barriers rather than tailored strategies based on demographic subgroups. Efforts should therefore focus on enhancing instructional support, providing adequate resources, and improving technological literacy across the board.

**Focus Group Discussion Result**

| | Interview Question | Answer |
|---|---|---|
| 1. | What challenges do you usually face when starting your research project? | R1- *"I struggle in finding a topic that is researchable and suited to our track and the use of available resources for my research."* <br> R2- *"balancing my academic tasks and research can be quite challenging, especially with the hands-on training and practical activities in TVL."* <br> R3- *"I tend to delay starting my research, leading to rushed work, balance my time in other subject and dealing with always absent members."* <br> R4 – *"I find it challenging to introduce and justify my research and doing other tasks in other subjects at the same time."* <br> R5- *"I am challenged in understanding how to properly cite sources like computing results, keeping my files and members are not helping me."* <br> R6– *"I am challenged in computing the results and members who are not cooperative."* <br> R7– *"I struggle with using research-related tools like how to properly get the related studies and literature and the use of resources."* <br> R8- *"Being a leader of our group in research I am challenged in making chapter 1 to 3 my members are not so cooperative."* <br> R9- *"Working with group members on research is challenging because we have different schedules and responsibilities.* |
| 2. | How do you feel about the research process, from formulating a topic to submitting your final output? | R1 – *"I am very challenged because the research process is difficult."* <br> R2 – *"I feel nervous when starting and sometime feeling frustrated because of deadlines and revisions.* <br> R3- *"Finding a topic and gathering data and dealing with members are frustrating, but after we made it I felt accomplished and proud."* <br> R4- *"I felt sad when we have a lot to revise in our study, and nervous when we defended our study."* <br> R5- *"Its tiring and nervous in defending research but finishing it is a fulfillment."* <br> R6- *"I sometimes struggle with methodologies and nervous in defense."* <br> R7- *"Balancing research with other subjects and deadlines is stressful and also editing and revising is tiring but feeling accomplished after."* <br> R8 – *"I am feeling pressured as a leader because my members defends on me and nervous in finals but I enjoy learning new things through research, but meeting deadlines adds pressure."* <br> R9– *"I struggle to revise our paper after feedback because I'm not sure how to improve it."* |
| 3. | What difficulties do you encounter when collecting data for your research?" | R1- *"Some respondents are unwilling to participate in surveys, making data collection challenging."* <br> R2- *"I find it difficult in data collection because they do not take the survey seriously."* <br> R3- *"Some respondents do not provide clear or honest answers."* <br> R4- *"Conducting research, especially when printing surveys or traveling for interviews, can be costly."* <br> R5- *"Some respondents are not responsive and busy*." <br> R6- *"Respondents are not responsive."* <br> R7- *"I encountered in school some students are not participating* <br> R8- *We have difficulty in printing survey questionnaire."* <br> R9- *"For me I encountered unresponsive respondent*." |
| 4. | How do you find the process of analyzing the data that you have collected? | R1- *"Its challenging and time consuming."* <br><br> R2- *"Its difficult to interpret result and sometimes struggled in statistical tools and method."* <br> R3- *"I find data analysis to be a task that requires a lot of patience and accuracy."* |

| | | |
|---|---|---|
| | | R4- *"I am not confident with the methods we are using, and I don't always ask for help because I'm afraid it might seem like I don't know what I'm doing."*<br>R5-*"For me, data analysis is complicated."*<br>R6- *"Although it is challenging, I find data analysis to be a great learning experience."*<br>R7- *"I find data analysis confusing. With proper guidance from teachers, we made it correctly."*<br>R8- *"For me, analyzing data can be overwhelming, especially when faced with time pressure. However, despite the pressure, we were able to complete it successfully."*<br>R9- *"I find data analysis to be a task that requires a lot of patience."* |
| 5. | What kind of support do you receive from your teachers or school in conducting your research? | R1- *"Ahhmm, Teachers checked our work."*<br>R2- *"Our research teacher assisted us in refining our research work."*<br>R3- *"They are very helpful, we receive moral support and encouragement, which boosts our confidence in completing our research."*<br>R4- *"Teachers are very helpful they gave us sample research papers as references to guide us in our study."*<br>R5- *"Our school allowed us to use 1 tablet per group for us to do our research and helps us revise our research."*<br>R6- *"Our school allowed us to use printer when available and teachers guided us in conducting research."*<br>R7- *"Our teacher in research rehearsed us in research defense, they helped us in revising our study."*<br>R8- *"They helped us improve our research and encouraged us to participate and guide us in completing our study."*<br>R9- *"They checked our work and they gave us support in defending our research."* |
| 6. | What resources are available to you in completing your research, and are they sufficient? | R1- *"For our research teachers allows us to print in school but with pay, because we don't have at home."*<br>R2- *"For research, I use a school tablet but its hard to use. Teachers and classmates are also there to help us."*<br>R3- *"Sometimes, we do not have access to the internet or updated research materials, making it hard to complete our work."*<br>R4- *"Our school allows us to use tablet per group."*<br>R5- *"For our research, we used online research databases, and educational websites. Sometimes we encountered issues finding the exact resources I need."*R6- *"We rely on online tools such as Google Scholar to complete my research, but there are resources that needs subscription that's why its hard to access."*<br>R7- *"The resources we use for research are online databases, and websites like Google Scholar. The Teachers and classmates also provide support when I need it."*<br>R8- *"For research, we used research outputs of graduates. School has no library so we rely more on available websites provided by the teachers. Teachers and classmates are also useful for discussing ideas and getting advice."*<br>R9- *"To complete our research, we rely on the internet and educational videos on YouTube because School has no library."* |
| 7. | How do you manage your time between your academic tasks and completing your research? | R1-*" Very challenging I need to balance research and activities in other subjects. I worked on research on school and weekend."*<br>R2- *"With our Research paper"*<br>R3- *"I struggled with balancing school academics. I had to focus and approach teachers to help me and check my work."*<br>R4- *"For me, Managing my time during a research was challenging. We set our time and divide each parts to my group members."*<br>R5- *"I ask for help from my teachers or classmates when I struggle. We ask our teachers to check our papers during their free time."*<br>R6- *"I am working with a group."*<br>R7- "As a *Technical-Vocational-Livelihood (TVL) student,* balancing my academic tasks and research is challenging, especially with the hands-on training and practical activities that come with my track. We did our best to manage time effectively so I can complete my school tasks."<br>R8- "*I communicate with my teachers and ask for guidance whenever I encounter difficulties., I also collaborate with my classmates,* divide our tasks efficiently to lessen the workload and ensure that we meet our deadlines."<br>R9- *"It is challenging because we spend hours practicing skills, I sometimes have limited time left for research. To manage this, I practice self-discipline by avoiding distractions like excessive social media use and unnecessary activities."* |
| 8. | What motivates you to complete your research, and what discourages you? | R1- *"Ahh,,,Completing my research gives me a sense of accomplishment, and that motivates me to push through the challenges. What discourages me is the other school tasks, especially when I have to balance research with my TVL practical activities.*<br>R2- *"I am motivated by my teachers and classmates who always supports me. Seeing them work hard inspires me to do my best. However, I sometimes feel discouraged when I lack financial, computer, and internet resources."*<br>R3- *"For me, My motivation is for me to be successful and I know this which will help me in college. I get discouraged when my schedule becomes too tight, not cooperative members and use of laptop and internet connection."*<br>R4-*" My family motivates me to complete my research and study hard. They always remind me that education is important. But I feel discouraged when I am unable to find the right information for my study."* |

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| | | R5- *"I am motivated because I want to graduate and make my family proud. But there are times when I feel discouraged, especially when I experience difficulties in gathering data or when deadlines with other schoolwork and resources."*<br>R6- "I am motivated because of my family, but, when I experience rejection of my proposals or revisions, I feel discouraged."<br>R7- *"I am motivated because I want to graduate. I want to achieve a high score. I am discouraged when I encounter difficulties, like slow internet connection or difficulty accessing resources."*<br>R8- *"I am motivated by the challenge of proving to myself that I can do it. Research is difficult, but overcoming the struggles makes me feel proud. What discourages me is when I don't understand certain concepts and feel like giving up."*<br>R9- *"I am motivated because I want to graduate and be an honor student. But I struggle with time pressure, limited resources which sometimes makes me lose motivation."* |
| 9. | What specific skills or knowledge areas do you feel you need more help with when conducting research? | R1-"I want to improve my knowledge in research and statistics, but I don't know where to start or what to read."<br>R2- *"I need more help in Writing the Review of Related Literature is difficult for me. I struggle to find relevant sources and summarize them properly."*<br>R3- *"For me, Interpreting and analyzing data is confusing. I want to learn how to use basic statistics because I'm not good in this."*<br>R4- *"I need more help in statistics, I lack confidence when presenting my research. I need to improve my public speaking skills and learn how to explain my findings effectively."*<br>R5- *"I am not good at writing the Review of Related Literature. I struggle in statistics and interpreting data."*<br>R6- *"I need confidence in presenting my research. I want to improve my writing skills to make my research good."*<br>R7- *"I need help in interpreting and analyzing data and learn more statistics."*<br>R8- *"For me I struggle with time management because research takes much effort and I need more resources to do each parts. I want to improve my knowledge in research and statistics."*<br>R9- *"For me is using technology, like spreadsheets and research tools, to organize and analyze data are the skills I need to improve."* |
| 10. | What suggestions can you give to improve the support or resources available to TVL learners in conducting research? | R1- *"I think we need more samples of Research and more access to different websites for research and more knowledge in Statistics."*<br>R2- *"We want more practice in Statistics and interpretation and analysis of data."*<br>R3-*"I think the schedule or additional time for research work and additional resources, as TVL subjects are already heavy with practical tasks to do."*<br>R4-*"More time in research and mentor for researchers."*<br>R5-*"I think More support for financial or research grants to help students with materials, printing, and other research-related costs."*<br>R6- *"For me I want group research discussions or peer mentoring sessions so we can learn from each other's experiences."*<br>R7- *"More available resources, laptop and internet to finish our research."*<br>R8- *"For me to improve our research we should have more available resources like computer and internet and more time to finish our study."*<br>R9- *"Maybe more computer, time and free bond paper for students."* |

## 5. Conclusions

Based on the gathered data and findings of the study, the researcher arrived at this conclusion:

The study tested the hypothesis that there are no significant differences in research challenges experienced by TVL-HE students based on age and sex. The findings support this hypothesis, as statistical analysis revealed no significant difference in the research difficulties encountered by students when grouped by age or sex; thus, the null hypothesis is not rejected.

## 6. Recommendations

Based on the study's findings, several targeted recommendations are proposed to strengthen Media and Information Literacy (MIL) among TVL learners. Teachers are encouraged to integrate MIL into core subjects and use real-world examples for fact-checking, while school administrators should organize workshops, support student-led media initiatives, and create social media guidelines for civic education. TVL learners are urged to engage in capacity-building activities, use social media for educational purposes, and practice responsible information sharing. Additionally, subject group heads should collaborate to embed MIL and political discourse into the curriculum, lead LAC sessions, and provide support and monitoring to ensure effective implementation.

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