MODULAR LEARNING EFFICIENCY: LEARNER'S ATTITUDE AND PERFORMANCE TOWARDS SELF-LEARNING MODULES

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ABSTRACT

Learner's attitude towards modular distance learning catches uncertainties as a world crisis occurs up to this point. As self-learning modules (SLMs) become a supplemental means of learning in new normal education, this study investigated efficiency towards the learners' attitude and performance. Specifically, the study described the learners' profile and their attitude and performance towards SLMs. It also ascertained the relationship between the learner's profile with their attitude and performance, as well as the relationship between attitude and performance relevant to SLMs. A descriptive-correlational research design was employed in the study with 88 non-randomly chosen participants from secondary schools in West Philippines. The learners' GWA (general weighted average) was used to determine their performance and a survey questionnaire for their profile and attitude. Frequency counts, percentage, and Spearman's rank correlation coefficient were used to analyze the data gathered with the aid of Jamovi software. Results revealed a strong correlation between attitude and performance, but there was no link between learner's attitude and performance as to the learner's profile. It was affirmed that attitude is a compelling factor that is related with performance. Hence, this research has broader ramifications that can direct the Bureau of Learning Delivery to orient the module writers to further contextualize the learning materials that can compound learner's disposition and academic performance.

Keywords: Attitude, Academic Performance, COVID-19, New Normal Education, Modular Learning

INTRODUCTION

Filipino learners faced developing challenges brought by the closure of schools and continue to experience the same as the situation worsens. To date, the limited face-to-face classes proposed is not yet feasible. The abrupt move to remote or distance learning may have a drastic impact to the learner's attitude and performance. To cope with this concern, the Department of Education (2020) releases the most essential learning competencies to ensure mastery of the core learning areas as well as to maximize learners' engagement with their subjects. Adapting to the rough transition and new mode of learning indeed takes on the learner's attitude and performance. During the pandemic, El Said (2021)

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and Lee et al. (2021) have reported that an increase in the learner's academic performance is associated with positive attitude towards learning. Both attitude and academic performance have been explored prior to the pandemic, but there are few in the context of modular distance learning (MDL).

In the Philippines, where face-to-face interaction is not yet possible (Agaton & Cueto, 2021) and online learning is challenging in the province of Palawan (Agayon et al., 2022), MDL is currently being implemented. Though it contests academic integrity among learners (Bautista & Pentang, 2022) and may heighten learners' demotivation (Bordeos, 2021), MDL engages the use of self-learning modules (SLMs) which encourages independent and self-paced learning. It focuses on learning outcomes, and its effectiveness is determined by the ability to connect learner performance and course design to the outcomes (Friestad-Tate et al., 2014). Given that attitude is strongly related to performance (Ibañez & Pentang, 2021; Pekrun et al., 2017), implementing MDL via SLMs may have a negative impact on the learners' attitude, which may have a direct influence on their performance. Since every learning outcome and learner performance are linked with their attitude, exploring both and their relationship motivated the study with the limited scientific inquiry conducted in the locality.

Despite the pandemic, the Department of Education (2020) remains committed to providing high-quality education, considering that the learner's ability to establish a good attitude and improve their performance is jeopardized. Hence, the study determined the learner's attitude and performance regarding SLMs, where results can benefit young learners who were directly affected by MDL during the pandemic. Besides, results may be helpful to the Department of Education, especially curriculum developers and module writers in developing and implementing learning materials that is appropriate for distant or remote learning. The study's outcomes can be used also by teachers to better tailor topics and evaluation methods to learners who are struggling. Further, parents can understand their crucial role in their children's upbringing at home. It may also create awareness among learners to understand the

value of having a positive attitude toward homeschooling and independent learning. Since the learner's performance and perspectives during the basic education level is considered to strongly define their attainment of learning outcomes in the college level (Kankaew et al., 2021), results will serve as basis in the preparation of the learners for tertiary education.

Recent studies explored the relationship between the learners' profile with their attitudes (Andrew et al., 2020; Harju-Luukkainen et al., 2020; Manlangit et al., 2020; Mirahmadizadeh et al., 2020) and performance (Buctot et al., 2021; Francisco et al., 2021; Indrahadi & Wardana, 2020; Naite, 2021; Yang & Zhao, 2020), as well as the relationship between attitude and performance (Agaton & Cueto, 2021; Dikaya et al., 2021; El Said, 2021; Lee et al., 2021; Mirahmadizadeh et al., 2020). However, no studies have evaluated learner's attitudes and performancetowards MDL, especially in the basic education level in the province of Palawan, the Philippines where most schools made use of printed modules instead of online platforms. Aside from its contribution to the body of knowledgthe e, results of the current study agreed and argued the cited literatures.

OBJECTIVES OF THE STUDY

Given that the COVID-19 may affect the learning interest and academic success, an inquiry combining both attitude and performance towards SLMs is helpful for teachers in addressing the concerns of the learners. Since attitude and performance play a significant role in the growth and development of young learners, assessing modular learning efficiency is necessary. With the foregoing, the study was able to:

1. describe the learner's profile in terms of age, sex, parents' level of education, parent's employment status, family monthly income, gadgets available, and internet connectivity;
2. ascertain the attitude of the learners towards SLMs;
3. determine if there is a significant relationship between the learner's profile in terms of age, sex, parents' level of education, parents' employment status, family monthly income,

gadgets available, and internet connectivity with their attitude towards SLMs;

4. find out the learner's performance towards SLMs;

5. determine the significant correlation between the profile of the learner in terms of age, sex, parents' level of education, parents' employment status, family monthly income, gadgets available, and internet connectivity and its relationship with the learner's performance; and

6. determine if there is a significant relationship between the learner's attitude with their performance towards SLMs.

METHODOLOGY

Research Design. The study employed a quantitative research design combining descriptive and correlational research designs. The descriptive-correlational design enabled the researchers to address the goals of the study (Magulod et al., 2021). The descriptive design described the attitude and performance of the learners towards SLMs, while the latter determined the relationship between (a) the learners' profile with attitude and performance, and (b) the learners' attitude and performance.

Participants and Sampling Procedure. The participants of the study were Grade 8 learners from secondary schools situated in Palawan. Eighty-eight participants were chosen using availability and convenient sampling as the challenges posed by the COVID-19 restrictions do not permit randomly sampled participants to join the survey. These learners voluntarily participated in the survey with the consent and approval of their parents and teachers. These participants were chosen since they were the first batch of learners who underwent modular learning last school year and have difficulty transitioning from elementary to high school life.

Data Gathering Procedures and Analysis. Initially, letters were addressed to the school authorities, the barangay captains, the parents, and the participants requesting permission to conduct the study. Following approval of the request, the researchers used a survey questionnaire to collect the necessary data. The first part of the instrument enquired about the learner's profile, such as age, sex, parents' level of education, parents' employment, family income, gadgets available, and internet connectivity. The second part was a checklist of 16 items that describes the learner's attitude toward SLMs. A limited item was designed to conform to the short attention span of the participants. The instrument was both written in English and in Filipino to break language barriers in the study. Items not clearly understood were further translated into the participant's mother tongue.

To ensure that the instrument is valid and reliable, the questionnaire undergone two phases of pre-testing which were employed for non-participants. The Cronbach's alpha of 0.81 means that the instrument is reliable. Recommendations were obtained from two external experts. Data regarding the participant's academic performance was based on their general weighted average obtained last school year.

The data collected were tabulated and screened first to guarantee a valid analysis. Data were analyzed using *jamovi* software following Pentang (2021b). Frequency counts (*f*) and percentage (*%*) were utilized to describe the participants' profile and their attitude and performance toward SLMs. Spearman's rank correlation coefficient (r_s) was used to determine a significant relationship between the (a) learners' profile with their attitude, (b) learners' profile with their performance, and (c) learners' attitude and their performance.

Ethical Considerations. Utmost ethical considerations were maintained prior, during, and after the conduct of the study. Despite having approved request letters from school authorities and consent from instructors, parents, and participants, school and student involvement is entirely voluntary. The study and its purposes were discussed with the participants. All data collected was kept strictly confidential, and no specific school and personal information was acquired or reported in the study.

RESULTS AND DISCUSSION

1. Profile of the Respondents

1.1. In terms of Age and Sex

Table 1 exhibits that majority of the participants are 13 years old (63.6%) and females (52.3%). This clearly shows that the students are of the right age to be in the Grade 8 level, while female students were given equal opportunities as males. This break the gap that only males are given priority to study and are being sent to school while females stay at home to do the household chores. Besides, it can be shown that at an early age, parents sent their children to formal schooling, putting their trust that education matters while providing their children their right to education. Similarly, the technical report of Pentang et al. (2020) and Pentang (2021a) have showed that equal opportunities are provided to both male and female youths in Palawan who are currently having a home study using SLMs, however, these youths belong to older age brackets.

Table 1
Profile of the Participants

Profile Variables	Frequency (n = 88)	Percentage (%)
Age		
13 years old	56	63.6
14 years old and above	32	36.4
Sex		
Male	42	47.7
Female	46	52.3
Parents' Level of Education		
Father		
Elementary Level	31	35.2
High School Level	38	43.2
College Level	19	21.6
Mother		
Elementary Level	28	31.8
High School Level	38	43.2
College Level	22	25.0
Parents' (Both Father & Mother) Employment Status		
Government Employee	6	6.8
Self-employed	82	93.2
Family Monthly Income		
Below ₱10,957 (poor)	76	86.4
₱10,957 to ₱21,914 (low income but not poor)	12	13.6
Availability of Gadgets		
Normal (Keypad) Phone	36	40.9
Smart Phone	47	53.4
Laptop	5	5.7
Internet Connection		
Strong	5	5.7
Poor	47	53.4
None	36	40.9

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1.2. In terms of Parent's Level of Education and Employment Status

There are more parents (43.2%) who were able to reach high school level than elementary or college, indicating that the parents may have the basic literacy and numeracy skills to assist their children. Though these parents did not complete their tertiary education, they still played a rewarding role to facilitate their wards education, especially with the use SLMs. Since these parents were not able to gain a college degree, a high percentage (93.2%) of them were self-employed. Despite not having the qualities to earn a job in either a public or private entity, the data present that these parents were able to work to meet their family's daily needs while determined to guide their children in working on their SLMs. Accordingly, the reported monthly income of the participants is below ₱10,957 (86.4%), which is described as poor, based on the country's statistics. This poor status can be related to the educational and employment background of the participants' parents. However, the data strongly confirmed that low family income is not a hindrance in education, especially in this new normal situation. Evidently, the parents were able to support their wards despite the concerns for resources added by the difficulties caused by the pandemic. Agayon et al. (2022) noted that parental assistance is essential as SLMs is the new norm and limited face-to-face classes is not yet fully implemented.

1.3. Availability of Gadgets and Internet Connection

Majority of the participants have smartphones (53.4%). This means that they have an edge to communicate with their teachers and classmates as well as to do task that require online resources. However, it is valuable to note that 40.9 percent of the participants had basic cellphones, which connotes that they had no means to communicate and perform online task if necessity arises. In spite of the extra burden on the pocket of the parents, the participants may be provided with smart phones for them to cope with their lesson noting that young students are virtual learners, and they can grasp the lesson much better through virtual media (Tabuena & Pentang, 2021).

Meanwhile, poor internet connection was reported by the participants with smartphones. It cannot be denied that technological advancements are key players in today's educational paradigm shifts requiring schools, educators, and learners to be adept with these changes (Pentang, 2021c). Since internet connectivity is considered a need in today's educational setup, this added more burden on the part of the participants in dealing with their SLMs. This concern can affect their attitude and performance.

2. Learners' Attitude towards Self-Learning Modules (SLMs)

The participants have high regard for SLMs as manifested by their agreement with the statements (*Mean* = 57.1). Specifically, Table 2 reflects that the learners have a positive attitude towards SLMs for statements 1-2, 5-6, 9-10, and 13-16, indicating that the learners show enthusiasm to learn with minimal supervision; feel comfortable working on their tasks and are confident with their outputs; spend extra time and exert more effort to finish all requirements; and believe that modules work best for them amid pandemic. Nevertheless, the learners have a low to moderate outlook toward SLMs (Statements 3-4, 7-8, & 11-12). This shows that the learners have an adverse attitude in taking time to read and understand the discussion and examples; managing and completing the tasks and activities; and considering that the module is a source of substantial knowledge. Similarly, Bordeos (2021) reported that learners in the Philippines had a negative attitude towards the use of SLMs. As the pandemic continues to put the educational sector in peril, the attitude of the learners may worsen, which needed intervention from their parents, teachers, and agencies concerned. With the majority of the learners in forming a positive attitude towards SLMs, an effective modular

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learning can be derived. This corresponds with Syukur (2016) who maintained that successful learning starts with a positive attitude. Since learning now occurs at home, parents have a crucial role in developing and improving the attitude of their children towards SLMs. Parents must be able to manage their time for work and other responsibilities while also assisting their children with their SLMs (Agayon et al., 2022; Bhamani et al., 2020). For teachers and module writers, they must consider the individual differences of the learners and contextualized the SLMs being used. This is necessary since individual differences are crucial for identifying learning styles (Kubat, 2018) and contextualizing SLMs promotes independent learning and holistic development of critical thinking (Madrazo & Dio, 2020). In addition, a strong support from the school through regular home visitation and communication is needed to ensure positivity, interest, and motivation among learners. Akin with the mentoring and tutorial project of Pentang (2021a), this result may serve as a benchmark for extension activities and outreach programs that may be conducted by other institutions.

Table 2
Learners' Attitude towards Self-Learning Modules

Statements	Agree		Disagree	
	f	%	f	%
1. I show enthusiasm to learn every time I work on my module	68	77.3	20	22.7
2. I attend to my module with minimal supervision from my parents	72	81.8	16	18.2
3. I take time in reading the lessons and discussions in the module	46	52.3	42	47.7
4. I am sure that I understand the examples indicated in the module	44	50.0	44	50.0
5. I feel comfortable working on my tasks provided in the module	62	70.5	26	29.5
6. I am confident that I correctly answered the activities in the module	64	72.7	24	27.3
7. I complete all the required activities and tasks in module on time	34	38.6	54	61.4
8. I can manage the activities and tasks in the module independently	34	38.6	54	61.4
9. I exert more effort to finish the tasks prescribed in the module	80	90.9	8	9.1
10. I spend extra time dealing with the activities given in the module	68	77.3	20	22.7
11. I consider that module are sources of substantial knowledge	40	45.5	48	54.5
12. I know I can quickly learn my lessons using the module	28	31.8	60	68.2
13. I work hard in dealing with the activities and tasks in the module	68	77.3	20	22.7
14. I feel the urgency of finishing the needed activities in the module	62	70.5	26	29.5
15. I am excited every time I study another set of learning module	78	88.6	10	11.4
16. I believe that modules work best for me this time of pandemic	66	75.0	22	25.0
Mean	**57.1**	**64.9**	**30.9**	**35.1**

Note: Random statements were reversed in the actual survey instrument. Statements were translated into Filipino as well.

3. Correlation between Learners' Profile and Attitude towards SLMs

Table 3
Relationship between Learners' Profile and Attitude towards Self-Learning Modules

Leaner's Profile	Attitude towards SLMs (r_s)	p-value
Age	.218[ns]	.501
Sex	-.325[ns]	.092
Parents' Level of Education	.206[ns]	.083
Parents' Employment Status	.280[ns]	.174
Family Monthly Income	.005[ns]	.166
Gadgets Available	.380[ns]	.061
Internet Connectivity	.102[ns]	.055

Note: [ns]not significant (p > .05)

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No significant relationship was found between the learner's profiles with their attitude towards SLMs ($p > .05$). This mean that regardless of the learners' age, sex, parents' level of education, parents' employment status, family monthly income, gadgets available, internet connectivity, and internet connectivity classification, they can still have either a negative, neutral, or positive outlook to SLMs. Similarly, Mirahmadizadeh et al. (2020) showed that learner's gender has nothing to do with a negative or positive attitude during the COVID-19 pandemic. However, the same study reported that age is related with attitude.

The result also opposes Harju-Luukkainen et al. (2020) and Manlangit et al. (2020) where parents educational level is linked with their children's performance. It is further different from Andrew et al. (2020) where age and family income have a bearing on the learner's attitude amid the pandemic. This demonstrates that the perspectives of the learners are not shaped by their background. Learners, regardless of their profile, must still adopt the attitude of completing their modules with the given activities and expected outputs. This permits them to form the habit of studying at a young age as they realize that learning is a personal responsibility. Further studies may consider other factors aside from demographics to ascertain the learner's attitude toward SLMs.

4. Learners' Performance towards Self-learning Modules

Table 4
Learners' Performance towards Self-Learning Modules

Level of Performance	Frequency (n = 88)	Percentage
Very Satisfactory (85%-89%)	8	9.1
Satisfactory (80%-84%)	58	65.9
Fairly Satisfactory (75%-79%)	22	25.0

Note: Mean = 81.39 percent (Satisfactory)

The learners' average performance towards SLMs was satisfactory, with a mean rating of 81.39 percent (Table 4). Majority (65.9%) of the learners have a performance from 80 to 84 out of 100 percent. This data implies that the learners were able to comply with the minimum standards set by their teachers, however, they were not able to attain outstanding performance. Seemingly, the learner's performance needs attention and intervention with or without the presence of a pandemic, whether face-to-face or modular learning. Pentang (2021a) revealed similar results where learners working independently on their modules faced difficulties as reported by their mentors. As SLMs encourage independent learning, the main challenge in today's educational setting is the limited interaction and communication between the learners with their teachers which continuously affect the learner's performance. Agayon et al. (2022) pointed out that communication has the capacity to improve learning and create a good environment. Since the learner's performance is important and should not be disregarded, teachers should have open communication with the learners aiming to achieve an excellent performance.

SLMs are deemed to ensure that basic education is offered despite the challenges posed by the pandemic (Department of Education, 2020). This suggests that learners should complete all the tasks and activities given to ensure learning. This situation necessitates parents devoting extra time to guiding their children and extra effort among the teachers concerned to interact with the learners. Parents must have multiple ways to support their children (Bateman et al., 2020; Dangle & Sumaoang, 2020) and teachers may encourage the learners to use several technologies to aid modular instruction (Ahmad, 2020; Bauer et al., 2020). Besides, competencies aimed for increasing learners' performance with the use of SLMs can be created by curriculum developers and module writers. A flexible curriculum and learning materials may further be designed by the concerned agency to fit any crisis and learning modality.

5. Correlation between Learners' Profile and Performance towards SLMs

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Table 5
Relationship between Learners' Profile and Performance towards Self-Learning Modules

Leaner's Profile	Performance (r_s)	p-value
Age	.234ns	.809
Sex	-.031ns	.511
Parents' Level of Education	.306ns	.132
Parents' Employment Status	.150ns	.059
Family Monthly Income	-.388ns	.444
Gadgets Available	-.293ns	.057
Internet Connectivity	-.279ns	.060

Note: nsnot significant (p > .05)

It can be gleaned from Table 5 that the profile variables considered had no significant relationship with the learner's performance (*p* > .05). This means that regardless of the learners' age, sex, parents' level of education and employment status, family income, gadgets available, and internet connectivity, they can have a low, average, or excellent performance with respect to SLMs. This somewhat agrees Naite (2021) who found no link between family income and performance. However, a significant relationship between parents' educational level and employment with performance was established. The result further agrees with Francisco et al. (2021) where gender, age, parent's educational attainment, and monthly family income had no bearing on the learner's performance. Still, the results contradict Indrahadi and Wardana (2020) where profile variables are the most important determinants of children's academic achievement. Besides, it is dissimilar with Buctot et al. (2021) and Yang and Zhao (2020) where learner's academic achievement was considerably related with their gender, age, parent's educational background, and family income.

The study argues with the notion that socio-demographic profile is associated with academic performance. It can be deduced that education during the pandemic, using SLMs, tested every learner's performance, regardless of their background. Time could be a factor in addressing the learner's performance. In order to ensure learning, learners should be allowed adequate time to reply to their SLMs. Correspondingly, teachers must ensure that the weekly plan is followed in order to avoid rushing or delays in submission (Dangle & Sumaoang, 2020), which has an impact on the learner's academic performance. In the same manner, learners must put in more effort in order to increase their chances of success. The tasks can also be modified by the teacher based on the learner's abilities. Teachers can modify the content on the SLMs as well as the assessment tools provided to learners without compromising the curriculum goals and learning outcomes.

6. Relationship between Learners' Attitude and Performance towards SLMs

Table 6
Relationship between the Learner's Attitude and Performance towards Self-Learning Modules

	Performance (r_s)	p-value
Attitude	.941**	.008

Note: **highly significant (p < .01)

The analysis revealed a highly significant strong-positive correlation between the learner's attitude and performance toward SLMs, r_s = .941, *p* = .008 (Table 6). This implies that the more positively the learner responds to their SLMs, the better their performance will be. Similarly, Dikaya et al. (2021) found that those with a positive attitude toward distant learning had a better understanding of the subject and can relax, concentrate, and absorb knowledge while learning. This positive correlation between the learners' attitude and performance towards SLMs confirms El Said (2021) and Mirahmadizadeh et al. (2020) where learner's attitude towards school and learning during the pandemic had a strong correlation with their performance. If maintained on a regular basis, this mood ensures strong academic results even with the use of SLMs. Nevertheless, this result may not always guarantee success considering other factors that

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may influence both the learner's attitude and performance. Ibañez and Pentang (2021) argue that attitude and its relationship with performance may vary over time.

Excellent academic achievement will be achieved along with having a positive attitude towards working on SLMs. Attitude indeed have an impact on learning outcomes (Agaton & Cueto, 2021; Lee et al., 2021; Pekrun et al., 2017). With this, learners should maintain a positive attitude and devote themselves completely to the tasks that must be completed during the day to achieve excellent results. Learners must understand the value of MDL and must have an optimistic outlook toward SLMs. For each division, the bureau of learning delivery may contextualize the learning materials making it more interactive and interesting, which could promote positive attitude towards MDL and SMLs. In this way, healthy scholastic performance among learners is being encouraged amid the new learning modality.

CONCLUSION

This study assessed the learner's attitude and academic performance with respect to SLMs as COVID-19 persists. The findings of the study demonstrated that the learner's attitude strongly agrees that using SLMs has a good influence. For optimum learning, these positive attitudes must be improved. No significant relationship was spelled between learner's profile and attitude concerning SLMs. This means that, regardless of their profile, learners must adapt modular learning to achieve knowledge. Accordingly, learners must cultivate the mindset of completing all the teacher's assignments. Learners can create a daily schedule that includes the tasks they must complete each day.

More so, it also disclosed that learners manifested a satisfactory performance on SLMs. This implies that the learner's performance deserves special attention and should not be overlooked. This occurrence should serve as a wake-up call to teachers to be resourceful in their efforts to help learners grow and achieve more. Finally, a high level of correlation was evident between attitude and performance over SLMs. A learner who is enthusiastic in answering modules

has a good chance of improving his or her performance. Therefore, the learner must recognize the benefits of SLMs as a supplement to traditional literacy instruction.

RECOMMENDATION

Module authors may incorporate activities in SLMs that arouse learners' attention and encourage them to completely commit to learning. Furthermore, peer and group activities must take precedence because learners learn better when they are surrounded by their peers. Teachers might create as many grouping tasks as they can to build confidence among learners. Additionally, schools should have a home visitation program in place to further help learners with their SLMs. Parents may devote more time to assisting their children in learning modules to enhance their children's performance.

To achieve a better performance, it is recommended that learners communicate openly with their lecturers. Curriculum implementers may create competencies aimed at improving learner's performance. In a similar manner, profile and performance were found to be not correlated as to SLMs. This implies that having a good profile is not a prerequisite for receiving positive feedback. To enhance the level of success, the learner needs to put in more effort. Teachers may adjust the tasks depending on the learner's ability. The themes on the SLMs, as well as the assessment instruments that will be delivered to learners, may be reviewed, and revised by the concerned teachers. The bureau of learning delivery may further instruct module authors to better contextualize the learning materials for each division that can compound the learner's literacy behavior, learning needs, and available resources.

With the limited number of participants, the study can be extended to other schools considering a larger random sample to validate this report. Besides, other variables may be explored to expose the efficiency of SLMs and the possible policies to be considered in its implementation. Moreover, a mixed-method inquiry may be utilized to so that quantitative results will be validated by qualitative data and vice versa.

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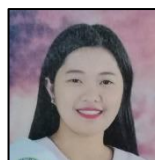
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