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STRESS LEVEL OF TEACHERS AND ITS EFFECT TO CLASSROOM PERFORMANCE: A BASIS FOR STRESS MANAGEMENT PLAN

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ABSTRACT

Since the outbreak of the COVID-19 pandemic, movements and activities of all people had been limited in order to prevent the spread of the contagious disease. Such changes presented new barriers and challenges to teachers who are obliged to execute the said changes. DepED implemented the New Normal setup of the educational system, which resulted to a holistic change in the teaching and learning process in which teachers needed to cope on the stress level as an effect to these sudden changes. Due to the increased pressure of limited face-to-face accountability measures based on test results, teachers have reported considerable levels of stress and burnout. (Jimenez, 2021). Thus, this study aimed to conduct an in-depth examination of the stress level of teachers and its effect on classroom performance and propose stress management plan. The study focused on the teachers because they are the backbone of education delivery. This study used non-probability sampling technique called purposive sampling, specifically the total population sampling. Data in this study were analyzed through frequency – percentage distribution, weighted mean, and Pearson correlation coefficient. The study concluded out the personal level of stress of teachers was affected by their age, sex, socio-economic status, and length of service. It was also concluded that the personal stress level of teachers greatly influences their classroom practices and has influence their teaching performance as well. Therefore, personal stress of teacher affects more the classroom practices and performance of teachers in comparison to occupational stress. Thus, the school head should see to it that the teachers' personal stress levels were being dealt. A personal stress management program was proposed in support to well-being of teachers for better performance and productivity that lead to progress and great accomplishment of the school .

Keywords: performance, stress, teachers

INTRODUCTION

Teachers play a vital role in shaping a child's future. Their entire job is to deliver classroom instruction that gives a possibility for a better future for their students. Yet, being referred to in such a positive way also spells what lies on the other side of the coin – great responsibility. Pursuing teaching as a career does not end with the instruction of what's within the books, it also entails dedication, patience, understanding, and care which significantly impact the well-being, lives, and principles of the students. Teachers' important role is to bring out the best in their students as they are the future of the nation. These responsibilities can be exhausting at times and may even cause stress on the part of teachers, especially as turbulent times, like the Coronavirus Disease 2019 (COVID-19) pandemic, comes into play.

Since the outbreak of the pandemic, the movements and activities of all people had been limited in order to prevent the spread of the contagious disease. Such restrictions made significant adjustments and changes in almost every societal sector, including, of course, the educational one.

In order to cope with the adjustment and restrictions, the Department of Education (DepEd) implemented a way to continue the education of students without jeopardizing their health by remotely delivering the process of learning. This method was soon known as the "Distance Learning" or the "New Normal" educational set-up which allowed students to attend school remotely to eliminate the risk of spreading the virus. Under this new set-up, schools were forced to migrate from face-to-face delivery to blend-

ed learning modality, online modality and modular. (Dayabgbil, et.al.,2021). This whole new change, which continued for two years, resulted in several changes in the educational sector as well. However, such changes also presented new barriers and challenges to teachers who are obliged to execute the said changes.

Since DepED implemented the New Normal set-up of the educational system, which resulted in a holistic change in the teaching and learning process, teachers needed to cope with the stress level as an effect of these sudden changes. Teachers were compelled to adapt immediately to a whole new system – they facilitated the implementation of the different distance learning modalities and were required to work under pressure by juggling the distribution of modules, teaching students online, dealing with stakeholders, poor connectivity, lack of equipment and other non-teaching works. All these duties, along with the pressure of both the workplace and their personal matters had caused severe stress among teachers that continued for the past two years.

Similarly, due to the increased pressure from accountability measures based on test results, teachers have reported considerable levels of stress and burnout. (Jimenez, 2021). In fact, in an article in Forbes, a startling 60% of teachers reported feeling pressured, and many of them have either already left the profession or are considering doing so (Gomez, 2022). Additionally, instructors working in the public sector have higher rates of depression than those working in private institutions. Also, it was stated that educators in the junior and primary school grades have higher levels of depression (Orlanda-Ventayen and Magno Ventayen, 2021). These series of events imply that teacher stress is a serious problem these days which must not be overlooked in order to maintain a strong and sturdy teaching force. Moreover, a teacher's disposition has an impact on the students as well as the teaching and learning process as a whole (Merrill, 2021).

Given the situations above, it is necessary for every institution to determine the level of stress of their teachers, the potential areas of concern, and provide a stress management plan that would benefit teachers with the coping strategies to manage stress and reduce or eliminate the harmful effects of prolonged exposure to stress. Furthermore, stress can affect a person's mental and physical health. Learning to manage stress better can lead to improved blood pressure, and overall physical and mental health (Gordon AM, et al., 2021). Thus, using stress management techniques during stressful situation might improve focus, attention, and ability to get things done among teachers which leads to their good performance and the success of every institution.

Stress is regarded as a necessary component of life for self-improvement. In any event, not everyone can adjust well enough. A sudden shift from traditional to limited face-to-face caused not only adjustments but also stress on the stakeholders involved especially teachers. In Dr. Panfilo Castro National High School alone, the occurrence of stress had become seemingly high among teachers during the limited face-to-face learning setup where teachers need to provide dual learning plans; one for an actual classroom set up for two days limited face-to-face and the other for modular learning modality. The researcher chose the problem because she wanted to seek possible solutions in managing stress level of teachers on the said school. The following objectives are her main reasons; First, the researcher aims to provide a broader perspective when it comes to stress management. Secondly, to enlighten the reader in terms of causes if stress is disregarded. Lastly, to give ideas on how to orchestrate an appropriate program that is suited to the group identified based on their needs.

Statement of objectives

The study aimed to conduct an in-depth examination of the stress level of teachers and its effect on performance and propose a stress management program.

Specifically, this study sought to answer the following questions:

1. What is the demographic profile of the respondents in terms of:
   - 1.1. age;
   - 1.2. gender;
   - 1.3. civil status;
   - 1.4. socioeconomic status; and
   - 1.5. length in service?
2. What is the level of personal and occupational stress of the respondents:
   - 2.1. personal, and
   - 2.2. occupational?

3. What is the level of classroom performance of teachers in terms of:
   3.1. teaching;
   3.2. practices; and
   3.3. attitude?
4. Is there a significant relationship between the stress level of teachers and classroom performance?
5. Is there a significant difference on the responses of the respondents when grouped according to their profile:
   5.1 level of stress, and
   5.2 level of classroom performance?
6. Based on the results of the study, what stress management plan can be proposed?

METHODOLOGY

This section discusses the research design, participants, research instrument, procedure, ethical considerations and data analysis of the study.

Research Design

Since the primary purpose of the study is to determine the stress level of teachers and its impact on classroom performance, a quantitative research design was utilized. According to Melegrito and Mendoza (2016), descriptive design is "research that describes and interprets data." Similarly, it focuses on the existing conditions of relationships, the opinions held, the processes occurring, as well as the effects or trends that are forming. This study used descriptive correlational method to analyze and comprehend the relationship between job performance and teachers' stress levels.

Participants

The participants of the study were the seventy-nine teachers from the Main and Annex Campuses of Dr. Panfilo Castro National High School. The study and sampling technique focused on the teachers because they were the backbone of education delivery and are overwhelmed with the surge in coronavirus disease (COVID-19) and education delivery adjustments as signs of burnout among them and threaten learning continuity in the country.

The researcher used non-probability sampling technique called purposive sampling, specifically the total population sampling. According to Nikolopoulou (2022), total population sampling is a type of purposive sampling where the whole population shares characteristic for a study. It has the ability to allow a researcher to picture a much more complete picture, and more likely reduces guesswork. It also excludes the risk of biased sample selection that is often encountered in a random study samples (Glen, 2018).

Research Instrument

The researcher utilized an adopted survey questionnaire to gather necessary data from the respondents of the study. The instrument was divided into three parts as follows:

The first part dealt with the demographic profile of the respondents in terms of age, sex, civil status, family monthly income, field of specialization, and number of years in teaching.

The second part, which dealt with the measurement of the respondents' perceived level of personal and occupational stress, the Perceived Stress Questionnaire (PSQ) which was a 29-item questionnaire adopted and modified from Shahid, A., et.al, (2011). On the other hand, in order to measure the perceived level of occupational stress of the respondents, the researcher utilized the Teachers' Occupational Stress Questionnaire (TOSQ) adopted from Fitzgerald P. (2020). It was demonstrated that the TOSQ items possess a high level of internal consistency, and that the instrument's criterion validity is satisfactory (Hendres, D.M., et.al, 2014). Both questionnaires used the following continuum: 5 is equivalent to always, 4 is equivalent to often, 3 is equivalent to sometimes, 2 is equivalent to rarely, and 1 is equivalent to never.

Finally, the third part of the instrument was a self-made questionnaire that dealt with the classroom performance of teachers. It also used questionnaires with same continuum of 5 is equivalent to always, 4 is equivalent to often, 3 is equivalent to sometimes, 2 is equivalent to rarely, and 1 is equivalent to

never. This self-made questionnaire was checked and validated by one head teacher and one master teacher of the school were the study was conducted.

Procedure

The researcher started the modification of the adopted survey questionnaire. After making the final draft of the survey questionnaire, the researcher asked the permission and approval of the Principal to administer the survey questionnaire to the teacher respondents. After securing the endorsement, the researcher personally distributed the instrument to the participants in the first week of September 2022. The respondents' answers were treated confidentially. The instruments were collected a week after. The information gathered were analyzed descriptively and organized in tables. The percentages results were presented in frequency, weighted means and sample t-test.

Data Analysis of the Study

The study used different inferential statistics like Frequency – Percentage Distribution, Weighted Mean, Kruskal-Wallis Test, and Kruskal-Wallis Test for analyzing data.

1. **Frequency – Percentage Distribution**
   These were utilized for the interpretation of demographic profile of the respondents.
2. **Weighted Mean**
   This was used to determine the average responses of the respondents on the level of stress and classroom performance.
3. **Kruskal-Wallis Test**
   This was employed to determine the differences on the level of stress and performance when grouped according to their profile.
4. **Pearson Correlation Coefficient**
   This was adopted to determine the relationship between level of stress and classroom performance.

RESULTS AND DISCUSSIONS

This part of the study shows the presentation of the data gathered from the questionnaires answered by the respondents. Such presentation is in accordance with the specific questions posited on the objectives of the study.

1. Profile of the Respondents

The first objective of this study focused on the description of demographic profile of the participants in terms of their age, gender; civil status, socioeconomic status. and length in service.

Table 1.1. Profile of the Respondents in Terms of Age, Gender, Civil Status

Variables	Frequency	Percentage	Rank
Age:			
20-25	9	11.39	5.5
26-30	13	16.46	4
31-35	16	20.25	2
36-40	17	21.52	1
41-45	15	18.99	3
46 and above	9	11.39	5.5
Total	**79**	**100**	
Sex			
Male	28	35.44	2
Female	51	64.56	1
Total	**79**	**100**	
Civil Status			
Single	47	59.49	1
Married	32	40.51	2
Total	**79**	**100**	

As seen in the table, the age range of 36 - 40 years old made the highest frequency count of 17 or 21.52% at rank 1 while the age range of 20 - 25 and 46 and above gained the least frequency count of nine or 11.39% at ranks 5.5. According to a study conducted by Xhelilaj, L.K., Petani, R., & Ntalla, M. (2021) entitled "Relationship Between Teachers' Occupational Stress, Coping, Gender, and Age" found that the level of exhaustion and occupational stress reported by older teachers was greater than that of younger teachers, although they reported greater personal accomplishment.

In terms of the respondents' sex, female obtained the highest frequency count of 51 or 64.56% at rank 1 whereas 28 or 35.44% at rank 2 were male. Gender is another important determinant of teacher stress. A study conducted by Rodrigues, L.T.M., Lago, E.C., Almeida, C.A.P.L., Ribeiro, I.P., & Mesquita, G.V. (2020) entitled "Stress and Depression in Teachers from a Public Education Institution" found that there was a significant difference between male and female stress and depression scores.

With respect to the respondents' civil status, single yielded the highest frequency count of 47 or 59.49% at rank 1 while married made 32 or 30.51% at rank 2. Another important factor in teacher stress is their civil status. While work provides an individual with a sense of belonging within a community and a means to make ends meet, marriage on the other hand, is a commitment done for variety of reasons, including love, happiness, companionship, the desire to have children, physical attraction, or the need to flee a bad situation (Nagaraju, B. & Nandini, H.P., 2013). Hence, it is necessary to understand that working under such pressure may be a prerequisite for the existence of stress.

Table 1.2 Profile of the Respondents in Terms of Socio-Economic Status and Length in Service

Variables	Frequency	Percentage	Rank
Socio-Economic Status			
25,000-30,000	56	70.89	1
31,000-35,000	18	22.78	2
36,000-40,000	1	1.27	4
41,000-45,000	4	5.06	3
Total	**79**	**100**	
Length of Service			
1 - 5 years	39	49.37	1
6 - 10 years	19	24.05	2
11 - 15 years	13	16.46	3
16 - 20 years	3	3.80	4
21 - 25 years	1	1.27	7
26 - 30 years	2	2.53	5.5
31 years and above	2	2.53	5.5
Total	**79**	**100**	

As stated in the table, the monthly income of P25,000 - P30,000 got the highest frequency count of 56 or 70.89% at rank 1 whereas P36,000 - P40,000 made the least frequency count of one or 1.27% at rank 4. Another demographic profile that needs to be considered in determining teacher stress is their family's monthly income or socioeconomic status. A study conducted by Werang, Lewrehilla, & Irianto (2017) entitled "The Effect of Teachers' Socioeconomic Status on Elementary School's Life in Indonesia: An Empirical Study in the Elementary Schools of Marauke District, Papua" found that in terms of teachers' job satisfaction, teachers' morale, teachers' organizational commitment, and teachers' socioeconomic status has a positive and significant influence on school life.

In terms of classroom effectiveness, teacher salaries would be economically justifiable if they more closely reflected teacher effectiveness (Hanushek, E., 2010). This is because monthly family income, along with teachers' qualification and level of institution, influences the performance of their students thus reflecting their satisfaction on the competency of their job. In the Philippines, for instance, teachers in both private and public schools are underpaid, with 92% of public-school teachers receiving a monthly salary of P25,000-P30,000

For the respondents' length of service, 1 - 5 years yielded the highest frequency count of 39 or 49.37% at rank 1. On the other hand, 21 - 25 years got the least frequency count of one or 1.27% at rank 7. In the study conducted by Fitzgerald, P. (2020) entitled "Burnout in Primary School Teachers: The Impact of Occupational Stress, Social Support, and Physical Activity" found no significant relationship

between years of service and teachers' burnout, although they also found that older teachers had significantly less burnouts. In addition, a study conducted by Turtulla, S. (2017) entitled "Examining Levels of Job Burnout Among Teachers Working in Kosova in Terms of Different Variables" also concluded that years of service, along with gender, age, perceived socioeconomic level, and marital status do not significantly affect burnout levels of teachers.

2. Level of Personal and Occupational Stress of the Respondents

The second objective of this study focused on the level of personal and occupational stress of the respondents.

Table 2. Level of Personal Stress of the Respondents

Items	Weighted Mean	Interpretation	Rank
During limited face-to-face, as a teacher			
I feel rested.	4.24	Always	16.5
I feel that my work and schedule are less demanding.	4.25	Always	14.5
I am always in a good mood.	4.10	Often	24
I have more free time.	4.15	Often	22
I am sociable and friendly.	4.32	Always	7.5
I find myself being able to resolve conflicts and problems.	4.15	Often	22
I feel I'm doing things I like.	4.25	Always	14.5
I feel confident that I can manage and attain my goals.	4.34	Always	6
I feel calm.	4.28	Always	12
I can easily come up with decisions.	4.32	Always	7.5
I feel pleased.	4.28	Always	12
I am full of energy.	4.09	Often	25
I feel peaceful.	3.86	Often	27
feel like I can easily manage my problems before they pile up.	3.84	Often	28.5
I feel I'm taking my time.	4.30	Always	9
I feel safe and protected.	4.29	Always	10
I feel free from worries.	4.15	Often	22
I feel free of pressure from other people.	4.24	Always	16.5
I feel encouraged.	4.38	Always	5
I enjoy myself.	4.28	Always	12
I am optimistic about the future.	4.52	Always	2
I feel I'm doing things because I want to and not just because I have to.	4.05	Often	26
I feel accepted and praised.	4.19	Often	20
I am light-hearted.	4.57	Always	1
I feel mentally recharged.	4.20	Always	19
I can relax more easily.	4.22	Always	18
I feel motivated to perform responsibilities.	4.39	Always	3.5
I have enough time for myself.	4.39	Always	3.5
I feel that deadlines do not pressure me.	3.84	Often	28.5
Composite Mean	**4.22**	**Always**	

As discussed in the table, the respondents affirmed that they are always light-hearted which made the highest weighted mean of 4.57 and rank of 1. The result implied that despite of all the adjustments brought by limited face-to-face, they are still optimistic on personal aspect. Meanwhile, the said group of respondents replied that they are often feel like they can easily manage their problems before they pile up, and they often feel that deadlines do not pressure them which got the least equal weighted means of 3.84 and equal ranks of 28.5. It shows that although there are times wherein, they feel pressure with the pile of work and deadlines, still, they manage to handle it. Similarly, the composite mean of 4.22 implied that the respondents always experienced positive personal stress during limited face-to-face. Overall, the result implied that they are not always. Personal stressors are also something to be looked at when it comes to teacher stress since individuals' stress may also be triggered by external factors. Stressors such as work, family, personal, and environmental factors are still part of a teacher's life, distinctly (Panis, 2021). Stress that are exhibited in the school may come from personal factors such as emotional stability, work commitment, and life commitment (Wettstein, Schneider, Holtforth & La Marca, 2021).

Table 3. Level of Occupational Stress of the Respondent

Items	Weighted Mean	Interpretation	Rank
During limited face-to-face, as a teacher, I find it easy to…			
keep the class quiet	4.46	Always	9
maintain discipline and order in the classroom.	4.43	Always	11
work with unmotivated students	4.57	Always	5.5
work with agitated or unruly students.	4.05	Often	16
carry out school duties during the time dedicated to my family (e.g., reading and marking offhand papers at home)	4.24	Always	13.5
teach quiet conditions (e.g., no noise outside the classroom)	4.98	Always	2
teach in suitable thermal conditions	2.70	Sometimes	20
supervise students during breaks	4.13	Often	15
work with papers or documents related to administrative activities	4.74	Always	4
make trips with students	3.94	Often	17
prepare students for competitions outside of school hours	3.43	Sometimes	18
prepare students for competitions taking place during school hours	3.13	Sometimes	19
participate with students in the contests	4.27	Always	12
work with too heterogeneous classes (different cognitive levels)	4.47	Always	7
have reckoned with my colleagues	4.46	Always	9
have inspections or evaluative situations in the classroom	4.57	Always	5.5
help a child with poor academic results to progress	4.78	Always	3
permanently pursue progress in students' acquisitions	4.46	Always	9
pay equal attention to each student	5.00	Always	1
maintain a good mood for each student in the classroom	4.24	Always	13.5
Composite Mean	**4.25**	**Always**	

As revealed in the table, the respondents assessed that as teachers always find it easy to pay equal attention to each student which gained the highest weighted mean of 5.00 and rank of 1. This implied that the respondents make sure that same treatment is given to every student as mandated by DepEd that "No child left behind". On the other hand, the said group of respondents answered that as teachers, preparing students for competitions outside of school hours was sometimes challenging which made the highest weighted mean of 3.43. The composite mean of 4.25 generalized that the respondents always experienced positive teachers' occupational stress during limited face-to-face. Determining the possible sources of occupational stress is also a prerequisite in creating a better workplace and a better learning environment for all students. This is because if occupational stressors are left unattended, it may result to low productivity and absenteeism (Communications Workers of America [CWA], 2017). Additionally, coping with such stressors is also as important as recognizing them because in order to ensure the continuity of teachers' effective service to their students, there should be ways to be done to cope the stress of teachers (Torreon & Trabajo, 2019).

3. Level of Classroom Performance of Teachers

The third objective of this study focused on the level of classroom performance of the respondents in terms of teaching, practices, and attitude.

As gleaned the table, the respondents declared that they always make sure to give equal opportunities and privileges to all students irrespective of any prejudice, and they always encourage and uphold inclusivity which got the highest equal weighted means of 5.00 and the highest equal ranks of 1.5. The result implied that teachers don't just give initial judgement on every student. They seek to know the background to address them properly.

Table 4. Level of Classroom Performance in Terms of Teaching

Items	Weighted Mean	Interpretation	Rank
During limited face-to-face, as a teacher			
I encourage self-discovery as an important learning medium.	4.25	Always	10
I motivate my students.	4.81	Always	7
I encourage students to brainstorm ideas with their peers.	4.85	Always	6

I know when my student is going through a hard time and offer	4.52	Always	8
I listen to my students and encourage them to share their ideas in class.	4.43	Always	9
I regularly follow the classroom routine (checking of attendance, motivation, etc.)	4.96	Always	3
I make sure that I am always well-prepared for the class.	4.94	Always	4
I make sure to give equal opportunities and privileges to all students irrespective of any prejudice.	5.00	Always	1.5
I want to know each of my students more and encourages them to open up to me.	4.91	Always	5
I encourage and uphold inclusivity.	5.00	Always	1.5
Composite Mean	**4.77**	**Always**	

On the contrary, the said group of respondents responded that encouraging self-discovery as an important learning medium is a bit struggle which garnered the least weighted mean of 4.25 and least rank of 10. The result implied that proper guidance to students is necessary in helping develop HOTS among students. Effective teacher performance in the classroom is an important factor in enhancing the quality of education among students. The development of teachers' performance improved classroom teaching among teachers. The use of necessary learning aids also helped a lot. These aids include discussion and dialogue management, communication skills, motivation, simulations, exercises, puzzles, problem solving, role playing, field observation, discovery, self-learning, cooperative learning, and brainstorming, as well as three-dimensional teaching aids (Mahgoub, Y.M., & Elyas, S.A., 2014).

Overall, the composite mean of 4.77 generalized that during limited face-to-face, the teachers always do their performances as teachers. The need of providing an equitable education system within your school supports an environment that helps all students develop core knowledge and skills. This development allows them to become more productive members of society from an early age (Deer, 2022). Learning about the environment or situation and adapting to changes in the environment are linked to the performance of the teachers in delivering education amidst to pandemic. It is according to King (2018) as cited by Munda (2021) as the survival of the fittest theory also known as adaptation theory as an organism's ability to adapt to changes in the environment and regulate over time.

As written in table, the respondents affirmed that they always discipline my students fairly and appropriately, make sure inclusivity is always upheld inside the classroom, do measures to avoid bullying and discrimination inside the classroom, make sure the class routines are consistently followed, make sure and observe that the Bayanihan spirit is alive inside the classroom, and make sure that no one in the class is left behind which got the highest equal weighted means of 5.00 and the equal highest ranks of 3.5. Contrary wise, the said group of respondents assessed that they always make sure that the classroom has an atmosphere suitable for the learning process which obtained the least weighted mean of 4.90 and least rank of 9. The result implied that with efforts that teachers made just to make sure to provide safe environment for students to work together there still a minimal chance of being not enough.

Table 5. Level of Classroom Performance in Terms of Practices

Items	Weighted Mean	Interpretation	Rank
During limited face-to-face, as a teacher			
I always make sure that the classroom has an atmosphere suitable for the learning process	4.90	Always	9
I discipline my students fairly and appropriately	5.00	Always	3.5
I believe my students are well-disciplined individuals	4.95	Always	8
I make sure inclusivity is always upheld inside the classroom	5.00	Always	3.5
I do measures to avoid bullying and discrimination inside the classroom	5.00	Always	3.5
I make sure the class routines are consistently followed	5.00	Always	3.5
I take into consideration the comments of observers regarding classroom organization and practices	4.96	Always	7
I make sure and observe that the *Bayanihan* spirit is alive inside the classroom	5.00	Always	3.5
I make sure that no one in the class is left behind	5.00	Always	3.5
Composite Mean	**4.98**	**Always**	

With the composite mean of 4.98 inferred that during limited face-to-face, the teachers always do their best usual classroom practices. Creating a well-disciplined and positive learning climate for students, catering a wide array of student needs, and promoting inclusivity are also good classroom practices that effective teachers can do (Kington, A., Regan, E., Sammons, P., & Day, C., 2012)

Table 6. Level of Classroom Performance in Terms of Attitude

Items	Weighted Mean	Interpretation	Rank
During limited face-to-face, as a teacher			
I am patient to employ classroom management.	4.82	Always	12
I try to stay cool-headed in every situation regardless of its extremity.	4.62	Always	14
I make sure to understand where my students are coming from before jumping to any conclusion.	4.76	Always	13
I prepare myself physically, mentally, and emotionally for the class regardless of how many stressful events happened during the day.	4.94	Always	9
I always try to wear a smile in front of the class.	4.91	Always	11
I come to school on time or earlier.	4.95	Always	7.5
I show love, passion, and dedication to even the smallest details of my profession.	4.92	Always	10
I recognize that my students and colleagues are humans entitled to their rights to be heard, considered, express themselves, and be respected.	5.00	Always	2.5
I always participate in any school activities.	4.96	Always	5.5
I believe that being a teacher is also being a learner.	5.00	Always	2.5
I make sure parents are well-informed about their children.	5.00	Always	2.5
I regularly attend classes.	5.00	Always	2.5
I always make sure that I show interest in what I do.	4.95	Always	7.5
I love what I do.	4.96	Always	5.5
Composite Mean	**4.91**	**Always**	

As stated in table, the respondents acknowledged that they always recognize that their students and colleagues are humans entitled to their rights to be heard, considered, express themselves, and be respected, believe that being a teacher is also being a learner, make sure parents are well-informed about their children, and regularly attend classes which gained the highest equal weighted means of 5.00 and the highest equal ranks of 2.5. This implied that teachers to respect to everyone even in their job is not questionable. Moreover, the said group of respondents granted that they always try to stay cool-headed in every situation regardless of its extremity which made the least weighted mean of 4.62. Only implied that remaining calm regardless of the situation is still always observe among teachers. With the composite mean of 4.91 revealed that during limited face-to-face, the teachers always try to do their usual positive attitudes as professionals. Good attitudes entail patience, understanding, and emotional, mental, and physical preparedness even if many things went wrong for the day. It also requires doing things to improve teacher's mood such as getting enough sleep and staying cool at any situation (Grand Canyon University [GCU], 2016). Good attitudes of teachers such as punctuality, motivation towards their profession, being respectful to their students and colleagues, enthusiasm in participating in school academic activities, being passionate learners, and caring to their students, parents, and colleagues can positively influence the students (Ahmad, I., Said, H., Zeb, A., Sihatullah, and Rehman, K., 2013) while bad ones such as irregularities in attending classes, poor mastery of the subject, monotony in the method of instructional delivery, and lack of enthusiasm can affect or influence the whole classroom negatively (Omolara, S.R. & Adebukola, O.R., 2015).

Table 7. Summary on the Level of Classroom Performance

VARIABLES	COMPOSITE MEAN	INTERPRETATION	RANK
Teaching	4.77	ALWAYS	3
Practices	4.98	ALWAYS	1
Attitude	4.91	ALWAYS	2
GRAND MEAN	**4.89**	**ALWAYS**	

The table presented the summary of teacher's classroom performance with the grand mean of 4.89 interpreted as always. The summary results implied that teachers remain positive and with good standing when it comes to their classroom performance during limited face-to-face. An effective classroom performance of a teacher is also determined by his/her teaching style in whatever circumstances. The teaching profession requires intelligence, skills, insights, and perseverance to meet the challenges of classrooms in a variety of different ways (Ahmed, S., Farooqi, M.T.K., & Iqbal, A., 2020). Classroom practices should also be taken into consideration when talking about teachers' classroom performance as these practices serve as guide to their actions when dealing with a specific subject matter (Sofiandis, A. & Kallery, M., 2021). Attitude is also one prerequisite of a teacher's good performance. It is an essential factor to consider when designing an appropriate learning environment for students, as it has a substantial impact on classroom performance and implementation (Syahputra, Y.S., Santosa, R., & Supriyadi, S., 2017).

4. Relationship Between the Stress Level of Teachers and their Classroom Performance

The fourth objective of this study is to find out if there is a significant relationship on the level of personal and occupational stress of teachers and their classroom performance.

Table 8. Relationship Between the Stress Level of Teachers and Classroom Performance

Variables Compared	r-value	p-value	Decision	Interpretation
Stress Level versus Classroom Performance				
Modified Perceived Stress versus:				
Teacher's Performance	0.23	0.04144	p<0.05, Reject Ho	Significant
Teacher's Attitude	0.01	0.93030	p>0.05, Failed to Reject Ho	Not Significant
Classroom Practices	0.41	0.00018	p<0.01, Reject Ho	Highly Significant
Modified Teacher's Occupational Stress versus:				
Teacher's Performance	0.11	0.33452	p>0.05, Failed to Reject Ho	Not Significant
Teacher's Attitude	0.13	0.25349	p>0.05, Failed to Reject Ho	Not Significant
Classroom Practices	0.11	0.33452	p>0.05, Failed to Reject Ho	Not Significant

As stated in the table, when the responses of the respondents on modified perceived stress were compared to their classroom performances, the computed r-value of 0.41 for classroom practices has a corresponding p-value of less than 0.01, thus rejecting the null hypothesis. In addition, the computed r-value of 0.23 for teacher's performance has a p-value of less than 0.05, thus rejecting also the hypothesis. On the other hand, the computed r-value of 0.01 for teacher's attitude has a corresponding p-value of more than 0.05, thus failing to reject the hypothesis. These inferred that the modified perceived stress level of the respondents has a high significant relationship to their classroom practices; significant relationship to their teacher's performance; and no significant relationship to their teacher's attitude. The result implies that personal stress level of teachers greatly influences their practices, it also influences their teaching but it does not affect their attitude. Therefore, they still manage to act as professionals. Finally, when the responses of the respondents on modified teacher's occupational stress were compared to their classroom performances, the computed r-value of 0.11 for teacher's performance; 0.13 for teacher's attitude, and 0.11 for classroom practices have corresponding p-values of more than 0.05, thus failing to reject the null hypothesis. These generalized that the modified teacher's occupational stress level of the respondents has no significant relationships to their teacher's performance, teacher's attitude, and classroom practices. It only implies that occupational stress does not affect the teachers' classroom performance. A teacher's behavior in teaching is an important factor that affects the overall performance of the classroom, specifically the students. An effective classroom performance of a teacher is determined by his/her teaching style. The teaching profession requires intelligence, skills, insights, and perseverance to meet the challenges of classrooms in a variety of different ways (Ahmed, S., Farooqi, M.T.K., & Iqbal, A., 2020). Elliott (2018) adds that when instructors face continuous stress and are unable to cope adequately, it may result in unfavorable consequences for both teachers and students and is costly to the educational system as this may result in poor physical, mental, and emotional health, which may impact teacher performance, the teacher-student relationship, and/or student performance (Rabago-Mingoa, 2017). A common result of teacher stress is teacher absenteeism, which in turn causes a decline in stu-

dents' test scores (Southern Education Foundation [SEF], 2021). According to Anwar, Ishak & Khan (2011) different stress contributing factors which either exists within or outside the educational institution can negatively influenced teachers' performance which hold up the performance of teachers, resulting in lower individual as well as institutional productivity. Similarly, personal stress affects teachers' performance and school effectiveness (Asaloei, Wolomasi & Werang, 2020). Similarly, Classroom performance is an ambiguous term that includes several components. One of these components is a good teacher's performance made up of different characteristics such as calmness, tolerance, sense of humor, friendliness, and well-preparedness (Lupascu, A.R., Pânisoară, G., & Pânisoară, I.O., 2013). Moreover, an effective teaching and classroom management is by evaluating themselves against indicators of effective instruction and classroom management, and develop individual professional development plans based on classroom observations and self-evaluations (Donley, J., 2019). Creating a well-disciplined and positive learning climate for students, catering a wide array of student needs, and promoting inclusivity are also good classroom practices that effective teachers can do (Kington, A., Regan, E., Sammons, P., & Day, C., 2012).

5. Difference on the Responses of the Respondents When Grouped According to Their Profile

The fifth objective of this study focused on the difference on the responses of the respondents when grouped according to their profile.

Table 9. Personal and Occupational Stress Between the Respondents when Grouped Based on their Demographic Profile

Variables Compared	K-value	p-value	Decision	Interpretation
Age versus Stress Level				
Modified Perceived Stress	71.44	0.00001	p<0.01, Reject Ho	Highly Significant
Modified Teacher's Occupational Stress	6.91	0.14076	p>0.05, Failed to Reject Ho	Not Significant
Sex versus Stress Level				
Modified Perceived Stress	8.14	0.00432	p<0.01, Reject Ho	Highly Significant
Modified Teacher's Occupational Stress	0.07	0.79720	p>0.05, Failed to Reject Ho	Not Significant
Civil Status versus Stress Level				
Modified Perceived Stress	1.51	0.21924	p>0.05, Failed to Reject Ho	Not Significant
Modified Teacher's Occupational Stress	0.01	0.94607	p>0.05, Failed to Reject Ho	Not Significant
Socio-Economic Status versus Stress Level				
Modified Perceived Stress	19.13	0.00036	p<0.01, Reject Ho	Highly Significant
Modified Teacher's Occupational Stress	1.74	0.62799	p>0.05, Failed to Reject Ho	Not Significant
Length of Service versus Stress Level				
Modified Perceived Stress	79.67	0.00000	p<0.01, Reject Ho	Highly Significant
Modified Teacher's Occupational Stress	6.90	0.14080	p>0.05, Failed to Reject Ho	Not Significant

As seen in the Table, only the variables modified perceived stress have high significant relationships to the respondents age, sex, socio-economic status, and length of service as evidenced by the computed K-values of 71.44, 8.14, 19.13, and 79.67, respectively with corresponding p-values of less than 0.01, thus rejecting the null hypothesis.

These safely generalized that the modified perceived stress level of the respondents has high significant differences when grouped according to their age, sex, socio-economic status, and length of service. The result implies that the age, sex, socio-economic status, and length of service of the teachers greatly influence their personal level of stress. It has been greatly perceived that marital status and level of teacher stress are significantly related to each other (Kuchy, S.A. & Thilagavathy, T., 2018). In addition, Werang, Lewrehilla, & Irianto (2017) stated in their study that teachers' socioeconomic status has a positive and significant influence on school life in terms of teachers' job satisfaction, teachers' morale, and teachers' organizational commitment.

The rest of the variables were found to have no significant differences when grouped according to the other profile variables. The rest of the variables were found to have no significant differences when grouped according to the other profile variables. It implies that, age, sex, socio-economic status, and length of service has no influence on occupational stress of the respondents. On the study conducted by Fitzgerald (2020) found no significant relationship between years of service and teachers' burnout, although they also found that older teachers had significantly less burnouts. In addition, a study conducted

by Turtulla, S. (2017) concluded that years of service, along with gender, age, perceived socioeconomic level, and marital status do not significantly affect burnout levels of teachers.

Table 10. Difference on the Classroom Performance of the Respondents when Grouped Based to their Profile

Variables Compared	K-value	p-value	Decision	Interpretation
Age versus Level of Classroom Performance				
Teacher's Performance	1.51	0.67923	p>0.05, Failed to Reject Ho	Not Significant
Teacher's Attitude	2.03	0.56450	p>0.05, Failed to Reject Ho	Not Significant
Classroom Practices	1.11	0.77572	p>0.05, Failed to Reject Ho	Not Significant
Sex versus Level of Classroom Performance				
Teacher's Performance	0.63	0.42736	p>0.05, Failed to Reject Ho	Not Significant
Teacher's Attitude	1.96	0.16109	p>0.05, Failed to Reject Ho	Not Significant
Classroom Practices	0.24	0.62721	p>0.05, Failed to Reject Ho	Not Significant
Civil Status versus Level of Classroom Performance				
Teacher's Performance	0.01	0.96980	p>0.05, Failed to Reject Ho	Not Significant
Teacher's Attitude	0.26	0.61326	p>0.05, Failed to Reject Ho	Not Significant
Classroom Practices	0.25	0.61360	p>0.05, Failed to Reject Ho	Not Significant
Socio-Economic Status versus Level of Classroom Performance				
Teacher's Performance	6.43	0.09256	p>0.05, Failed to Reject Ho	Not Significant
Teacher's Attitude	8.56	0.03576	p<0.05, Reject Ho	Significant
Classroom Practices	2.03	0.56682	p>0.05, Failed to Reject Ho	Not Significant
Length of Service versus Level of Classroom Performance				
Teacher's Performance	2.64	0.45020	p>0.05, Failed to Reject Ho	Not Significant
Teacher's Attitude	10.05	0.03964	p<0.05, Reject Ho	Significant
Classroom Practices	2.34	0.67342	p>0.05, Failed to Reject Ho	Not Significant

As stated in the table, when the responses of the respondents on their classroom performance were grouped according to their socio-economic status, the computed K-value of 8.56 for teachers' attitude has a corresponding p-value of less than 0.05, thus rejecting the null hypothesis. In addition, when the said responses were grouped according to their length of service, the computed K-value of 10.05 has a corresponding p-value of less than 0.05, thus rejecting also the null hypothesis. These safely concluded that the responses of the respondents on their classroom performance have significant differences in terms of teachers' attitude when grouped according to their socio-economic status, and length of service. The rest of the profile variables were found to have no significant differences. The result only implies that socio-economic and length of service of teachers influence their classroom performance. Similarly, teachers' length of service is also an important determinant of both their occupational stress and classroom effectiveness. A study conducted by Teles, R., Valle, A., Rodriguez, S., Piñero, I., & Regueiro, B. (2020) found that teachers with more teaching experience (30 years or more) and those with less experience (less than 30 years) exhibited lower levels of perceived stress, as did those over 60 years old and those with more teaching experience (less than 10 years).

6. Proposed Stress Management Plan

Stress management plan will benefit not only the teachers but also the organization as a whole. These are beneficial to all individuals, young and adult. Teachers and even students who feel overwhelmed by stressful situations at school will be helped through these plans. These can help to empower them with healthier coping strategies. They will also find that exercises are useful for managing stress. It can help prevent some serious health problems due to uncontrolled stress (Simran, 2023). Having stress management plan in every institution is essential to occupational health and safety to protect and enhance the health, well-being and productivity of teachers. This will not be possible without an understanding of stress and the mechanisms through which it affects individuals and organizations, and a well-planned stress management will both eliminate harmful effects of stress and, more important, prevent them (Warshaw, 2011).

This study proved that personal stress level of teachers whether positive or negative, influence their performance. However, even the result of this study shows that occupational stress level does not influence their performance, this cannot deny the fact that teachers will be more productive and perform well

in their job if their well-being will be taking care of. Thus, here are the proposed stress management plan to help every teacher sustain coping better with stressful situations.

The table below is stress management plan sample that may help every teacher sustain coping better with stressful situations.

AREAS	OBJECTIVES	STRATEGIES	PERSON INVOLVED	DURATION	OUTPUT
Improve Stress Awareness and Work Life Balance Among Teachers	*Identify and address the problem* Plan ahead, rearrange your surroundings and reap the benefits of a lighter load.	**Offer Stress Education** -Listing personal stress causes and determining how your body response to this causes -Working life balance by making a to do list.	All teachers and Expert Resource Speakers	30 mins.	Stressful situations in the surroundings was avoided. Given more time to relaxed.
Improve Resiliency of Teachers	Promote Teacher's Resilience and Introduce Stress-Related Challenges Workshops **Manage emotion. Improve quality of life.**	**Promoting Teacher's Resilience** -Taking inventory, then attempt to change situation for the better.		30 mins.	Causes of stressful situation was altered.
Improve Quality of Life of Teachers		Improving Teacher's Quality of Life -Taking Care of Mind and Body Meditation Visualizations <u>Yoga</u>		1 hour	Situations beyond control learned to be accepted and adapted.

CONCLUSIONS

The study concluded out the personal level of stress of teachers was affected by their age, sex, socio-economic status, and length of service. It was also concluded that the personal stress level of teachers greatly influences their classroom practices and has an influence to their teaching performance as well. Therefore, the personal stress of teacher affects more the classroom practices and performance of teachers in comparison to occupational stress.

While COVID-19 has amplified and exacerbated stress and overwhelm, mental health issues have been on the rise for teachers for quite some time, learning to manage emotions in the work place is important because they can also impact relationships, health and well-being, and performance. With the proper knowledge, awareness and right tools, teachers could be prepared and understand how to address their emotions and manage them safely while maintaining a healthy relationship with students.

As much, teachers who are not aware of how to effectively manage stress decreases the ability to educate the students properly. Thus, the school head should see to it that the teachers' personal stress levels were being dealt. Providing stress management plan would be beneficial not only for the teachers but also for the welfare of students and the institutions as well.

RECOMMENDATIONS

For Teachers, having stress awareness and personal and work life balance must be observed to stay healthy and be more productive. The researcher recommends to consider of listing personal stress causes and determining how your body response to this causes. Having personal and working life balance can be improve by making a to do list. Furthermore, taking care of your mind and body can significantly reduce stress by practicing meditation.

For Administrators, the findings of the study highly support the adoption and use of stress management plan primarily for teachers. The researcher highly recommends that the Department of Education and its higher offices initiate studies and research for the inclusion of prioritizing teacher well-being and giving higher rates of recognition and positive feedback to teachers versus criticism and judgment to help set a positive tone. Providing such programs and resources they need will somehow reduce stress and resulted in the success of not only teachers but the department as well. Additionally, a personal stress management plan was proposed in support of the well-being of teachers for better performance and productivity that lead to progress and great accomplishment for the school.

Finally, for future researchers, deeper studies can be conducted on determining the primary stressors of teachers. With the result of this study that is in contrast with some of the existing theories and previous researches, more research will be needed to reconcile these differences to help shed more light on the topic. Furthermore, another study can determine the effects of such stressors on the students, teachers, administration, and institution. The limitations highlighted in this study provide potential areas for more profound research so that a deeper understanding of the nature and effects of using stress management plan for teachers can be determined. Lastly, it is highly recommended, not only for teachers but also for other workers that other researchers might find stress management plan useful or appropriate.

REFERENCES

Ahmad, I., Said, H., Zeb, A., Sihatulla, & Rehman, K.U. (2013). Effects of Professional Attitude of Teachers on Their Teaching Performance: Case of Government Secondary School Teachers in Malakad Region, Kyber Pakhtunkwa, Pakistan. Journal of Education and Social Research, 3(1): 25-31. Retrieved from https://bit.ly/3OYChwN

Ahmed, M., Ambreen, M., & Hussain, I. (2018). Gender Differentials Among Teachers' Classroom Management Strategies in Pakistani Context. Journal of Education and Educational Development. 5 (2): 178-193. Retrieved from https://bit.ly/3bAGOaY

Ahmed, S., Farooqi, M.T.K., & Iqbal, A. (2020). A study of Teachers' Teaching Styles and Students' Performance. Ilkogretim Online – Elementary Education Online, 19(4): 5418-5426. Retrieved from https://bit.ly/3p2bdlH

Batool, S., Atta, M., & Riaz, N. (2020). Impact of Self-Efficacy on Job Stress in Teachers: The Role of Marital Status. Journal of Research in Social Science (JRSS), 8(2): 46-55. Retrieved from https://bit.ly/3vJ8bGu

Bhatti, E. (2017). Impact of Socioeconomic Status of Teachers on The Performance of Their Students at Bahawalpur. The Islamia University of Bahawalpur. Retrieved from https://bit.ly/3vJW10p

Blazar, D. (2016). Teacher and Teaching Effects on Students' Academic Performance, Attitudes, and Behaviors: Extension of the Literature. Dissertation: Harvard University]. Retrieved from https://bit.ly/3p0vDvc

Brady, J. & Wilson, E. (2021). Comparing Sources of Stress for State and Private School Teachers in England. Improving Schools: 1-16. Retrieved from https://bit.ly/3OYcRiI

Clipa, O. (2017). Teacher stress and Coping Strategies. Studies and Current Trends in Science of Education: 120-128. Retrieved from https://bit.ly/3P7MnLE

Deer, M. (2022). Promoting equality and diversity in the classroom. Retrieved from https://cpdonline.co.uk/knowledge-base/safeguarding/promoting-equality-and-diversity-in-the-classroom/

Donley, J. (2019). Effective Practices: Research Briefs and Evidence Rating. Center on Innovations in Learning. Retrieved from https://bit.ly/3vLSNt3

Educational News. (2021). Why is Teaching a Female-Dominated Field?. Best Brains. Retrieved from https://bestbrains.com/article/why-is-teaching-a-female-dominated-field

Eisenmann, L. (2017). Why are so many teachers women?. National Women's History Museum. Retrieved from https://www.womenshistory.org/articles/why-are-so-many-teachers-women
El-Emadi, A.A., Said, Z., Friesen, H.L. (2019). Teaching Style Differences Between Male and Female Service Teachers in Qatari schools: Possible Impact on Student Achievement. EURASIA Journal of Mathematics, Science, and Technology Education, 15(12): 1-16. Retrieved from https://bit.ly/3bCVkPt
Elliot, A.C. (2021). Teacher Stress and Supports, Classroom Practices, and Student Outcomes in High Poverty Urban Elementary Schools. Dissertation: State University of New Jersey. Retrieved from https://bit.ly/3vI8Loc
Ferguson, K., Mang, C., & Frost, L. (2017). Teacher Stress and Social Support Usage. Brock Education Journal, 26(2): 62-80. Retrieved from https://bit.ly/3OZr6nn
Fitzgerald, P. (2020). Burnout in Primary School Teachers; The Impact of Occupational Stress, Social Support, and Physical Activities. Bachelor's Thesis: Dublin Business School. Retrieved from https://bit.ly/3BIe4I0
Ganster, D. C. and Rosen, C. C. (2013) 'Work Stress and Employee Health A Multidisciplinary Review'. Journal of Management, 0149206313475815
Gomez, D. (2022). Stress is Pushing Many Teachers Out of The Profession. Forbes. Retrieved from https://bit.ly/3zYE6FG
Grand Canyon University [GCU]. (2016). The role of Attitude in Teaching. Retrieved from https://bit.ly/3P5xedY
Hanushek, E.A. (2010). The Economic Value of Higher Teacher Quality. National Center for Analysis of Longitudinal Data in Education Research. Retrieved from https://urbn.is/3Q6Sl0P
Haydon, T., Leko, M.M., & Stevens, D. (2018). Teacher Stress: Sources, Effects, and Protective Factors. Journal of Special Education Leadership 31(2): 199-107. Retrieved from https://bit.ly/3p1xss2
Hendres, D.M., Curelaru, V.C., Ashiri, L., Gherman, M.A., Diac, G. (2014). Teachers' Occupational Stress Questionnaire: Psychometric Properties. Revisita de Psihologie, 60(2), 131-140. Retrieved from https://bit.ly/3ddBR8A
Hwang, N.Y. & Kisida, B. (2021). Spread Too Thin: The Effects of Teacher Specialization on Student Achievement. Annenberg Brown University. Retrieved from https://bit.ly/3P696I5
Ismail, R.A.M., Arshad, R., & Abas, Z. (2018). Can Teachers' Age and Experience Influence Teacher Effectiveness in HOTS?. International Journal of Advances Studies in Social Science and Innovation (IJASSI), 2(1): 114-158. Retrieved from https://bit.ly/3BM9CI4
Jain, S. (2021). A Study of Work Stress and Coping Among Primary School Teachers in New Zealand. New Zealand Journal of Teachers' Work, 8(1): 18-35. Retrieved from https://bit.ly/3QryGsf
Jiahui, H. (2021). Stress Coping Strategies and Status of Job Burnout of Middle School Teachers in China. Advances in Social Science, Education, and Humanities Research, 571: 166-172.
Jimenez, E.C. (2021). Impact of Mental Health and Stress Level of Teachers to Learning Resource Development. Retrieved from https://files.eric.ed.gov/fulltext/EJ1287736.pdf
Johansson, S. & Myberg, E. (2019). Teacher Specialization and Student Perceived Instructional Quality: What are the Relationships to Student Achievement. Educational Assessment, Evaluation, and Accountability, 31: 177-200. Retrieved from https://bit.ly/3A1e6cA
Kington, A., Regan, E., Sammons, P., & Day, C. (2012). Effective Classroom Practice: A Mixed-Method Study of Influences and Outcomes. The Nottingham Jubilee Press. Retrieved from https://bit.ly/3OYCErb
Kinnunen, U., de Bloom, J., & Virtanen, A. (2019). Do Older Teachers Benefit More from Workday Break Recovery Than Younger Ones?. Scandinavian Journal of Work and Organizational Psychology, 4(1). Retrieved from https://bit.ly/3vJSiQi
Kuchy, S.A. & Thilagavathy, T. (2018). Influence of Demographic Profiles on Teacher Stress: A Study on High School Teachers. International Journal of Advanced Research and Development, 3(1): 574-577. Retrieved from https://bit.ly/3P2vAtC
Laguador, J.M. (2013). Developing Students' Attitude Leading Towards a Life-Changing Career. Education Research International, 1(3): 28-33. Retrieved from https://bit.ly/3oWXNaw
Langat, A.C. (2015). Students' Attitudes and Their Effects On The Learning and Achievement in Mathematics: A Case Study of Public Secondary Schools in Kiambu County, Kenya. [Master's Thesis: Kenyata University]. Retrieved from https://bit.ly/3P2FP12

Lazarus, R.S. & Folkman, S. (1984). Stress, Appraisal, and Coping. Springer Publishing Company.
Lee, J., Rhee, D., & Rudolf, R. (2017). Teacher Gender, Student Gender, and Primary School Achievement: Evidence from Ten Francophone African countries. Munich Personal RePEc Archive (MPRA). Retrieved from https://bit.ly/3Qmm4T5
Lupascu, A.R., Pânisoară, G., & Pânisoară, I.O. (2014). Characteristics of Effective Teacher. Procedia – Social and Behavioral Science, 127: 534-538. Retrieved from https://bit.ly/3bH7LcW
Mahgoub, Y.M. & Elyas, S.A. (2014). Development of Teacher Performance and Its Impact on Enhancing Out the Quality of the Educational Process. Pensee Journal, 76(2): 19-179. Retrieved from https://bit.ly/3d442Xf
Maiers, S. (2020). New research reveals how students are doing during COVID-19 pandemic. National PTA and NEA release joint recommendations in response to poll data. Retrieved from https://www.nea.org/about-nea/media-center/press-releases/new-research-reveals-how-students-are-doing-during-covid-19
Margaret, K., Ngigi, S. & Mutisya, S. (2018). Sources of Occupational Stress and oping Strategies Among Teachers in Borstal Institutions in Kenya. Edelweiss Psychiatry Open Access, 2(1): 18-21. Retrieved from https://bit.ly/3zDOVLL
McLeod, S. A. (2019, August 03). Sampling Methods. Simply Psychology. Retrieved from https://bit.ly/3Jzhyye
Melegrito, M.L., and Mendoza, D. (2016) An Introduction to Quantitative Research Methods and Report Writing. Phoenix Publishing House, ISBN:978-971-06-3960-1.
Merrill, W.H. (2021). A Teacher Affects Eternity; He Can Never Tell Where His Influence Stops: A Reassessment of the Contributions of Barney Brooks, A Consummate Educator. Retrieved from Journals.lww.com/aosopen/Fulltext/2021/09000/A_Teacher_Affects_Eternity__e_Can_Never_Tell.7.aspx#:~:text=and%20surgery%20residents.-,A%20teacher%20affects%20eternity%3B%20he%20can%20never%20tell%20where%20his,a%20descendant%20from%202%20presidents
Mohamed, T. (2018). Sources of Occupational Stress Among Teachers: A Field of Study for Teachers Working in Libyan Schools in Turkey. International Journal of Academic Research in Economics and Management Science, 7(1): 1-15. Retrieved from https://bit.ly/3JGUYnx
Morgan, G.B., Hodge, K.J., Trepinski, T.M., & Anderson, L.W. (2014). The Stability of Teacher Performance and Effectiveness: Implications for Policies Concerning teacher Evaluation. Education Policy Analysis Archives, 22: 1-18. Retrieved from https://bit.ly/3oXzHfJ
Munda, N. (2021). The Adaptability of Public-School Teachers amidst the Pandemic. Central Mindanao University Journal of Science ISSN Print: 0116-7847 ISSN Online: 2704-3703. Retrieved from https://js.cmu.edu.ph/uploads/37_The_Adaptability_of_Public_School_Teachers_amidst_the_Pandemic.pdf
Nagaraju, B. & Nandini, H.P. (2013). A Factor of Marital Status Highly Influencing on Stress of Women Employees: A Case Study at Insurance Sector. International Journal of Business and Management Invention, 2(10): 39-46. Retrieved from https://bit.ly/3zAq2AD
Omolara, S.R. & Adebukola, O.R. (2015). Teachers' Attitudes: a Great Influence on Teaching and Learning of Social Studies. Journal of Law, Policy, and Globalization, 42: 131-137. Retrieved from https://bit.ly/3JxK1Vo
Organization for Economic Co-Operation and Development (OECD). (2020). OECD Stat, Distribution of Teachers by Age Retrieved from https://stats.oecd.org/Index.aspx?datasetcode=eag_pers_share_age
Orlanda-Ventayen, C.C and Magno Ventayen, R.J. (2021). Stress and Depression in the Workplace of Educators in the Philippines. Retrieved from https://www.medrxiv.org/content/10.1101/2021.04.22.21254017v1#p-5
Prem, R., Ohly, S., Kubicek, B., and Korunka, C. (2017) 'Thriving on Challenge Stressors? Exploring Time Pressure and Learning Demands as Antecedents of Thriving at Work'. Journal of Organizational Behavior 38 (1), 108-123
Rabago-Mingoa, T. (2017). Filipino Teachers' Stress Levels and Coping Strategies.De Lasalle University Research Congress. Retrieved from https://bit.ly/3P3zv9e

Rodrigues, L.T.M., Lago, E.C., Almeida, C.A.P.L., Ribeiro, I.R., & Mesquita, G.V. . Stress and Depression in Teachers from a Public Education Institution. Enfermeria Global. Retrieved from https://bit.ly/3P7Gxdc

Selye, H. (1950). Stress and the General Adaptation Syndrome. British Medical Journal, 1384-1392. Retrieved from https://bit.ly/3vFvcub

Shah, S.R. & Udgaonkar, U.S. (2018). Influence of Gender and Age of Teachers on Teaching: Students' Perspective. International Journal of Current Microbiology and Applied Sciences, 7(1): 2436-2441. Retrieved from https://bit.ly/3QmIGmh

Shahid, A., Wilkinson, K., Marcu, S., & Shapiro, C.M. (2011). Perceived Stress Questionnaire (PSQ). STOP, THAT and One Hundred Other Sleep Scales, 273-274. Retrieved from https://bit.ly/3QsbSs3

Simran. (2023). Stress Management Program at Workplace. Retrieved from https://mantracare.org/employee-wellness/stress-management-programs/#Preventing_Workplace_Stress_Programs

Sofiandis, A. & Kallery, M. (2021). An Insight Into Teachers' Classroom Practices: the Case of Secondary Education Science Teachers. Education Sciences, 11(583): 1-18. Retrieved from https://bit.ly/3JDyUtV

Southern Education Foundation [SEF]. (2021). Teacher Stress and Burnout. Retrieved from https://bit.ly/3OY6TOQ

Stengård, J., Mellner, C., Toivanen, S., & Nyberg, A. (2022). Gender Differences in the Work and Home Spheres for Teachers, and Longitudinal Associations with Depressive Symptoms in Swedish Cohort. Springer Link Sex Roles, 86: 159-178. Retrieved from https://bit.ly/3zEXxBU

Syahputra, Y.S., Santosa, R., & Supriyadi, S. (2017). Teacher's Willingness Towards the Implementation of Scientific Approach: From Theory to Implementation. Journal of English Education (JEE). Retrieved from https://bit.ly/3Sy6NR9

Tašner, V., Žveglič, M., & Čeplak, M.M. (2017). Gender in the Teaching Profession: University Students' Views of Teaching as Ccareer. Centre for European Policy Studies, 7(2): 47-69. Retrieved from https://bit.ly/3zVUG83

Teles, R., Valle, A., Rodriguez, S., Piñero, I., & Rigueiro, B. (2020). Perceived Stress and Indicators of Burnout in Teachers at Portuguese Higher Education Institutions (HEI). International Journal of Environmental Research and Public Health, 17(3248).

Termos, M.H. (2013). The effects of the Classroom Performance System on Student Participation, Attendance, and Achievement. International Journal of Teaching and Learning in Higher Education, 25 (1): 66-78. Retrieved from https://bit.ly/3zzhcDf

Turtulla, S. (2017). Examining Levels of Job Burnout Among Teachers working in Kosova in Terms of Different Variables. European Journal of Multidisciplinary Studies, 2(6): 286-298. Retrieved from https://bit.ly/3P3x2f6

Uju, E. (2019). Gender Differences in Perceived Stress Level and Coping Strategies Among Secondary School Teachers in Delta. Journal of Emerging Trends in Educational Research and Policy Studies, 10(4). Retrieved from https://bit.ly/3Spd4OZ University of Regina [UOR]. (1998). What is stress. Retrieved from https://bit.ly/3bzkA9j

University of Virginia Human Research Protection Program. (2022). Retention of Research Records and Destruction of Data. Retrieved from https://bit.ly/3BJXQOw

Warsha w, L.J. (2011). Stress Management Programmes. https://www.iloencyclopaedia.org/component/k2/item/149-stress-management-programmes

Werang, B.R., Lewaherilla, E.D., & Okto, I. (2016). The Effect of Teachers' Socioeconomic Status on Elementary Schools' Life in Indonesia: An Empirical Study in the Elementary Schools in Merauke District, Papua. International Journal of Research Studies in Management, 6(1): 23-37. Retrieved from https://bit.ly/3P68wdn

Wettstein, A., Schneider, S., Holtforth, M.G., & La Marca, R. (2021). Teacher Stress: A Psychobiological Approach to Stressful Interactions in the Classroom. Frontiers in Education. Retrieved from https://bit.ly/3d7I7P2

Xhelilaj, L.K., Petani, R., & Ntalla, M. (2021). Relationship Between Teacher's Burnout, Occupational Stress, Coping, Gender, and Age. Journal of Educational and Social Research, 11(4): 266-276.

Yarwood, M. (2017). Schachter-Singer Two Factor Theory. In: Psychology of Human Emotion. Pennsylvania State University Open Resource Publishing. Retrieved from https://bit.ly/3JA2qkk

FIRE RESILIENCY PRACTICES AMONG SELECTED ESTABLISHMENT OF URBAN BARANGAYS IN LIPA CITY BASIS FOR: AN ACTION PLAN

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ABSTRACT

This study aims to determine the level of fire resiliency practices and assess the residents working in the establishment among selected urban Barangays in Lipa City, Batangas, regarding the availability of firefighting equipment and infrastructures and knowledge of firefighting activities. This study is beneficial to local government, firefighting organizations, and public and private sectors, particularly to the respondents involved in the study. This study followed a descriptive quantitative research design with 112 selected employed participants working under establishments of Barangay 2 and 3 in Lipa City, Batangas. The validated self-made questionnaire was presented and manually distributed and comprised of two (2) parts, part one assessing the demographic profile of the respondents and part two assessing the level of resiliency prior to fire events, such as firefighting equipment and infrastructure adequacy and knowledge of firefighting activities. The data gathered revealed a significant relationship between the levels of fire resiliency practices and the demographic profiles of the respondents. The researchers proposed an action plan with the support of firefighting organizations that mainly discusses the key results area, objectives, and strategies for personnel involved in the study. Also, researchers provide a recommendation for a future researcher who wishes to study the same topic.

Keywords: Fire Resiliency, Practices, Firefighting Infrastructures, Firefighting Equipment, Firefighting Activity

INTRODUCTION

In a fire, mere seconds can mean the difference between a safe escape and a tragedy. According to Jamba (2017), fire is one of the most destructive man- made disasters, claiming lives and destroying property. Many recurring fires have been reported all over the world. When a building catches fire, it frequently results in significant damages and repair costs. It may also result in significant financial loss, which may lead to job losses or, in the worst-case scenario, loss of life and forced closure of the business. In fact, establishments with a low level of resilience in case of fire outbreak are likely to have massive consequences on people's lives (Ibe et al., 2019). Buildings, for example, must be built in accordance with the version of the building code in effect at the time an application for a building permit is submitted. Building inspectors ensure that a new building complies with the building code. Once completed, a building must be maintained in accordance with the current fire code, which is enforced by local fire department fire prevention officers. Firefighters, investigators, and other fire prevention personnel are dispatched in the event of a fire to mitigate, investigate, and learn from the potential damage caused by the fire. On top of that, it is crucial for owners to ensure that the buildings are fire resilient with the full cooperation of their employees on strict compliance and procedures on how to mitigate a fire.

As per BFP spokesperson Superintended Annalee Carbajal-Atienza, a total of 2,103 fire incidents were recorded in January and February, an increase of 12.9% from only 1,863 incidents in the same period in 2021 (Caliwan, 2022). According to Tupas (2018), BFP records from Jan. 1 to Dec. 27 showed that a total of 14,316 fires occurred, 3,943 of which were recorded in Metro Manila. The Bureau of Fire Protection has reported an increase in the number of fires and deaths this year compared to 2018. The

latest BFP data showed that there were 16,382 fires in the country from Jan. 1 to Dec. 11, a 3% increase from 15,848 incidents in the same period last year (Cabrera, 2019). It statistically proves that major man-made fire occurs in geographically crowded area such as the NCR and CALABARZON. With the aid of the government, raising public awareness around urban barangays in Lipa City on the issue of fire occurrence and prevention through information dissemination campaigns, public fire drills, and talks is a good way to keep everyone cautious. Establishments can consider precautionary measures as a significant risk to the safety of their employees within the scope. It was determined that elements such as the presence and condition of firefighting facilities, which exposes the institution's supportive capability, and public awareness which demonstrates the ability to respond immediately and appropriately in the event of a fire outbreak, were critical and relevant factors in fire disaster avoidance. Also, studies on human knowledge of fire threats and assessments of preparedness are important aspects of measuring fire risks. As this study was use the information provided to determine the level of fire resiliency practices and assess the residents working in the establishment among selected urban Barangays in Lipa City, Batangas. This were served as the foundation for program development that was aid in the event of a fire outbreak in the aforementioned barangays. Before implementing this program, the researchers intend to share the findings with the Barangay Disaster Risk Reduction Management Council, which were evaluating the effectiveness of the formulated plan. The findings of this study will benefit the researchers, local government, private and public sectors, and residents by improving and assisting them in identifying the weaknesses of the existing program and assisting them during the avoidance of fire events.

STATEMENT OF THE PROBLEM

This study wants to determine the level of fire resiliency practices among selected establishment of urban Barangays in Lipa City, Batangas. With this, the researchers were be able to create plans that were increase the readiness of people during fire events.

Specifically, this study aimed to answer the following questions:

1. What is the demographic profile of the respondents in terms of:
   1.1. age,
   1.2. gender,
   1.3. job position; and
   1.4. business category?
2. What is the level of fire resiliency practices in establishment among selected urban Barangays in Lipa City, Batangas in terms of:
   2.1. availability of firefighting equipment,
   2.2. availability of firefighting infrastructure, and
   2.3. knowledge on firefighting activity?
3. Based on the results, what course of action can be proposed for strengthening the level of fire resiliency practices of residents in the event of a fire?

METHODOLOGY

The researcher believed that using this descriptive-quantitative method was the best way to collect responses that would be significant data to help in determining the level of fire resiliency practices of residents working in establishments among selected Urban Barangays in Lipa City prior and may further establish the basis for a fire safety awareness program. The respondents of the study were employees working in establishments of barangay 2 and 3 of Lipa City, 4217. These barangays were chosen among 72 barangays because they are prone to major fires. The researchers used this study to determine the demographic characteristics of a sample to understand how the survey assesses their level of fire resiliency. These respondents were composed of fifty-six (56) working residents for each barangay drawn from a population of 7,019 residents. According to the Local Disaster Risk Reduction and Management Office's contingency plan for fire, a total of 7,019 residents' lives in Barangays 2 and 3, including those who lived both inside (3,510 residents) and outside (3,509 residents) the evacuation area (LDRRMO). The relevant data gathered from the study was limited to the answers sought by the researchers from the

residents working in establishments in these Barangay. With the total number of possible respondents working in urban areas in Lipa City, the researchers utilized non-probability sampling, specifically, the purposive sampling technique. Purposive random sampling was used by the researcher.

The researcher used self-made survey questionnaires as the main data- gathering tool. The researchers developed a self-administered questionnaire based on existing literature. The researchers used statements from published and unpublished journals, articles, and studies about the level of preparedness before fire events. The items were being revised and were in line with the data required in the study. Moreover, weighted mean, frequency, and Pearson's Correlation coefficient was used as statistical tool in this study.

FINDINGS

Table 1. Demographic Profile of the Respondent

Variables	Frequency	Percentage	Rank
Age			
18 – 22	52	46.43	1
23 – 27	35	31.25	2
28 – 32	11	9.82	3
33 – 37	8	7.14	4
38 – 42	4	3.57	5
43 years old and above	2	1.79	6
Total	**112**	**100**	
Gender			
Male	62	55.36	1
Female	50	44.64	2
Total	**112**	**100**	
Job Position			
Admin Staff	20	17.86	2
Regular Employee	92	82.14	1
Total		**100**	
Business Category			
Micro	109	97.32	1
Small	3	2.68	2
Total	**112**	**100**	

As gleaned in the table, the age range of 18 - 22 got the highest frequency count of 52 or 46.43% at rank 1. Meanwhile, the age range of 43 years old and above made the least frequency count of 2 or 1.79% at rank 6.

On the other hand, the age group in Poblacion Barangay 3 ranged from 20-24 with 269 individuals taking second, while the age range 15-19 with 233 individuals came at third. Age Dependency Ratios show that there are 52 youth dependents for every 100 working-age population in Poblacion Barangay 3; 8 aged/senior citizens for every 100 working-age population; and 60 dependents (young and old-age) for every 100 working-age population overall.

In terms of gender, males obtained the highest frequency count of 62 or 55.36% at rank 1, whereas females gained the least frequency of 50 or 44.64% at rank 2. The results that out of 112 respondents who participated in the study, male respondents are more prevalent than female respondents.

Concerning the respondents' job positions, regular employees gained the highest frequency count of 92 or 82.14% at rank 1, while Admin Staff got the least frequency count of 20 or 17.86% at rank 2.

Lastly, with regards to the respondents' business category, micro garnered the highest frequency count of 109 or 97.32% at rank 1 whereas small got three or 2.68% at rank 2.

Table 2. Level of Fire Resiliency Practices of Residents Working in Establishment among Selected Urban Barangays in Lipa City, Batangas in terms of Availability of Fire Fighting Equipment

Items	WM	Interpretation	Rank
1. Ensure that a fire extinguisher in the establishment is placed on the wall, near an exit, and away from any heat sources.	3.25	Frequent	2
2. Secures that the establishment is equipped with fire emergency exit that safeguard the escape from the effects of fire incident.	2.79	Sometimes	6
3. Ensure the presence of portable filled water tank/reservoir as back up when water supplies during firefighting decreases.	3.21	Frequent	3
4. Ensure that the establishment has tools for a firefighting activity (Ex: water bucket, water hose, ladder)	3.64	Frequent	1
5. Secure the provision of functional smoke detector that gives advance warning in case of fire	2.83	Sometimes	5
6. Ensure the fire exit plan displayed on the door and on each floor of the establishment indicating the safest and fastest escape route is still readable and updated.	2.52	Sometimes	8
7. Makes sure that the patent fire alarm system is fully functional and present in the establishment	2.86	Sometimes	4
8. Ensures that the establishment's fire sprinkler system isn't damaged	2.65	Sometimes	7
Composite Mean	**2.96**	**Sometimes**	

As stated in the table above, the respondents assessed that the establishment frequently ensured that they have equipment for a firefighting activity like water bucket, water hose, ladder which yielded the highest weighted mean of 3.64 and the highest rank of 1.

Results of the study signified that having this basic firefighting equipment on hand can help prevent small fires from turning into major blazes. According to the National Fire Protection Association's (NFPA) fire code, commercial, industrial, and residential buildings must have visible fire extinguishers and other types of fire safety equipment so that employees are capable of operating fire safety equipment in the event of an emergency.

Meanwhile, the said group of respondents responded "sometimes," indicating that the establishments ensure that the fire exit plan displayed on the door and on each floor of the establishment indicating the safest and fastest escape route is still readable and updated, which received the lowest weighted mean of 2.52 and the lowest rank of 8.

In fact, researchers discovered that because the majority of businesses in Lipa City were micro, they did not support having a fire exit plan displayed on the wall. Their businesses were not as large as those of other establishments. It is not triggered people to be prepared, but the orientation on evacuation planning was properly executed.

Table 3. Level of Fire Resiliency Practices of Residents Working in Establishment among Selected Urban Barangays in Lipa City, Batangas in terms of Availability of Fire Fighting Infrastructures

Items	WM	Interpretation	Rank
1. Ensures that there is a suitable pumping station and a water tank present at this establishment.	2.74	Sometimes	5
2. Ensures that there are no obstacles/hindrances on the exits and fire escapes of the establishment.	2.63	Sometimes	6
3. Ensures the ventilation system is in good condition.	2.93	Sometimes	3
4. Ensure the availability of emergency hotlines posted on the establishment.	2.36	Sometimes	8
5. Ensures that there is sufficient equipment to be used for the outage phase. (Ex. Water buckets, water hose)	3.17	Frequent	1
6. Makes sure that there is no electrical equipment, gas stove, and other flammable materials left unchecked.	2.80	Sometimes	4
7. Ensures that the establishment prohibits any vehicle for parking too long near the building to avoid obstacles or hindrances on the road for emergency vehicles.	2.60	Sometimes	7
8. Ensures the presence of emergency lights in the establishment is still in good conditions.	2.94	Sometimes	2
Composite Mean	**2.77**	**Sometimes**	

As presented in Table 3, the respondents responded that establishments ensured frequently the availability of equipment for the outage phase such as water buckets, and water hoses which got the highest weighted mean of 3.17 and the highest rank of 1. The availability of basic firefighting equipment such as water buckets or hoses during the survival phase is critical for people in establishments because the majority of them are not well-trained in dealing with fire outbreaks. These items or materials are adequate for people to use in order to survive in a fire.

Meanwhile, the aforementioned group of respondents occasionally ensured the availability of an emergency hotline posted on the establishment, earning the lowest weighted mean of 2.36 and the lowest rank of 8. The researcher also discovered that fire emergency contact information is not available in the establishments, which is critical for every individual, institution, and organization. Employees and managers alike were excused by respondents who were frequently overlooked and forgotten. The fire department would usually respond to a fire late as a result of the delay in contacting them. Furthermore, the fire engine is stoned by the local community, and items from the fire engine are sometimes stolen. Members of the community frequently fail to realize that their response time begins when they receive a call, not when the fire starts. The result shows the composite mean of 2.77 indicated that in terms of firefighting infrastructure availability, the selected establishments of Lipa City's Urban Barangays are sometimes resilient in the event of a fire.

Table 4. Level of Fire Resiliency Practices of Residents Working in Establishment among Selected Urban Barangays in Lipa City, Batangas in terms of Knowledge on Fire Fighting Activities

Items	WM	Interpretation	Rank
1. Being aware and participates in any fire preparedness and prevention-related activities.	3.65	Frequent	2
2. I am able to handle a fire extinguisher when the needs of situation arise.	3.23	Frequent	6
3. Ensures that the government agencies' advocacies and programs on fire preparedness are being followed.	3.75	Frequent	1
4. Ensures to sought additional knowledge on fire preparedness through community research and engagement.	3.50	Frequent	5
5. Updated on the BFP's and LDRRMO's emergency contact number.	3.60	Frequent	4
6. Having updated knowledge to know the evacuation protocols when there is a fire occurring	3.21	Frequent	7
7. View online videos about the fundamental applications of firefighting gear (Ex: fire extinguisher, fire hose)	3.15	Frequent	8
8. Updating myself with information about fire prevention, fire hazards, and histories of fire cases acquired through the seminars I have attended.	3.63	Frequent	3
Composite Mean	3.47	Frequent	

As presented in Table 4, the respondents acknowledged that the establishments ensured that the government agencies' advocacies and programs on fire preparedness are being followed frequently this made the highest weighted mean of 3.75 and the highest rank of 1. The study implied that there was a high level of compliance among establishments in implementing fire safety measures, which is crucial in preventing fires and minimizing its damages.

On the contrary, the said group of respondents responded "sometimes" as they occasionally viewed online videos about the fundamental applications of firefighting equipment such as fire extinguishers and fire hoses, yielding the lowest weighted mean of 3.15 and the lowest rank of 8.

In terms of knowledge of firefighting activity, the composite means of 3.47 indicated that the selected establishments of Lipa City's Urban Barangays are frequently resilient in the event of a fire.

Table 5 Proposed Action Plan

The researcher formulated action plan that was ensure the benefit local government, firefighting organizations, public and private sectors, and the respondents involved in the study.

Similar to the National Infrastructure Protection Plan (NIPP) (2013) objectives for critical infrastructures in the United States, such as assessing and analyzing hazards to inform risk management activities,

securing against threats through risk-reduction actions, enhancing resilience by minimizing the consequences of incidents based on planning and mitigation, applying effective responses and ensuring quick recovery, sharing action and vision, and promoting The study also discovered that the National Institute of Standards and Technology (NIST) defines comparable goals and objectives, such as defining community hazards and levels, predicting performance to ensure social functions, defining desired recovery performance goals based on social needs, and identifying dependencies and cascading events. When considering specific events, the primary goal of building codes is to ensure life safety and prevent collapse by defining an acceptable level of tolerable threat to a building; however, the objectives can also include property protection and continuity by providing a minimum level of functionality, quick recovery, and improvement for future hazards.

PROPOSED ACTION PLAN: Increase Employees / Employer Relationship			
Main objectives: To educate employees and employers about fire safety measures and precautions in the workplace. To enhance communication and collaboration to effectively respond to a fire emergency situation. To offer psychological support and resilience – building programs impacted by a fire emergency.			
KEY RESULTS AREA	**Mental Health Promotion and Support**	**Workplace Flexibility and Adaptability**	**Workspace Design and Ergonomics**
MANDATE PROGRAMS	Employee Support Program	Flexible Work Arrangements, Resilience and Adaptability Training	Ergonomic Assessment, Workspace Design Improvements, Ergonomic Training
PROCEDURE	Conduct needs assessment, develop mental health promotion plan, roll-out training and support programs, implement policy, monitor and evaluate program effectiveness	Conduct needs assessment, develop flexible work policy, rollout training, implement emergency management plan, monitor and evaluate program effectiveness	Conduct ergonomic assessment, implement improvements, rollout training, monitor and evaluate program effectiveness
SPECIFIC OBJECTIVES	Provide timely and accessible support for employees experiencing mental health challenges	Improve work-life balance for employees	Provide timely and accessible support for employees experiencing mental health challenges
PERSONS INVOLVED	HR team, mental health professionals (e.g., counselors, therapists), employee	HR team, training and development professionals, disaster/emergency management specialists	Occupational health and safety professionals, facilities management team, training and development professionals
INDICATORS OF SUCCESS	increased employee engagement in mental health initiatives, increased utilization of counseling services, positive feedback from employees on workplace culture related to mental health	Increased employee satisfaction and productivity, successful implementation of flexible work arrangements, successful management of workplace emergencies and disasters	Reduced incidence of workplace injuries and disorders, improved employee comfort and productivity, high levels of employee engagement in workplace safety measures
DURATION	Ongoing, with regular evaluations and updates	Ongoing, with regular evaluations and updates	Ongoing, with regular evaluations and updates

CONCLUSIONS

Based on the findings of this study, the following conclusions were drawn:

1. The majority of the respondents were young adult, males, who had a job position as regular employees and were currently employed in microbusinesses from the entire population of the study.
2. Majority of the respondents exhibit a level of resiliency "Sometimes" on the availability of firefighting equipment and availability on firefighting infrastructures, while the majority of respondents acquired a "Frequent" knowledge of firefighting activity.

RECOMMENDATIONS

Based on the findings and conclusions presented, the following recommendations are suggested:

1. The researcher suggested, especially to those employers, to be more cautious and think about the safety of their people as the top priority in support of compliance with building fire codes or any tragic events possibly incur. So, they can help to boost employees' resilience in presence of fire-fighting equipment, firefighting infrastructures, and knowledge on firefighting activities by diverting their attention which leads to preparedness even without proper training.
2. To selected urban barangays, the researcher recommends to conduct a survey to identify the level of availability of firefighting equipment. This would include assessing the availability and condition of equipment such as fire extinguishers, fire hoses, fire alarms, and smoke detectors. The survey could also explore the extent to which this equipment is frequently maintained and updated, and whether the barangays have a system in place for monitoring and replenishing their supply of firefighting equipment. In addition, to evaluate the availability of firefighting infrastructures in the selected urban barangays. This could involve assessing the condition and accessibility of fire hydrants, water sources, roads and pathways, and other infrastructure that could help in the event of a fire. The study could also explore the extent to which these infrastructures are regularly maintained and updated, and whether there are any gaps or limitations in the barangays' firefighting infrastructure. And, to assess the knowledge level of community members regarding firefighting activity. This could involve conducting surveys, focus group discussions, or interviews to determine the extent to which community members are aware of fire risks and prevention measures, and whether they have the necessary knowledge and skills to respond to a fire emergency. The study could explore the role of community-based organizations, local government units, and other stakeholders in promoting fire safety awareness and education.
3. Expand or conduct additional surveys or interviews to gather more detailed information about the specific factors that influence fire resiliency practices among different demographic groups. For example, the study could explore whether cultural beliefs, access to resources, or other social or environmental factors play a role in shaping fire resiliency practices among different demographic groups.
4. The researcher recommends future researchers to broaden the research setting of the study to increase its value of the study. It is highly recommended to have a higher number of participants and other locales must be considered for future studies.

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REFERENCES

Cabrera, R. (2019, December 12). BFP: More fires, more deaths reported in 2019. Philstar.com. Retrieved February 5, 2023, from https://www.philstar.com/nation/2019/12/13/1976567/bfp-more-fires -more- deaths-reported-2019

Caliwan, (2022). Fire incidents up by almost 13% in first 2 months of 2022. Philippine News Agency. https://www.pna.gov.ph/articles/1168780

Ibe, K. et.al (2014). Fire Extinguishing Strength of the Combustion Product of Wood Saw Dust. Journal of Application Science and Environment Management.

Jamba, (2017). Fire disaster preparedness and situational analysis in higher learning institutions of Tanzania. doi: 10.4102/jamba.v9i1.311

National Fire Protection Association's (NFPA). Fire Extinguisher Types. https://www.nfpa.org/news-blogs-and-articles/blogs/2023/08/01/fire-extinguisher-types

Tupas, (2018). Fire incidents increased by .84 percent in 2018. Philstar Global. https:// www.philstar.com/nation/2018/12/28/1880369/fire-incidents-increased-84-percent-2018

IMPACT OF FLAVOR, TEXTURE AND PALATABILITY ON CONSUMERS' PERCEPTION AND ACCEPTANCE OF CAPINE MELON SMOOTHIE (CARROT, PINEAPPLE AND WATERMELON)

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ABSTRACT

In this study, the researchers aim to investigate the influence of flavor, texture, and palatability on consumers' perception and acceptance of Capine Melon (carrot, pineapple, and watermelon) smoothie. Smoothies are becoming more and more popular as a convenient and healthy beverage choice. The adoption of various tastes and components by consumers, however, varies greatly. The researchers concentrated on watermelon, pineapple, and carrot smoothies in this study because of their unique tastes and possible health advantages. The researchers conducted sensory evaluations to gather data on participants' preferences for each smoothie based on these factors. The participants were asked to rate each smoothie based on various attributes including taste, aroma, mouthfeel, and overall liking. By analyzing the feedback, we can identify which attributes contribute most to consumer satisfaction and determine any potential correlations between flavor, texture, and palatability. The findings showed that in terms of aroma, treatment 1 received the highest score and was described as "like very much" while treatment 2 received the lowest mean and was described as "like moderately". In terms of color, treatment 1 received the highest mean and was described as "like very much" while treatment 2 received the lowest mean and was interpreted as "like moderately". In terms of taste, treatment 1 obtained the highest score of and was described as "like very much" while treatment 3 obtained the lowest score and was interpreted as "like moderately". In terms of texture, treatment got the highest rating and was interpreted as "like very much" while treatment 3 got the lowest rating and was also interpreted as "like moderately". For general acceptability, treatment 1 was rated by the respondents as the most acceptable and was interpreted as "like very much" while treatment 3 was rated as the lowest and was also interpreted as "like moderately." The findings revealed that the combination of ingredients of treatment 1 excels in aroma, color, taste, and texture and its qualitative attributes influences consumer satisfaction. Aside from its high ratings of sensory attributes, treatment 1 may also hold a promise of return of investment as the product may positively impact the consumers' willingness to pay for its price. For the Return of Investment per treatment it is found out that treatment 3 has the highest ROI among the three treatments of 69.73% while treatment 1 and treatment 2 has an ROI of 53.89% and 65.06% respectively. In conclusion, this study highlights the importance of flavor, texture, and palatability in consumers' perception and acceptance of watermelon, pineapple, and carrot smoothies. The CAPINE Melon Smoothie exhibits a distinct and appealing aroma, characterized by the combined fragrances of carrot, pineapple and watermelon. The blend appeared visually appealing, suggesting freshness and the presence of natural ingredients. The taste profile of CAPINE Melon Smoothie is likely to be a harmonious combination of the sweetness from watermelon, the tropical notes from pineapple, and the earthy undertones from carrot. The texture complements the overall sensory experience, enhancing the perceived quality of the CAPINE Melon Smoothie. The findings can be valuable for smoothie producers and marketers in developing products that cater to consumers' preferences and enhance their overall experience.

INTRODUCTION

Background of the Study

Smoothies have become increasingly popular as a convenient and nutritious beverage option, offering a blend of fruits and vegetables that cater to diverse taste preferences. A smoothie is a beverage made by puréeing ingredients in a blender. A smoothie commonly has a liquid base, such as fruit juice or milk, yogurt or ice cream. Other ingredients may be added, including fruits, vegetables, non-dairy milk, crushed ice, whey powder or nutritional supplements.

In the 1960s Steve Kuhnau was inspired by his work as a soda jerk and began experimenting with smoothies. They were an alternative for the lactose intolerant Kuhnau to taste his own concoctions using unique blends of fruit juices, vegetables, protein powder, and vitamins. Kuhnau discovered early success in his smoothie sales and founded Smoothie King. The smoothie was then modified by fast food chains with the addition of sweeter ingredients like chocolate and Splenda. In the 2000s, consumers began making smoothies at home, in part as an alternative for daily consumption of fruits and vegetables.

According to a study by Ares, Giménez, Gámbaro (2007), flavor is one of the most influential factors in food preference, directly affecting the consumer's choice and acceptance. The researchers found that the perceived intensity of the flavor significantly influenced the overall liking of the product. The study highlights the importance of flavor balance in food and beverage products. According to Spence, Piqueras-Fiszman, and Auvray (2012), the flavor of a beverage is influenced not only by its taste but also by its aroma, temperature, and even the sound it makes during consumption. Consumer perception towards smoothies is significantly influenced by the product's characteristics such as taste, texture, and appearance (Smith & Riethmuller, 2019). These sensory attributes play a crucial role in shaping consumers' preferences and acceptance of smoothies. Moreover, the study conducted by Smith and Riethmuller (2019) also indicates that consumers' perceived value of smoothies is higher when they are made with fresh and natural ingredients.

In recent years, the exploration of unique combinations has led to the emergence of innovative smoothie blends, hence, the researchers opt to conduct a quantitative study, assessing the sensory attributes affecting the perception of the consumers of the Capine Melon Smoothie - a fusion of Pineapple, Carrot, and Watermelon.

STATEMENT OF THE PROBLEM

General Objectives

Generally, this study attempts to assess the sensory attributes factors in the perception of CAPINE Melon Smoothie (Carrot, Pineapple and Watermelon) by consumers.

Specific Objectives

Specifically, this study sought to find the answers to the following questions:

1. To determine the sensory qualities of CAPINE Melon Smoothie (Carrot, Pineapple and Watermelon) in terms of:
   1.1 Aroma
   1.2 Color
   1.3 Taste and
   1.4 Texture
2. What is the perception of the respondents on Capine Melon Smoothie?
3. What is the ROI (return of investment) per treatment of the Capine Melon Smoothie?

METHODOLOGY

Materials and Equipment

The study used different kitchen utensils in making the CAPINE Melon Smoothie (Carrot, Pineapple and Watermelon) such as knife, chopping board, strainer, blender, measuring cup for liquid, and measuring spoon.

Experimental Design and Treatments

This research was experimental types of research. This study was conducted in a Completely Randomized Design (CRD) with three (3) treatments and three (3) replications.

The data and other information were presented, treated, and analyzed using the experimental design in comparing the groups under the observation of this research.

The treatments are the following:

Treatment 1	200 grams sliced fresh pineapple ,100 grams sliced fresh watermelon, 50 grams carrots, diced, 250 grams full cream milk, 4 tablespoons condensed milk
Treatment 2	100 grams slice fresh pineapple, 50 grams slice fresh watermelon, sliced, 200 grams carrots, diced, 250 grams full cream milk, 4 tablespoons condensed milk
Treatment 3	50 grams slice fresh pineapple, 200 grams slice fresh watermelon, sliced, 100 grams carrots, diced, 250 grams full cream milk, 4 tablespoons condensed milk

Processing Procedure

1. **Preparation of Pineapple**
   Peel and cut the pineapple into chunks. Remove the core and freeze overnight.
2. **Preparation of Watermelon**
   Use seedless watermelon. Wash and peel the watermelon. Cut into cubes and freeze overnight.
3. **Preparation of Carrots**
   Wash and peel the carrots and then slice into small pieces.
4. **Preparation of Capine Melon Smoothie**
   Before preparing the Capine Melon Smoothie, ensure that all utensils were washed, drained, and set aside for use.

Start by preparing the ingredients of the Capine Melon Smoothie based on the treatment. Pour the desired amount in weight of Carrots, Pineapple and Melon based on the treatment into the blender. Add full cream milk corresponding on the amount stated per treatment in order to create a smooth base. Blend the ingredients until you achieve a creamy consistency. To sweeten the smoothie, add two (2) tablespoon of honey syrup and condensed milk, and then blend once more to ensure even distribution of the flavors.

FINDINGS

Summary of Findings

The results showed that in terms of aroma, treatment 1 received the highest score of 4.26 and was described as “like very much” while treatment 2 received the lowest mean of 3.92 and was described as “like moderately”. In terms of color, treatment 1 received the highest mean of 4.20 and was described as “like moderately” while treatment 2 received the lowest mean of 3.5 and was interpreted as “like moderately”. In terms of taste, treatment 1 obtained the highest score of 4.05 and was described as “like moderately” while treatment 3 obtained the lowest score of 3.45 and was interpreted as “like moderately”. In terms of texture, treatment got the highest rating of 3.9 and was interpreted as “like moderately” while treatment 3 got the lowest rating of 3.6 and was also interpreted as “like moderately”.

For general acceptability, treatment 1 was rated by the respondents as the most acceptable with a mean of 4.05 and was interpreted as “like moderately” while treatment 3 was rated as the lowest with a mean of 3.55 and was also interpreted as “like moderately”

The results showed that the carrots contribute a slightly and earthy flavor to the smoothie, pineapple adds a sweet and tangy flavor and watermelon imparts a slight and sweet flavor.

The findings revealed that the combination of ingredients of treatment 1 excels in aroma, color, taste, and texture and its qualitative attributes influences consumer satisfaction. Aside from its high ratings of sensory attributes, treatment 1 may also hold a promise of return of investment as the product may positively impact the consumers' willingness to pay for its price.

Table 1. Summary of the Results of Treatments 1, 2, and 3 in terms of Aroma, Color, Taste, and Texture, and General Acceptability

	Indicator	Mean	Description
Treatment 1	Aroma	4.26	Like Very Much
	Color	4.20	Like Very Much
	Taste	4.05	Like Moderately
	Texture	3.9	Like Moderately
	General Acceptability	4.05	Like Moderately
	Grand Mean	**4.092**	**Like Moderately**
Treatment 2	Aroma	3.92	Like Moderately
	Color	3.5	Like Moderately
	Taste	3.75	Like Moderately
	Texture	3.75	Like Moderately
	General Acceptability	3.8	Like Moderately
	Grand Mean	**3.744**	**Like Moderately**
Treatment 3	Aroma	4.20	Like Very Much
	Color	3.9	Like Moderately
	Taste	3.45	Like Moderately
	Texture	3.6	Like Moderately
	General Acceptability	3.55	Like Moderately
	Grand Mean	**3.74**	**Like Moderately**

Legend: (4.20-5.00=Like Very Much; 3.40-4.19=Like Moderately; 2.60-3.39=Neither Like nor Dislike; 1.80-2.59=Dislike Moderately; 1.00-1.79=Dislike Very Much)

Table 2. Net Income of Capine Melon Smoothie

TREATMENT	REVENUE	COST	NET INCOME
T1	3600	2339.4	1260.6
T2	3600	2181	1419
T3	3600	2121	1479

Table 3. Net Income of Capine Melon Smoothie

TREATMENT	NET INCOME	COST	ROI
T1	1260.6	2339.4	53.89%
T2	1419	2181	65.06%
T3	1479	2121	69.73%

CONCLUSIONS

Based on the findings of the study, the following conclusions were drawn:

First, treatment 1 creates a balanced creaminess and tropical sweetness due to a nearly balanced amount of full cream milk and frozen pineapples. The aroma was captivating and enjoyed by the majority of the respondents as a result of adding a large amount of tropical fruits. Second, Treatment 1 surpasses treatment 2 and 3 in terms of taste and aroma which implies that the ratio of the ingredients is important in achieving a high quality of smoothie. Treatment 1 was the most favored by the respondents and may potentially attract consumers. Finally, among the three treatments, treatment 3 has the highest

return of investment of 69.73% while treatment 1 and treatment 2 has an ROI of 53.89% and 65.06% respectively.

RECOMMENDATIONS

Based on the findings and conclusions of the study, the researchers recommended the following:

The market analysts may explore a wider scope of analysis in the smoothie market and provide insights to help the researchers create a more detailed questionnaire for sensory attributes.

The consumers may experiment at home by adding desired fruits or ingredients and create a smoothie tailored to their preferences.

The researchers may collect insights and individual preferences of the consumers to help refine the smoothie formulation and exceed the expectations of the consumers.

The future researchers may incorporate a variety of fruits and different kinds of milk to explore and discover new combinations.

Lastly, the formulation for treatment 1 may be adjusted to refine and enhance the quality of the product.

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Sincerely,

The Researchers

REFERENCES

Ansay, M.R. (2014). Development of turmeric-based healthy mocktails. Retrieved from Technical Education and Skills Development Authority (TESDA) on November 14, 2023

Ares, G., et al. (2010). Sensory profiling, the blurred line between sensory and consumer science. A review of novel methods for product characterization. Food Research International, 43, 834–848.

Balaswamy, K., Prabhakara Rao, P. G., Nagender, A., Narsing Rao, G., Sathiya Mala, K., Jyothirmayi, T., ... & Satyanarayana, A. (2013). Development of smoothies from selected fruit pulps/ juices. *International Food Research Journal*, 20(3).

Hayes, A. (2022). Simple Random Sample. Retrieved from Investopedia on November 15, 2023

Horsaengchai, M. P., & Patterson, P. G. (2018). A Study of Consumers 'understanding, Attitudes, And Behavior towards Sugar Content in Soft Drinks (Doctoral Dissertation, Thammasat University).

Kumar, A., Aggarwal, P., Kumar, V., Babbar, N., & Kaur, S. (2022). Melon-based smoothies: process optimization and effect of processing and preservation on the quality attributes. Journal *of Food Measurement and Characterization*, 16(5), 4121-4136. https://doi.org/10.1007/s11694-022-01466-3\

Sajid,E.K.(2022).Comprehensive review on milk based smoothies: Current status and nutritional impact.

Sarantakou, P., Andreou, V., Paraskevopoulou, E., Dermesonlouoglou, E. K., & Taoukis, P. (2023). Quality Determination of a High-Pressure Processed Avocado Puree-Based Smoothie Beverage. Beverages, 9(2), 38. https://doi.org/10.3390/beverages9020038

DEVELOPMENT OF DIGITAL COMICS IN ARALING PANLIPUNAN 6

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ABSTRACT

This study aimed to develop and validate the digital comics media as a learning material used in Araling Panlipunan to grade 6 students. Specifically, it sought to answer the process of development of digital comics media in teaching material in Araling Panlipunan, and how teachers assessed the digital comic media in terms of content, originality, accuracy, and appeal to target user. The researcher utilized a survey type of questionnaire to validate the material. To determine the validity of the digital comics media, the researcher administered the questionnaire for acceptability of materials to five (5) Master Teachers and Digital Illustrator as participants. The assessment of teachers on digital comics media in terms of content got a composite mean of 4.00, originality, with 4.00, accuracy, with 3.80, and appeal to target user, with 3.69, all described as highly acceptable. The researcher therefore concluded that the developed digital comics media based on the Most Essential Learning Competency of grade 6 students in Araling Panlipunan have met the acceptability criteria and has high usability. However, it is recommended to teachers to develop more digital comics as a learning material to help them in guiding their pupils meet the Most Essential Learning Compentency in Araling Panlipunan. The material may enhance by adding voice clips and music to cater to other learning styles of the learners. Other researchers may conduct the same study by increasing the Most Essential Learning Competencies included and utilizing the material to test its' effectiveness.

Keywords: araling panlipunan, development, digital comics

INTRODUCTION

One of the salient features of K to 12 Program that was adapted a few years ago in the Philippines was making the curriculum relevant to learners (Sec 5, RA No. 10533, DepEd Order No. 21 s 2019). In this curriculum, everything that was used in the teaching and learning process was based on the local culture, history, and reality which will make the lessons relevant to the learners. With this, Araling Panlipunan, which follows the aspirations of the laws Education for All 2015 and K-12 Philippine Basic Education Curriculum Framework with the objective to attain 21st-century skills and develop "functionally literate and developed Filipino," was included in the curriculum.

Araling Panlipunan curriculum ensures to develop among the learners the understanding of the basic knowledge and issues of history, geography, politics, economics, and related disciplines to reach the four pillars of learning: learning to know, learning to do, learning to live together, and learning to be. The content standard and competency standard of AP Curriculum are anchored on seven themes (1. tao, kapaligiran at lipunan, 2. panahon, pagpapatuloy at pagbabago, 3. kutlura, pananagutan at pagkabansa, 4. karapatan, pananagutan at pagkamamamayan 5. kapangyarihan, awtoridad at pamamahala, 6. produksyon, distibusyon at pagkonsumo 7. at ungnayang pangrehiyon at pangmundo) and being acquired by the learners through continuity and consistency across all levels and subjects. With the different developmental stages of the learners, AP curriculum time allotment is adjusted from Grades 1-2 with 30 min/day to 40 min/day x 5 days for Grades 3-6, and 3hrs/week for Grades 7-10 during school days of the week.

The learners should know all the information on the community he/she belongs to including its history, culture, and traditions (Official Gazette, 2019). Learning from the past will benefit the learners to gain valuable insights into how people in the past handled moral dilemmas and to become productive

members of a larger society. However, many students were uninterested in Araling Panlipunan subject, and others viewed it as an unimportant subject. Some have misconceptions of the real and true meaning of history, wherein they compare it with gossip. It will become a growing problem and issue in teaching and learning Araling Panlipunan if it is not solved. Araling Panlipunan, however, requires concentration and focus to understand its main concept. Thus, simple and situational delivery is needed to ensure the requested learning outcome.

Thus, this study will seek to provide a useful and modern way of teaching concepts that the learners easily understand. Applying the digital comics, which were used as a learning tool in different subject areas, will result in a large probability that what they understand, and gain will help the students to have a deep understanding regarding the subject Araling Panlipunan.

Statement of problems

The study aimed to develop and validate digital comics in Araling Panlipunan 6. Specifically, it sought to answer to the following questions:

1. What is the process of development of digital comic media as teaching material in Araling Panlipunan in terms of:
   1.1 Analyzing
   1.2 Designing and Developing
   1.3 Implementing and Evaluating?
2. How do the teachers assess the digital comic media in Araling Panlipunan in terms of:
   2.1 Content
   2.2 Originality
   2.3 Accuracy
   2.4 Appeal to target user?

METHODOLOGY

This chapter presents the research design used by the researcher, participants, research instrument, procedures of conducting the study, ethical considerations and data analysis.

Research Design

A research may identify areas in need of additional research and relationships between variables that require future study. The Descriptive Method of research which is also referred to as "hypothesis generating research" was utilized to study data that can be used to identify the prevalence of problems and the need for new or additional services to address these problems. And with that, the Descriptive Method of research was used in this study. It was applied to gather information about the present existing condition of the study. Analyses it and then provides the data in an understandable manner. It dealt with the process of assessing the developed digital comic and determining the validity of the developed material.

Participants

The participants were chosen purposively since it was primarily focused on the lesson in Araling Panlipunan VI and another reason was for easier collecting the data needed. The materials were validated by the five Master Teachers (MT) and digital illustrator. Four of the five Master Teachers majored in Educational Management teaching Araling Panlipunan in Grade Six and the other one was specialized in Araling Panlipunan teaching in Junior High Schools (JHS). All of them were from DepEd Sariaya which is divided into two districts, Sariaya East District and Sariaya West District. The two of them were from Sariaya East District while the remaining three were from the Sariaya West District including the MT teacher in JHS. On the other hand, the Digital Illustrator and at the same time a Graphic Artist contributed a lot in the betterment of the material developed as his expertise was extended to the researcher. He is a Filipino Artist based in Ontario, Canada where he works for a foreign company.

Their constructive comments and suggestions on validating the digital comics, based from their expertise and knowledge in relation to the content and the material itself, helped the material achieved its objective and improve in a way that it can be learn best by the target user which will be the grade six students.

Research Instrumentation

The researcher used a self-made questionnaire as an instrument in this study. The researcher followed the steps in developing the questionnaire.

1. ***Construction of questionnaire***. A self-made type of questionnaire was constructed by the researcher for the validation of the created digital comics. It was composed of four components: Content, Originality, Accuracy, and Appeal to Target User. The statements constructed were based on other developed instructional materials as such. In the first component, the content, assessed the face value of the digital comics material and the topics included and the visual elements used. In terms of originality, it talks about whether it was self-made or created from the idea of others. The accuracy was consisting of statements which assessed whether the content of the digital comics media was presented in clearly to achieve the expected outcome. And lastly, it also includes evaluation based on the effect to the target users which are the grade six students.
2. ***Revision***. The researcher revised the questionnaire based on the comments and suggestions of her adviser and asked assistance & critic from other teachers related to the material made.
3. ***Content and face validation***. After checking and reconstructing the questionnaire, it was shown to subject teachers who taught Araling Panlipunan 6 and were knowledgeable enough of the topic being presented and an English Major Teacher who checked the grammar for content and face validation. Comments and suggestions were acknowledged for the newly constructed questionnaire.
4. ***Administration of questionnaire***. The researcher administered the questionnaire online to five (5) Master Teachers and digital illustrator. A letter of permission was secured first and foremost.

Procedure

The growing number of instructional materials found in the internet is not sufficient to cater to all the learners' needs, specially if it is not made locally. In order to address this common problem, the researchers surf the internet and gather information of instructional material that is proven to be effective nowadays in the digital era. After taking many considerations, including the capability of the researcher and the limited time frame of the study, the researcher came up with developing digital comics media.

The researcher found the most convenient digital comics maker for a beginner like her. And to be precise of the content to be included in the material, the researcher watches a number of Filipino movies related to the topics included surf through the reliable websites, and read several books. The process of developing digital comics media followed the rapid prototyping model. Simultaneous to the development of the material, the researcher was constructing a self-made questionnaire. To serve the purpose of which the research was designed for, a self-made survey type questionnaire was used to validate the digital comics developed by the researcher about Araling Panlipunan 6. After the series of processes in constructing the questionnaire, it was then administered to the validators. Additionally, the output was evaluated based on its content, originality, accuracy, and appeal to the target user.

In gathering data, the researcher gets in touch with the validator through an online platform, Google forms. Considering the current situation and the risk of COVID Pandemic and given that the participants were living outside the country, the researcher got through with them online. The results were validated through statistical treatment and checked by the statistician.

Data Analysis

To determine the results of the assessment done by the teachers and digital illustrator as the validators of the digital comic media developed based on the four components, content, originality, accuracy, and appeal to target users, Weighted Mean was utilized.

For the interpretation and analysis of data gathered by the researcher from the participants, the following descriptions were utilized.

Scale	Range	Descriptive Rating (DR)
4	3.50-4.49	Highly Acceptable (HA)
3	2.50-3.49	Highly Acceptable (HA)
2	1.50-2.49	Fairly Acceptable (FA)
1	1.00-1.49	Not Acceptable (NA)

RESULTS AND DISCUSSIONS

This part of the study shows the presentation, analysis and interpretation of the gathered data from the tests and questionnaires answered by the respondents.

1. Process of Development of Digital Comics Media in AP

As shown in the Figure 1, it will start in analysis phase of the learner's needs and what is to be learned and by whom. The trend of today's educational system is to support the 21st century learners' instructional needs. Provided that there are a lot of videos and other instructional materials in the internet, making it localize is in another level of supporting the learners. The developed digital comics as an instructional material envisioned to meet the learners' needs to enhance their academic performance in Araling Panlipunan. Among the MELCs included in the first quarter, given the scope of conducting the study and limitations in identifying the lessons to be included, the researcher selected the lesson about history that fit in narrative form of digital comics developed.

It was then followed by the simultaneous process of design and development wherein the tools and the material was decided while at the same time developing the material which is digital comics. The initial design of digital comics involved writing of the storyline of the lesson about history with the mixture of past and present scenarios adapted by the researcher from the ideal creation of Philippine TV series "Maria Clara at Ibarra" of GMA Network because of its influence to the new generation. The draft of storyline was delicately made by the researcher using paper and pencil. And since the participants were grade 6, the characters, aside from the characters included already in the history, were adjusted to their age and daily life experience inside the classroom. The main character was Emilio, named after the Philippine hero and the first President of the Philippines, who was included in the lesson presented in the comic. Together with him was his classmates named Joy, Angel, Anton, and Maria which were derived from common Filipino names. Their teacher was Ma'am Ann which is single syllable that could help the students easily remember. The choice of said characters and the storyline was purely from the researcher's imagination. The inclusion of Most Essential Learning Competency in the storyline was in the set-up of history as it is based on the books, reliable websites, and Filipino movies related to it. On the other hand, the scenario of the main character is in the school setting in order for the students to relate their real life and to create the connection between the past and the present.

The cover page of each comic was created in a way the students can easily adapt to what was the content inside. It includes the title, which is provided by books, the reimagine picture of the highlight of the story, special note about the content, the author, and the software application used. The color used in the cover page defines the story like red for a bloody war. The speech bubbles were purposively placed to create a balance between the text and the images. As seen in the material, there were storyboards with both images and texts, some were images alone or text only. It is for a reason to create a unity where there is a harmony produced by all the elements and design piece and how these elements create a relationship for the whole page. The unity can make the design feel disorganized or cluttered, that is why it is important that unity can point the students to the right information. In terms of the color, shapes, and textures used they create a contrasting effect. It is where the visual elements create hierarchies. This can help the students go to certain element because they stand out more. It will help them visually remember the facts being presented. After finishing the storyline, it was checked by the adviser for comments and suggestions. It was then revised and then validated by a teacher major in Filipino who draws some corrections on the grammar and suggestions on the storyline. For Araling Panlipunan subject, two Grade 6 teachers of AP read and analyze clearly the contents presented.

While the storyline was in the process of checking, the researcher was also at the same time in the developing process. There were various applications introduced by the internet for creating a digital comic but the researcher considers a teacher and beginner friendly that could be easily used for a short period of time. Thus, the creative tool launched by the Ministry of Education of France intended for use by teachers for creating the digital comics was BDnF which was utilized by the researcher. One of BDnF's greatest assets is that it provides access to a wealth of extremely varied resources, allowing readers to switch back and forth between discovering archive materials and creating their own unique works. It provides strips and templates, characters with different facial expressions and body movements, speech bubbles, and can also import images. It was a friendly comic maker application for beginners like the researcher. The main character was from the BDnF while the characters from the history

were picked from the internet with thorough considerations of the one it represents. All considerations for the characteristics of the cast like facial features, body size and movements, skin color, their wardrobe relative to the history and others even the settings were decided accordingly. Comprehensive research was done in the internet, books, and movies to be able to keep the identity of the characters. By the end of the digital comics was a 10 items multiple choice activity. The activity was self-made by the researcher with the use of Budget of Work and Table of Specifications that covers the MELCs. This phase took the researcher for almost two months after the consultation with the adviser.

The process followed the combination of implementing the developed material and then evaluating its over-all, however, this study was limited to the implementation stage. The final output was then forwarded to digital illustrator for validation. The digital illustrator made suggestions for the betterment of the face value of the illustrations. There was also five Master Teachers who validated the output and made some comments and suggestions that were integrated into the digital comics. One of which was for it to be more effective, the learners should be engaged through encompassing the characters involved in the story. A self-made type of questionnaire that was constructed by the researcher, checked by the adviser and critic by an expert and went through a series of revisions was used for the validation of the created digital comics. This includes 4 major aspects: Content, Originality, Accuracy, and Appeal to Target User. A letter of permission was secured first and for most to each validator.

2. Teacher's Assessment on Developed Digital Comic Media in AP

Table 1. Assessment of Teachers on Digital Comic Media in Terms of Content

Items	WM	Interpretation	Rank
The topics are useful and organized.	4.00	Highly Acceptable	3.5
The topics are arranged in clear and logical order.	4.00	Highly Acceptable	3.5
The contents are appropriate for the Grade 6 pupils.	4.00	Highly Acceptable	3.5
The use of Digital Comics materials in teaching Araling Panlipunan can enhance/boost the interest of the students about the topics	4.00	Highly Acceptable	3.5
The information is sufficient and appropriate for understanding.	4.00	Highly Acceptable	3.5
The materials achieved its purpose.	4.00	Highly Acceptable	3.5
Composite Mean	**4.00**	**Highly Acceptable**	

As seen in Table 1, the teacher-respondents rated all the six items (the topics are useful and organized, the topics are arranged in clear and logical order, the contents are appropriate for the Grade 6 pupils, the use of Digital Comics materials in teaching Araling Panlipunan can enhance/boost the interest of the students about the topics, the information is sufficient and appropriate for understanding, and the materials achieved its purpose) as highly acceptable as evidenced by the equal perfect weighted means of 4.00 and equal ranks of 3.5. Similar results that of Şentürk (2020) of the research prepared and applied in the digital environment, educational comic materials have educational competencies as follows; it increases the permanence of learning, enables learning with fun, increases academic success, appeals to more than one sense organ due to its being given with the harmony of visual and text.

These safely concluded that the teachers evaluated the content of the Digital Comic Media as highly acceptable. Thus it means that the information presented by the material is sufficient and appropriate for the understanding of the Grade 6 students. Wherein according to Dewi et al (2022), comic is one of the picture stories that present an easy-to-remember, consistent and ordered plot.

Table 2. Assessment of Teachers on Digital Comic Media in Terms of Originality

Items	WM	Interpretation	Rank
The material has unique and different style of presentation	4.00	Highly Acceptable	1.5
The material contains features different to other instructional material	4.00	Highly Acceptable	1.5
Composite Mean	**4.00**	**Highly Acceptable**	

As given in Table 2, the teacher-respondents evaluated the two items such as the material has unique and different style of presentation, and the material contains features different to other instructional material which made equal weighted means of 4.00 and equal ranks of 1.5.

These safely affirmed that the teachers assessed the originality of the Digital Comic Media as highly acceptable. This means that the material of the researcher has a unique and different style of presentation and that it is locally based and contains features different to other instructional learning material. Wherein Sentuk (2020) highlights that teaching materials' being pedagogical based is among the required features.

As reflected in the table 3, the teacher-respondents affirmed that the various Digital Comics material are connected to the topics included in First Grading Period of AP 6, and the materials used are appropriate to the age and developmental thinking of the students are highly acceptable with equal weighted means of 4.00 and equal ranks of 1.5. This means that the material is aligned with the chosen MELCs and appropriate to the target participants. Similar findings that of Soydan (2018) that the materials prepared by considering the characteristics of the students of the age with technology integration contribute positively to the development of students' academic achievement, motivation and thinking skills.

Table 3. Assessment of Teachers on Digital Comic Media in Terms of Accuracy

Items	WM	Interpretation	Rank
The ideas and concepts are well-explained and easy to understand	3.67	Highly Acceptable	4
The information is displayed/shown effectively	3.50	Highly Acceptable	5
The uses of Digital Comics material in presenting the topics are appropriate to the knowledge and learning of the students	3.83	Highly Acceptable	3
The various Digital Comics materials are connected to the topics included in First Grading Period of AP 6	4.00	Highly Acceptable	1.5
The materials used are appropriate to the age and developmental thinking of the students	4.00	Highly Acceptable	1.5
Composite Mean	**3.80**	**Highly Acceptable**	

Meanwhile, the said group of respondents agreed that the information is displayed/shown effectively which gained the least weighted mean of 3.50 and least rank of 5. Identical results that of nowadays that the majority of young people are exposed to a wide and constantly rising range of stimuli by different media. This sensory overload leads to higher stress levels and therefore decreases the ability to concentrate and focus (Zeiner, Viehauser, & Friedmann, 2019).

The composite mean of 3.80 generalized that the teacher respondents evaluated that the Digital Comic Media is highly acceptable and accurate. This means that though the information may not be shown effectively enough still the produced material accurately attained the target to connect to the topic with consideration to the participants. Similar outcome that of Garcia (2019) who combined the strategies of relating relevant content and current events in students' lives and with the use of technology can ensure that students will find a love for social studies that will ensure their academic success in the future.

Table 4. Assessment of Teachers on Digital Comic Media in Terms of Appeal to the Target User

Items	WM	Interpretation	Rank
The material captures the viewer's interest	3.83	Highly Acceptable	2.5
Stimulates the user to have interest in the lesson	3.83	Highly Acceptable	2.5
The font style, font size and color scheme are appealing	3.33	Highly Acceptable	6
Images, symbols and figures are clear.	3.50	Highly Acceptable	5
There is a unity of colors, style and lay-out	3.83	Highly Acceptable	2.5
Graphics add interest to the material	3.83	Highly Acceptable	2.5
Composite Mean	**3.69**	**Highly Acceptable**	

As stated in the table, the teacher-respondents revealed that the items "the material captures the viewer's interest", "stimulates the user to have interest in the lesson", "there is a unity of colors, style and lay-out", and "graphics add interest to the material" are highly acceptable with equal weighted

means of 3.83 and equal ranks of 2.5. This only means that the graphic design used in the material help to gain the student's interest. Similar findings to Şentük (2020) as to keeping the focus of the students on the course during the class, attention-grabbing materials should be preferred and that it should be proper to the learning approach of the age.

On the other hand, the said group of respondents affirmed that the font style, font size and color scheme are appealing and highly acceptable which got the least weighted mean of 3.33 and least rank of 6. Since the material was digitally made, there were some adjustments in terms of the font style, size and color when being exported. Thus it could affect the development of concept through a series of panels that combine images and text to create a graphic narrative (Kearns, 2020).

The composite mean of 3.69 signified that the teacher respondents replied that the Digital Comic Media is highly acceptable because it has an appeal to the target user. This means that the developed digital comics media achieved to gain the interest of the student participants. Same outcome as Sahin & Nihan (2022) studied that the comics developed positively affect the attitude towards the lesson and improve the thinking skills of the students.

CONCLUSIONS

Based from the results presented in this study it can be concluded that:

1. The developed Digital Comics Media based on the Most Essential Learning Competency in Araling Panlipunan 6 have met the acceptability criteria as evaluated by Master Teachers and Digital Illustrator.
2. It can be indicated that the developed digital comics media conforms on the criteria of instructional material development.
3. Using comics as tools in a variety of teaching can motivate students and that comics are visual, permanent, popular, and can develop cognitive learning outcome.
4. Digital comics media are useful in the classroom, easy to use, can be easily learned, and worth recommending to a colleague.
5. The use of Digital Comics Media encourages students to engage because it is localize, unique, and it caters to the 21st-century learners who are considered digital natives.

RECOMMENDATIONS

In view of the results and discussions of the study, the following are recommended:

1. Other researchers may implement the developed digital comics media to the target students to further support the usability of the material.
2. The teachers could use the developed digital comics media as a learning material to help them in facilitating the learners and help them meet the Most Essential Learning Competency in Araling Panlipunan.
3. The material may enhance by adding voice clips and music to cater other learning styles of the learners.
4. Other researchers may conduct the same study by increasing the MELCs included and utilize the material to test its' effectiveness and be able to popularize the digital comics as a tool in teaching Araling Panlipunan.

REFERENCES

Almelhi, A. M. (2021) Effectiveness of the ADDIE Model within an E-Learning Environment in Developing Creative Writing in EFL Students. Vol. 14, No. 2 https://doi.org/10.5539/elt.v14n2p20

Branch, R. M. (2018). Characteristics of instructional design models. In R. A. Reiser, & J. V. Dempsey (Eds.),Trends and issues in instructional design and technology (4th ed., p. 28). Pearson Merrill Prentice Hall.

Bugis, Yosra. (2018). Creating digital stories with Saudi Arabian pre-service teachers: using the analysis, design, development, implementation, and evaluation model to promote lesson plan development. Unpublished doctoral dissertation. University of Northern Colorado. ProQuest Number: 10829604

Cempron, D. L. (2021). An Inquiry on the Underlying Instructional Materials in Social Studies. https://doi.org/10.31124/advance.14846868.v1

Chen, G. D., Fan, C. Y., Chang, C. K., Chang, Y. H., & Chen, Y. H. (2018). Promoting autonomy and ownership in students studying English using digital comic performance-based learning. Educational Technology Research and Development, 66(4). https://doi.org/10.1007/s11423-018-9597-7

Damopolii, I., Lumembang, T., and İlhan, G. (2021). Digital Comics in Online Learning During COVID -19: Its Effect on Student Cognitive Learning Outcomes https://online-journals.org/index.php/i-jim/article/view/23395/10035

Data Privacy Act of 2012.NPC. https://www.privacy.gov.ph/data-privacy-act/#0

Dewi, S. M., Maftuh, B., Sapriya, S. & Syaodih, E. (2022). Development of cartoon art learning media (CALM) to improve children's conflict resolution skill. Cypriot Journal of Educational Science. 17 (3), 726-740. https://doi.org/10.18844/cjes.v17i3.6889

Dong, H. (2021). Adapting during the pandemic: a case study of using the rapid prototyping instructional system design model to create online instructional content. Journal of Academic Librarianship, 47 (3), 102356. https://doi.org/10.1016/j.acalib.2021.102356.

Dueñas, Wilson (2019) Enhancing the Performance of Grade 9 Students of Malapad na Parang National High School in Araling Panlipunan Using Information and Communication Technology. Vol. 3 No. 2D (2019): Ascendens Asia Journal of Multidisciplinary Research Abstracts https://ojs.aaresearchindex.com/index.php/AAJMRA/article/view/9708

Garacia, E (2019). How to motivate students to love AralingPanlipunan. Pressreader. https://www.pressreader.com/philippines/sunstarpampanga/20170322/281608125255143

Hasibuan, Ainul M. (2019). Development of Learning Materials Based on Realistic Mathematics Education to improve Problem-Solving Ability and Student learning Independence. IEJME Article. https://www.iejme.com/article/development-oflearning-materials-based-on-realistic-mathematics-education-to-improveproblem-4000

Ilhan, G. O., Kaba, G. & Sin, M. (2021). Usage of Digital Comics in Distance Learning during COVID-19. International Journal on Social and Education Sciences, v3 n1 p161-179

Kalogiannakis, M., Nirgianaki, G.-M., and Papadakis, S. (2018). "Teaching magnetism to preschool children: The effectiveness of picture story reading," Early Child. Educ. J., vol. 46, no. 5, pp. 535–546. https://doi.org/10.1007/s10643-017-0884-4

Kearns, C. et al., (2021). "Using Comics and Curiosity to Drive Pandemic Research on A National Scale," J. Vis. Commun. Med., vol. 44, no. 1, pp. 12–22. https://doi.org/10.1080/17453054.2020.1823206

Kearns, C., Fisher, D., and Chong, Y. S. (2021). "The infective nurture of pandemic comics," Lancet, vol. 397, no. 10268, pp. 22–23. https://doi.org/10.1016/S0140-6736(20)32550-2

Kearns, C and Kearns, N. (2020). "The role of comics in public health communication during the COVID-19 pandemic," J. Vis. Commun. Med., vol. 43, no. 3, pp. 139–149. https://doi.org/10.1080/17453054.2020.1761248

Kimmel, H. S., Carpinelli, J. D., Spak, G. T. & Rockland, R. H. (2020). Methodology for Retaining Student Learning During the Pandemic. In Sahin, I., Shelley, M. (Eds), Educational Practices during the COVID-19 Viral Outbreak: International Perspectives (1-18). Monument: ISTES Organization.

Lewis, Beth (2018). TLM – Teaching/Learning Materials. Retrieved February 16, 2019. https://www.thoughtco.com/tlm-teaching-learning-materials-2081658

Lu, L. and Sides, M. L.(2022). Instructional design for effective teaching: The application of ADDIE model in a college reading lesson. NOSS Practitioner to Practitioner, p. 4 https://files.eric.ed.gov/fulltext/EJ1343586.pdf

Magpantay, Leonila (2019) Instructional Techniques in Araling Panlipunan Employed By the Grade Ten Teachers in Public Schools in Area III, Division of Batangas Province: Basis for a Proposed Action Plan. Vol. 3 No. 2E (2019): Ascendens Asia Journal of Multidisciplinary Research Abstracts. https://ojs.aaresearchindex.com/index.php/AAJMRA/article/view/6629

Maity, J. (2022). Comics in Digital Forms: An Overview and Growth of Digital Comics in the Present Era. Research Scholar, Raiganj University (W.B). p.95

Matuk, C., Hurwich, T., Spiegel, A., & Diamond, J. (2021). How Do Teachers Use Comics to Promote Engagement, Equity, and Diversity in Science Classrooms? Research in Science Education, 51(3). https://doi.org/10.1007/s11165-018-9814-8

Paivio, A. (1971). Imagery and Verbal Processes. Rinehart & Winston.

Paivio, A. (1986). Mental Representations. Oxford University Press.

Ra, Sungsup (2018). 5 ways to make textbooks relevant in a digital world. ADB. https://blogs.adb.org/blog/5-ways-make-textbooks-relevant-digital-world

Sahin, E. & Nihan, A. (2022). A Digital Educational Tool Experience in History Course: Creating Digital Comics via Pixton Edu. Journal of Educational Technology and Online Learning, v5n1 p223-242

Samuel, Amadioha W. (2018). The importance of Instructional Materials in our School: An overview. Research gate. https://www.researchgate.net/publication/322368912_THE_IMPORTANCE_OF_INSTRUCTIONAL_MATERIALS_IN_OUR_SCHOOLS_AN_OVERVIEW

Senen, A., Sari, Y. P., Herwin, H., Rasimin, R., & Dahalan, S. C. (2021). The use of photo comics media: Changing reading interest and learning outcomes in elementary social studies subjects. Cypriot Journal of Educational Sciences, 16(5). https://doi.org/10.18844/cjes.v16i5.6337

Senturk, M. (2020). The effects of educational comics and educational cartoons in the social studies course onstudent' attitude, motivation and academic achievement. Published doctoral thesis, Ataturk University, Erzurum.

Senturk, O.Ç. (2020). The effect of argumentation-supported educational comics on students' environmental interests, motivation, and academic achievements and student experiences. Published doctoral thesis, Gazi University, Ankara.

Shakeel, S.I., Al Mamun, M. & Haolader, M. (2022) Instructional design with ADDIE and rapid prototyping for blended learning: validation and its acceptance in the context of TVET Bangladesh. Educ Inf Technol. https://doi.org/10.1007/s10639-022-11471-0

Soloway, E., Guzdial, M., and Hay, K. E. (1994). Learner-centered design: the challenge for HCI in the 21st century. Interactions, vol. 1, issue 2, pp. 36-48. https://doi.org/10.1145/174809.174813

Soydan, C. (2018). İnvestigation of digital material development processes of field teachers in guidance of information technologies teacher. Published master thesis, Ondokuz Mayıs Unıversity, Samsun.

Thais (2019). The Rapid Instructional Design Model – My Favorite Model to Get the Job Done https://mylove4learning.com/the-rapid-instructional-design-model-my-favorite-model-to-get-the-job-done/

Tribull, C. M. (2017). Sequential Science: A Guide to Communication Through Comics. Annals of the Entomological Society of America, Volume 110, Issue 5, Pg 457–466. https://doi.org/10.1093/aesa/sax046

Tripp, S. & Bichelmeyer, B. (1990). Rapid Prototyping: an Alternative Instructional Design Strategy. Educational Technology Research and Development. 38. 31-44. 10.1007/BF02298246.

Zeiner, M., Viehauser, P. and Friedmann, C. S. (2019). Teaching Laboratories at a Slower Pace: Introduction of Photocomics as Easy-to-Use Laboratory Instructions. https://doi.org/10.1021/acs.jchemed.9b00142

RESEARCH ENGAGEMENT OF PUBLIC ELEMENTARY SCHOOL TEACHERS IN CONGRESSIONAL DISTRICT 2, DIVISION OF BATANGAS

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ABSTRACT

This study focused on the research engagement of public elementary school teachers in Congressional District 2, Division of Batangas. The study determined the extent of manifestation of teachers' engagement in research, assessment on attitudes and interest, research competencies and communication skills. Moreover, the researcher also investigated the usefulness of research engagement of teachers and school heads to their professional and personal growth and development with the end view of proposing a research management plan for teachers. The descriptive method of research was utilized in this study with a research-made questionnaire as the main data gathering instrument supplemented with documentary analysis. As to research locale, this study covered all the schools in Congressional District 2, Division of Batangas. Results from the findings revealed that the respondents play significant factor in the engagement of the teachers and school heads in research. The teachers' engagement towards research is in moderately extent most especially in terms of their attitude and interest, research competencies and communication skills. The usefulness of research engagement of teachers to their professional and personal growth and development is very evident to be of great importance among teachers. Researches obtained many benefits from the conduct of research studies for professional growth and development. The research management program for teachers' engagement in research contains problems/gaps, objectives, strategies, person involved, time frame, source of fund and assistance to be given by the DepEd to sustain the needs of the teachers in research engagement.

Keywords: Congressional District 2, Division of Batangas; research engagement, research management program, research competencies

INTRODUCTION

The mission of teaching the public has grown more difficult and complex in today's competitive environment. Everyone has the power to change the world. The key to professional success is passion. People who are

passionate about what they do add an intensity and excitement that cannot be matched by hard effort alone. They put up their best efforts and act as shining examples in their workplace, providing great, high-quality, and competitive professional services. They are frequently pushed to complete extra tasks, like research, that might help them attain true quality education. They take longer steps as they advance with a constant awareness that marks their quest of knowledge for the benefit of their educational clients.

At the present time, the Department of Education needs educators who do not just deliver lectures to learners but merely those who act primarily as facilitators of learning and serve as role models for self-directed learning, research, and study. The application of innovative teaching strategies and approaches, the use of technology-based teaching applications and the instructional materials utilized for facilitating learning had been necessary and could only be realized through the results of researches conducted and their efficacy must be echoed within the academic community.

In addition to this, teachers and school personnel are also encouraged to conduct research studies to better understand and advance basic education in the country even with the existing learning landscape. DepEd Order No. 43, s. 2015 still serves as the guidelines wherein research agenda should focus and revolve around four main themes, namely: teaching and learning, child protection, human resource development, and governance. Since promotion research culture to facilitate data-driven and evidence-based innovation to improve school performance and foster continuous improvement is the battle cry of DepEd, research culture should reflect the values, ideals, and beliefs of a teacher to be engaged in such endeavour.

According to Posecion et al., (2011) teachers must conduct research to improve and develop teaching, and create a research culture and be engaged in this undertaking to know what is actually happening in the classrooms, what learners are thinking, why learners are reacting in the ways they do, what aspects of the classroom they should focus on the development in the teaching most effectively, how they should change in these aspects, and what the effects of such a change are. Given these justifications for conducting research, one can see the difficulties involved. As a result, teachers must take on these difficulties to collect critical information from various contexts for a specific purpose, undoubtedly for the benefit of students. Despite the difficulties, teachers must still undertake this challenge to conduct research.

However, because it is an extra duty for them, doing educational research has become one of the most difficult tasks for most teachers. The ability of teachers to do research has long been seen as a crucial factor in both their own professional growth and their ability to effectively instruct. In particular, when teaching and research are combined, teaching effectiveness will be greatly increased. Teachers have been prohibited from participating in and carrying out research activities due to a number of circumstances. These may include a school environment that discourages collaboration, teachers who lack awareness, belief, abilities, and expertise, a lack of resources, demotivating circumstances, and economic issues (Healey, 2005).

With such great contributions of research in the professional development of a teacher, many of them did not engage in research for some reasons. Firstly, lack of knowledge on the technical part on how to construct research and to materialize its content. Secondly, the teachers' lack of knowledge on the statistical aspects to be used in analysing the data sets that will give reliable results. Lastly, the lack of legalities and strong mandates that teachers should undergo researches in the Department of Education.

This prompted the researcher to conduct this study which will hopefully to be of great contribution to the programs and projects being undertaken in the division as regards to research engagement of public elementary school teachers particularly in Congressional District 2 of the Division of Batangas. Added to this, the researcher believed that with the limited number of teachers participating in research activities, the education authorities can still encourage them and raise the culture of research for the improvement in teaching and learning process.

It is for this relevance and importance of research that the researcher has the intention to assess the engagement in research of public elementary school teachers in Congressional District 2, Division of Batangas to develop a management program that will serve as the reference and tool for the engagement in research activities of teachers. This would somehow transform them to embrace the importance of research in their workplaces.

Objectives of the Study

The study aimed to prepare a research management program for teachers that will serve as a better reference and tool for research engagement of public elementary school teachers in Congressional District 2, Division of Batangas.

Specifically, it aimed to do the following:

1. describe the profile of the teacher-respondents in terms of:
    1.1 sex;
    1.2 highest educational attainment;
    1.3 years in service;
    1.4 number of research conducted/finished; and
    1.5 number of related seminars and trainings.

2. determine the extent of manifestation of teachers' engagement in research as assessed by the school heads and teachers along the following:
    2.1 attitudes and interest;
    2.2 research competencies; and
    2.3 communication skills;
3. find the difference in the assessments on the extent of manifestation of teachers' engagement when grouped according to profile;
4. ascertain the usefulness of research engagement of teachers to professional and personal growth and development; and
5. prepare a research management program.

METHODOLOGY

The researchers made use of a quantitative method of research/ study.

Data Gathering Instruments. The study utilized questionnaire as the main data gathering instruments. Documentary analysis and interview were also utilized.

Questionnaire. The questionnaire was the primary technique used to collect relevant data. The researcher prepared a questionnaire based on the thoughts and insights gathered regarding the research engagement of school heads and elementary school teachers.

Documentary Analysis. This was utilized in gathering information related to the results of the Division Conference of Basic Education Researchers from the Research and Planning Department in the Division of Batangas Province Office.

Interview. To substantiate gathered data from questionnaire, interviews strengthened the interpretation of data. The researcher was able to communicate with other personnel from his own district.

Data Gathering Procedure. After the researcher received permission from higher authorities to administer the questionnaire in the field, proper communication among concerned was ensured.

Ethical Considerations. This study has worked on ethical considerations such as protecting the rights of research participants to enhance the research validity and maintain scientific integrity.

Statistical Treatment of Data

The statistical computation results guided the researcher in his interpretation and analysis of the data. To answer the research questions, the statistical tools listed below were used:

Weighted Mean. This was used to determine the assessment of the respondents of their perception in the attitude and interest, research competencies and communicating skills in conducting educational research as well as the usefulness of research.

Independent t-test. This was used to determine the differences in the assessments by the two groups of respondents.

Analysis of Variance. This was used to answer the significance difference of the respondent's extent manifestation of teachers' engagement in researched as assessed by school heads and teachers themselves.

FINDINGS

This study described the profile of the teacher-respondents in terms of sex, highest educational attainment, years of service, number of research conducted/finished, and number of related seminars and trainings. Data are presented from Tables 2-6.

In the study on the teachers' engagement in research, the proponent believes that the respondents' profile has something to do with their connection to the engagement of research. Tables 2-6 present the distribution of the respondents according to their profile such as sex, highest educational attainment, year in service, number of researches conducted as well as the number of related seminars and trainings attended. With this regard, the results will be more accurate and organized relative to the study.

1.1 Sex. Table 2 presents data on sex.

Table 2. Profile of Respondents in terms of Sex

Sex	Teachers		School Head	
	Frequency	Percentage	Frequency	Percentage
Male	13	5.9	19	22.9
Female	209	94.1	64	77.1
Total	**222**	**100**	**83**	**100**

The distribution of teachers and school heads who responded to the survey about their sex is shown in Table 2. It was discovered that 209 out of 222 teachers, or 94.1 percent, are female, while 13 out of 222 teachers, or 5.9 percent, are male. On the other side, 64 out of 83 school heads are female, making up 77.1 percent of the total, and 19 out of 83 are male, making up 22.9 percent. Because women made up most of the responses, it follows that women are more interested in the teaching profession than men.

1.2 Highest Educational Attainment. Table 3 shows data on the profile of the respondents in terms of highest educational attainment.

According to the greatest level of education attained by teachers and school heads, Table 3 displays the profile of the respondents. It was discovered that for teachers, 103 out of 222 had bachelor's degrees, making up 46.4 percent;

Table 3. Profile of the Respondents in terms of Highest Educational Attainment

Highest Educational Attainment	Teachers		School Head	
	Frequency	Percentage	Frequency	Percentage
Bachelor's Degree	103	46.4	34	41
Master's Degree	117	52.7	44	43
Doctorate Degree	2	0.9	5	6
Total	**222**	**100**	**83**	**100**

117 had master's degrees, making up 52.7 percent; and 2 had doctoral degree, making up 0.9 percent. On the other hand, among school head, 34 out of 83 hold a bachelor's degree, making up 41 percent; 44 hold a master's degree, making up 43 percent; and 5 hold a doctorate, making up 6 percent. According to the profiles of the respondents, the majority have master's degrees and have expertise in writing research.

1.3 Years in Service. Table 4 shows data on the profile of the respondents in terms of years in service.

The respondents' combined years of service are shown in Table 1.3. A total of 84 out of 222 teachers, or 37.9%, fall into the 1–10 years category, followed by 74 out of 222 teachers, or 33.3%, who fall into the 11–20 years category.

Table 4. Profile of the Respondents in Terms of Years in Service

Number Years in Service	Teachers		School Head	
	Frequency	Percentage	Frequency	Percentage
1-10 years	84	37.9	6	7.2
11-20 years	74	33.3	30	36.2
21-30 years	59	26.6	36	43.4
31 and above	5	2.2	12	13.2
Total	**222**	**100**	**83**	**100**

Teachers with 21 to 30 years of experience has 59 out of 222 or 26.6%, and the least number which are 5 out 222 are in the group of teachers with 31 or more years of experience. On the other hand, it should be noted that among school heads, the group with 21–30 years of experience obtained the most responses, with 36 out of 83, or 43.4%. Only 7.2%, or a total of 6 out of 83 school heads, worked in group for at least 1–10 years, followed by 30 out of 83 or 36.2% falls in 31-30 year in service. Lastly,

there are 12 out of 83 or 13.2% in 31 and above years in service. It shows that the research participants, considering both groups, may already be regarded as experienced instructors, as demonstrated by the data. Most of them had worked in teaching academe for a considerable amount of time.

1**.4 Number of Researches Conducted**. Table 5 shows data on the profile of the respondents in terms of number of researches conducted.

Table 5. Profile of the Respondents in Terms of Number of Researches Conducted

Number of researches conducted or finished	Teachers		School Head	
	Frequency	Percentage	Frequency	Percentage
No research	53	23.9	0	0
1-2 research/es	89	40.1	18	21.7
3-4 researches	45	20.3	47	56.6
above 5 researches	35	15.8	18	21.7
Total	**222**	**100**	**83**	**100**

The findings show that 53 teachers or 23.9 percent of the 222 total respondents have not yet conducted action researches while 89 or 40.1 percent of them had 1-2 research/es. Moreover, 45 (20.3%) teachers revealed that they were able to conduct 3-4 researches and only 35 or 15.8 percent of them produced 5 and above researches. It only indicates that when it comes to the number of researches produced or finished, the teacher respondents cannot be considered neophytes in this so-called scholarly activity. They already have a culture of research. Moreover, among the school head respondents, everyone affirmed to have conducted action research. Thus, 18 (21.7%) of them had produced or finished 1-2 research/es, 47 (56.6%) produced or finished 3-4 researches and 18 (21.7%) of them had 5 and above researches. It can be inferred that majority of the respondents has the experience of conducting researches thus creating engagement to the said activity.

1.5 Number of related seminars attended. Table 6 shows data on the profile of the respondents in terms of number of related seminars attended.

Table 6. Profile of the Respondents in Terms of Related Seminars /Trainings Attended

Number of related Seminars attended	Teachers		School Head	
	Frequency	Percentage	Frequency	Percentage
1-3 seminars	167	75.2	49	59.1
4-7 seminars	46	20.7	25	30.1
8 and above seminars	9	4.1	9	10.8
Total	**222**	**100**	**83**	**100**

Data from Table 6 show that seminars and trainings related to research were attended. According to the list, 167 out of 222 teachers, or 75.2% of those who responded, had attended at least 1-3 seminar. There are 46 out of 222 had attended four to seven seminars, and 9 out of 222 had confirmed attendance at eight or more.

It is clear from the school heads that the bulk of them had merely attended 1-3 trainings, of which 49 out of 83 or 59.1%, and 25 out of 83 or 30.1% said they had been attendees to 4–7 seminars, while only 9 out of 83 or 10.8% had gone to 8 or more research trainings. The outcome indicates that to be knowledgeable and skilled in research, both teachers and school heads still require trainings and seminars.

2. Extent of Manifestation of Teachers' Engagement in Research as Assessed by Teachers and School Heads in Terms of Attitudes and Interest.

The extent of manifestation of teachers' engagement in research assessed by the school heads and teachers themselves were also determined in this study.

2.1 Attitudes and Interest. Table 7 captures the extent of manifestation of teachers' engagement in research as assessed by both teachers and school heads with regards to their attitudes and interest.

Table 7. Extent of Manifestation of Teachers' Engagement in Research as assessed by Teachers and School Heads in terms of Attitudes and Interest

Table 7	Teacher		School Head		Teacher and School Head	
	WM	VD	WM	VD	WM	VD
Composite Mean	3.19	ME	3.20	ME	3.20	ME

Legend: 3.50 -4.00 = Great Extent (GE), 2.50 -3.49 = Moderate Extent (ME), 1.50 – 2.49 = Least Extent (LE), 1.00 -1.49 = Not Manifested (NM), WM = Weighted Mean, VD = Verbal Description

The study reveals that teachers and school heads exhibit moderate levels of manifestation in their research engagement. Key indicators include model integrity, building trust among co-workers, allocating time for personal and professional development through educational seminars, reading educational materials regularly, and accepting responsibility and accountability to conduct research for the welfare of school clients. These attitudes are crucial for teachers' readiness to participate in research.

2.2 Research Competencies. Table 8 captures the extent of manifestation of teachers' engagement in research as assessed by both teachers and school heads in terms of research competencies.

Table 8. Extent of Manifestation of Teachers' Engagement in Research as Assessed by Teachers and School Head in terms of Research Competencies

Table 8	Teacher		School Head		Teacher and School Head	
	WM	VD	WM	VD	WM	VD
Composite Mean	2.63	ME	2.62	ME	2.62	ME

Legend: 3.50 -4.00 = Great Extent (GE), 2.50 -3.49 = Moderate Extent (ME), 1.50 – 2.49 = Least Extent (LE), 1.00 -1.49 = Not Manifested (NM), WM = Weighted Mean, VD = Verbal Description

The study reveals that teachers and school heads are increasingly recognizing the importance of research in educational research. Teacher respondents prioritized knowledge on anti-plagiarism, declaration of absence of conflict of interest, and awareness of data privacy laws and DepEd Freedom of Information Manuals. These indicators were manifested to a moderate extent. School heads also considered these top three indicators with a moderate extent.

2.3 Communication skills. Table 9 captures the extent of manifestation of teachers' engagement in research as assessed by both teachers and school heads in terms of communication skills.

Table 9. Extent of Manifestation of Teachers' Engagement in Research as Assessed by Teachers and School Head in terms of Communication Skills

Table 9	Teacher		School Head		Teacher and School Head	
	WM	VD	WM	VD	WM	VD
Composite Mean	3.07	ME	3.02	ME	3.05	ME

Legend: 3.50 -4.00 = Great Extent (GE), 2.50 -3.49 = Moderate Extent (ME), 1.50 – 2.49 = Least Extent (LE), 1.00 -1.49 = Not Manifested (NM), WM = Weighted Mean, VD = Verbal Description

In terms of teachers' communication skills towards research engagement, communicating and enforcing school policies, maintaining a learning environment of courtesy, respect for different learners garnered the highest weighted mean of 3.33 and 3.37 by the respondents respectively. Moderate extent of research engagement is thereby affirmed. Their combined responses also yielded a weighted mean of 3.35 which also signifies to be of moderate extent manifestation. Lastly, using electronic means of administering questionnaires and interview to respondents has been identified as the lowest indicator. With a weighted mean of 2.86 obtained among teachers and a weighted mean of 2.70 for the school heads, moderate extent of compliance is evident. The combined responses also yielded a weighted mean of 2.78

which also explains that only a moderate extent of engagement has been noted. All the given indicators are moderately exhibited by the school head and teachers-respondents.

3. Difference in the Assessments on the Extent of Manifestation of Teachers' Engagement when Grouped According to Profile

The difference in the assessments on the extent of manifestation of teachers' engagement when grouped according to profile were also determined in this study.

Table 10. Independent t-test of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of attitudes and interest and their sex profile.

Sources	Mean Difference	p-value	Decision	Interpretation
Attitudes and interest via sex	-0.067	0.472	Accept Ho	Not Significant

3.1 Significant Differences in the Assessments on Extent of Manifestation of Teachers' Engagement in Research and Their Profile Variables.

Table 10 shows significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of attitudes and interest and their sex profile.

The independent t-test of the significant differences in the assessment of the level of teachers' involvement in research in terms of attitudes and interest with their sex profiles is shown in the above table. This further shows that there are no appreciable differences between the responses of the teachers and school leaders in terms of attitudes, traits, and sex profiles in terms of the extent expression of teachers' engagement in research. This further explains why the null hypothesis was disproved. This suggests that there is a conclusive proof that sex has no bearing on research engagement, because the extent to which the teachers' research engagement was assessed by the teachers and school heads when it was compared according to sex did not show a significant difference. Whether you are a male or a female, if you are dedicated in creating researches, you will succeed in this field.

Table 11 shows significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of attitudes and interest and their educational background profile.

Table 11. ANOVA of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of attitudes and interest and their educational background profile.

Sources	F-value	p-value	Decision		Interpretation
Attitudes and interest via educational background	8.375	0.000	Reject Ho		Significant

Table 11 explains the ANOVA of the significant differences in the assessment on the extent of manifestation of teachers' engagement in research in terms of attitudes and interest with their educational background. Thus, the null hypothesis was rejected. This also implies that a significant difference can be noted among the responses of the teachers and school heads in their manifestation in research engagement if attitudes and attributes and their educational background are concerned. A post-hoc test will be done to determine which among the educational background has significant difference.

Significant Differences in the Assessments on Extent of Manifestation of Teachers' Engagement in Research and Their Profile Variables. Table 12 shows significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of attitudes and interest and their educational background profile.

Table 12. Post hoc test (least square difference) of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of attitudes and interest and their educational background profile.

Sources	Mean Difference	p-value	Decision	Interpretation
Bachelor vs				
Masters	-0.25	0.026	Reject Ho	Significant
Doctorate	-0.42	0.000	Reject Ho	Significant
Masters vs				
Doctorate	- 0.20	0.266	Accept Ho	Not Significant

Table 12 illustrates the post-hoc test of the significant differences in the assessment on the extent of manifestation of teachers' engagement in research in terms of attitudes and interest with their educational background. Thus, the null hypothesis was rejected. This further implies that there is a significant difference on the extent of research manifestation of teachers and school heads when compare according to educational background. It explains that the master's degree holder respondents give a higher response than the bachelor's degree respondents.

On the other hand, for the educational background that is bachelor's degree versus doctorate degree a significant difference on the matched educational background has been noted. Doctorate degree holder respondents give a higher response than the bachelor's degree respondents. However, when the master's degree and doctorate degree will be compared, there is no significant differences attained between the two educational backgrounds. The findings suggest that teachers and school administrators will engage in research with the same attitudes and interests if they acquire master's and doctoral degrees. In contrast, a person with a bachelor's degree is a novice in the field of academic research and requires significant professional development to be completely qualified in terms of the technical aspects of doing research.

Significant Differences in the Assessments on Extent of Manifestation of Teachers' Engagement in Research in Terms of Attitudes and Interest and Their Numbers of Years in Teaching Profile.

Table 13 shows significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of attitudes and interest and their number of years in teaching profile.

Table 13. ANOVA of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of attitudes and interest and their number of years in teaching profile.

Sources	F-value	p-value	Decision	Interpretation
Attitudes and interest via number years of teaching	1.171	0.318	Accept Ho	Not Significant

Table 13 is the ANOVA of the significant differences in the evaluation on the level of extent manifestation of teachers' research engagement in terms of attitudes and interest compared with their number of years in the teaching profile. It can be deduced that the null hypothesis was accepted. As a result, there were no appreciable variations in the replies from teachers and school administrators about the degree to which teachers' involvement in research was manifested in terms of their attitudes, characteristics, and length of teaching experience. The findings also suggest that extensive years of experience are not a guarantee of expertise in a certain topic; on the other hand, if teachers and school administrators pursue career advancement in the relevant field then it might hasten his skills in crafting researches.

Significant Differences in the Assessments on Extent of Manifestation of Teachers' Engagement in Research in Terms of Attitudes and Interest and Their Numbers of Researches Produced Profile. The ANOVA of the significant differences in the assessment of the level of manifestation of instructors' involvement in research in terms of attitudes and interest with the quantity of researches generated is shown in Table 14.

Table 14. Significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of attitudes and interest and their number of researches produced profile.

Sources	F-value	p-value	Decision	Interpretation
Attitudes and interest via number of researches produced	7.995	0.000	Reject Ho	Significant

It demonstrates that the null hypothesis was rejected. The level of the manifestation of teachers' involvement in research in terms of attitudes, interest, and the quantity of research generated, thus, differs significantly between the responses of the teachers and school leaders. To ascertain how many of the researches performed have significant differences, a post-hoc test will be run.

Significant Differences in the Assessments on Extent of Manifestation of Teachers' Engagement in Research in Terms of Attitudes and Interest and Their Number of Researches Produced Profile.

The post-hoc test of significant differences in the assessment of the level of manifestation of teacher research participation in terms of attitudes and interest with the quantity of researches generated is shown in table 15. It has been established for the comparison of 0 research produced to 1-2 research/es performed. Consequently, the null hypothesis was disproved, suggesting that there is a significant difference in the amount of research studies that are matched.

Table 15. Post hoc test (least square difference) of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of attitudes and interest and their number of researches produced profile.

Sources	Mean Difference	p-value	Decision	Interpretation
0 research vs				
1-2 research/es	-0.159	0.049	Reject Ho	Significant
3- 4 researches	-0.245	0.003	Reject Ho	Significant
Above 5 researches	-0.439	0.000	Reject Ho	Significant
1-2 research/es vs				
3-4 researches	- 0.086	0.247	Accept Ho	Not Significant
Above 5 researches	-0.280	0.001	Reject Ho	Significant
3-4 researches vs				
Above 5 researches	-0.194	0.020	Reject Ho	Significant

The study found that respondents with 1-2 researches and those with 3-4 researches responded more, rejecting the null hypothesis. However, respondents with 5 and above researches had a higher response than those without research. The null hypothesis was accepted for respondents with 1-2 researches and those with 3-4 researches, indicating a significant difference in response. The study also found a significant difference among respondents with 1-2 researches and those with 3-4 researches, indicating a significant difference in response.

Significant Differences in the Assessments on Extent of Manifestation of Teachers' Engagement in Research in Terms of Attitudes and Interest and Their Numbers of Seminars Attended Profile. Table 16 shows significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of attitudes and interest and their number of seminars attended profile.

Table 16. A of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of attitudes and interest and their number of seminars attended profile.

Sources	F-value	p-value	Decision	Interpretation
Attitudes and interest via number of seminars attended	8.758	0.000	Reject Ho	Significant

This further implies that there is a significant difference among the responses of the teachers and school heads in the extent of manifestation of teachers' engagement in research in terms of attitudes and interest and the number of seminars attended. A post-hoc test will follow to determine which number of researches produced has significant differences.

Post Hoc Test (Least Square Difference) of the Significance Differences in the Assessments on Extent of Manifestation of Teachers' Engagement in Research in Terms of Attitudes and Interest and Their Numbers of Seminars Profile. Table 17 explains the Post- hoc test of the significant differences in the assessment of the teachers' engagement in research in terms of attitudes and interest with the number of seminars attended. It can be concluded that for 0-3 seminar/s versus 4-7 seminars yields

Table 17. Post hoc test (least square difference) of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of attitudes and interest and their number of seminars profile.

Sources	Mean Difference	p-value	Decision	Interpretation
0-3 seminar/s vs				
4--7 seminars	-0.211	0.002	Reject Ho	Significant
Above 8 seminars	-0.370	0.002	Reject Ho	Significant
4-7 seminars vs				
Above 8 seminars	- 0.159	0.213	Accept Ho	Not Significant

which means that the null hypothesis was to be rejected. This means that a significant difference on the paired indicators existed. Meanwhile, it is obtained from those with 4-7 seminars, a higher response than of the respondents having 0-3 seminars was noted. On the other hand, for the 4-7 seminar/s versus above 8 seminars attended, which is rejected the null hypothesis. A significant difference on the paired variables was listed. It is obtained showing that the respondents having above 8 seminars gives a higher response compared to the respondents with 4-7 seminars indicating that there are no significant differences between the two variables.

3.2 Significant Difference in the Assessment on Extent Manifestation of Teachers' Engagement in Terms of Research Competencies and Their Demographic Profile.

Table 18 shows independent t-test of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of research competencies and their sex profile. Table 18 is the independent t-test of the significance differences in the assessment on extent of manifestation of teachers' engagement in research in terms of research competencies and their sex profile. It was found out which further denotes that the null hypothesis was rejected.

Table 18 Independent t-test of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of research competencies and their sex profile.

Sources	Mean Difference	p-value	Decision	Interpretation
Research competencies via sex	-0.002	0.989	Accept Ho	Not Significant

There is no significant difference among the responses of the teachers and school heads relative to the extent of manifestation research engagement dealing with research competencies and sex profile. As illustrated in the table, which is negligible, and this further explains that the null hypothesis was rejected. It is then supported by the study of (Camara et. al, 2021), stating that even though females have a high perception on the research competencies, there is still no significant difference on the level of perception when it comes to research competencies.

ANOVA of the Significance Differences in the Assessments on Extent of Manifestation of Teachers' Engagement in Research in Terms of Research Competencies and Their Educational Background Profile. Table 19 shows ANOVA of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of research competencies and their educational background profile.

Table 19. ANOVA of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of research competencies and their educational background profile

Sources	F-value	p-value	Decision	Interpretation
Research competencies via educational background	2.613	0.075	Accept Ho	Not Significant

Table 19 determines the ANOVA of the significant differences in the assessment on the teachers' engagement in research in terms of research competencies with their educational background profile. The null hypothesis has been rejected.

No significant differences among the responses of the teachers and school heads in the extent of teachers' manifestation in research engagement in areas of research competencies and educational background can be noted. According to (Anub, 2020), most research teachers in his study have highest educational background but he gave emphasis that those teachers may have sensed competence which may not be sufficient in carrying research in the classroom setting.

ANOVA of the Significance Differences in the Assessments on Extent of Manifestation of Teachers' Engagement in Research in Terms of Research Competencies and Their Number of Years in Teaching Profile. Table 20 shows ANOVA of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of research competencies and their educational background profile.

Table 20. ANOVA of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of research competencies and their number of years in teaching profile.

Sources	F-value	p-value	Decision	Interpretation
Research Competencies via number years of teaching	0.827	0.565	Accept Ho	Not Significant

Table 20 bears the ANOVA of the significant differences in the assessment on the extent of teachers' manifestation in research with regards to their research competencies and the number of years of teaching. The null hypothesis was rejected. This explains that there are no significant differences among the responses of the teachers and school heads in the extent manifestation of their engagement in research in terms of competencies and the number of years in service. Anub (2020) further elaborated that most teachers in research are generally neophyte in the service. The Theory of Work Adjustment best describes this as it proposes that teachers may or may not able to "adjust" after they have given Practical Research subjects. If they feel competent and their abilities correspond to the organization, they will perform their job well but if not, they may also feel incompetent. Regardless of your length of service in the teaching academe, knowledge on the research competencies is needed in order to conduct more beneficial researches.

Significance Differences in the Assessments on Extent of Manifestation of Teachers' Engagement in Research in Terms of Research Competencies and Their Number of Researches Produced Profile. Table 21 shows significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of research competencies and their number of researches produced profile.

Table 21. Significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of research competencies and their number of researches produced profile.

Sources	F-value	p-value	Decision	Interpretation
Research competencies via number of researches produced	7.505	0.000	Reject Ho	Significant

The ANOVA of the significant differences in the assessment of the degree of teacher involvement in research in terms of attitudes and interest with the quantity of researches generated is further displayed in table 21. It is suggesting that the null hypothesis has been rejected. As a result, it becomes clear that there are considerable differences in the responses of teachers and school administrators regarding attitudes, qualities, and the quantity of completed research. To ascertain how many researches performed have significant differences, a post-hoc test will be run.

Post Hoc Test (Least Square Difference) of the Significance Differences in the Assessments on Extent of Manifestation of Teachers' Engagement in Research in Terms of Research Competencies and Their Number of Research Produced Profile. Table 22 shows post hoc test (least square difference) of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of research competencies and their number of research produced profile.

Table 22. Post hoc test (least square difference) of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of research competencies and their number of research produced profile.

Sources	Mean Difference	p-value	Decision	Interpretation
0 research vs				
1-2 research/es	-0.328	0.005	Reject Ho	Significant
3- 4 researches	-0.334	0.003	Reject Ho	Significant
Above 5 researches	-0.616	0.000	Reject Ho	Significant
1-2 research/es vs				
3-4 researches	- 0.006	0.950	Accept Ho	Not Significant
Above 5 researches	-0.283	0.012	Reject Ho	Significant
3-4 researches vs				
Above 5 researches	-0.289	0.013	Reject Ho	Significant

The post-hoc test showed significant differences in teachers' engagement in research with the number of researches produced. Respondents with 3-4 researches gave a higher response than those without any research. The null hypothesis was rejected for 0 research versus 5 and above researches. The null hypothesis was accepted for 1-2 researches versus 3-4 researches. The results indicate that research productivity of teachers is directly affected by their research knowledge and skills. Teachers with enough research competency have a higher chance of producing a research study or project, while those with insufficient basic competencies have minimal chances. This suggests that more research produced by teachers and school heads indicates better research competencies.

ANOVA of the Significance Differences in the Assessments on Extent of Manifestation of Teachers' Engagement in Research in Terms of Research Competencies and Their Number of Seminars Attended Profile. The ANOVA of the significant differences in the evaluation of teachers' research participation regarding their competences and the number of seminars they attended is shown in Table 23.

Table 23. ANOVA of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of research competencies and their number of seminars attended profile.

Sources	F-value	p-value	Decision	Interpretation
Research competencies via number of seminars attended	8.758	0.001	Reject Ho	Significant

The null hypothesis was thus disproved. This indicates that there are notable differences between the responses of the teachers and school administrators about the level of research competencies and the number of seminars attended by instructors. To ascertain which number of seminars attended makes a meaningful effect, a post-hoc test will be conducted.

Post Hoc Test (Least Square Difference) of the Significance Differences in the Assessments on Extent of Manifestation of Teachers' Engagement in Research in Terms of Research Competencies and Their Number of Seminars Profile. Table 24 shows Post hoc test (least square difference) of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of research competencies and their number of seminars profile.

Table 24. Post hoc test (least square difference) of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of research competencies and their number of seminars profile.

Sources	Mean Difference	p-value	Decision	Interpretation
0-3 seminar/s vs				
4--7 seminars	-0.270	0.004	Reject Ho	Significant
Above 8 seminars	-0.450f	0.007	Reject Ho	Significant
4-7 seminars vs				
Above 8 seminars	- 0.179	0.317	Accept Ho	Not Significant

The Post-hoc test showed significant differences in teachers' engagement in research with the number of seminars attended. Respondents with 4-7 seminars gave a higher response compared to those with 0-3 seminars. However, those with above 8 seminars provided a higher response. Exposure to more seminars helps teachers become familiar with research formats and technical terms. Despite being well-equipped, teachers still need training to develop their writing skills and produce research that benefits learners' educational capacity. However, no significant difference was found between the two variables.

3.3 Significant Difference in the Assessment on Extent Manifestation of Teachers' Engagement in Terms of Communication Skills and Their Demographic Profile. The significant variations in the assessment on the level of teachers' manifestation in research participation in terms of communication skills with their sex profile are shown in Table 25 using an independent t-test.

Table 25. Independent t-test of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of communication skills and their sex profile.

Sources	Mean Difference	p-value	Decision	Interpretation
Communication skills via sex	-0.040	0.709	Accept Ho	Not Significant

It was reported that the null hypothesis was disproved. In fact, there are no appreciable variations between the instructors' and school leaders' responses to the sex profile question. As shown in the table, is insignificant, which further explains why the null hypothesis was also disproved.

ANOVA of the Significance Differences in the Assessments on Extent of Manifestation of Teachers' Engagement in Research in Terms of Communication Skills and Their Educational Background Profile. In terms of communication skills with their educational backgrounds, Table 26 shows the ANOVA of the significant differences in the evaluation on the manifestation of teachers' research participation.

Table 26. ANOVA of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of communication skills and their educational background profile

Sources	F-value	p-value	Decision	Interpretation
Communication skills via educational background	5.776	0.003	Reject Ho	Significant

The fact that the null hypothesis was disproved further suggests that there is a considerable difference between the teacher and school administrators' replies. To identify which educational background has a substantial difference, a post-hoc test will be conducted.

Post Hoc Test (Least Square Difference) of the Significance Differences in the Assessments on Extent of Manifestation of Teachers' Engagement in Research in Terms of Communication Skills and Their Educational Background Profile. In table 27, data are presented of the Post- hoc test of the significant differences in the assessment on the extent of manifestation of teachers' engagement in research in terms of communication skills with their educational background.

Table 27. Post hoc test (least Square difference) of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of communication skills and their educational background profile.

Sources	Mean Difference	p-value	Decision	Interpretation
Bachelor vs Masters	-0.219	0.001	Reject Ho	Significant
Doctorate	-0.226	0.000	Reject Ho	Significant
Masters vs Doctorate	- 0.007	0.973	Accept Ho	Not Significant

The study found significant differences in educational backgrounds between bachelor's and master's degrees. Master's degree holders responded more, while bachelor's degree holders responded more. However, no significant differences were found between master's and doctorate degree holders when matched, indicating no significant differences between the two variables.

ANOVA of the Significance Differences in the Assessments on Extent of Manifestation of Teachers' Engagement in Research in Terms of Communication Skills and Their Number of Years in Teaching Profile. Table 28 denotes the ANOVA of the significant differences in the assessment on the extent of manifestation of teachers' engagement in research in terms of communication skills with the number of years of teaching profile.

Table 28. ANOVA of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of communication skills and their number of years in teaching profile.

Sources	F-value	p-value	Decision		Interpretation
Communication skills via educational background	1.837	0.080	Accept Ho		Not Significant

Thus, the null hypothesis was rejected. This means that there are no significant differences among the responses of the teachers and school heads in the extent manifestation of teachers' engagement in research in terms of research competencies and the number of years of teaching.

Significance Differences in the Assessments on Extent of Manifestation of Teachers' Engagement in Research in Terms of Communication Skills and Their Number of Researches Produced Profile.

The significant differences in the ANOVA assessment of the level of teacher involvement in research in terms of attitudes and interest with the quantity of research generated are shown in Table 29.

Table 29. Significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of communication skills and their number of researches produced profile.

Sources	F-value	p-value	Decision	Interpretation
Attitudes and interest via number of research produced	3.962	0.009	Reject Ho	Significant

The null hypothesis was disproved. In terms of attitudes, characteristics, and the quantity of research done, there were substantial variations in the responses of the teachers and school administrators. To evaluate how many of the studies performed have significant differences, a post-hoc analysis was conducted.

Post Hoc Test (Least Square Difference) of the Significance Differences in the Assessments on Extent of Manifestation of Teachers' Engagement in Research in Terms of Communication Skills and Their Number of Research Produced Profile. Table 30 reveals the Post- hoc test of the significant differences in the assessment on the manifestation of teachers' engagement in research in terms of communication skills with the number of research produced.

Table 30. Post hoc test (least Square difference) of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of communication skills and their number of research produced profile.

Sources	Mean Difference	p-value	Decision	Interpretation
0 research vs				
1-2 research/es	-0.195	0.039	Reject Ho	Significant
3- 4 researches	-0.241	0.013	Reject Ho	Significant
Above 5 researches	-0.366	0.001	Reject Ho	Significant
1-2 research/es vs				
3-4 researches	- 0.046	0.564	Accept Ho	Not Significant
Above 5 researches	-0.171	0.070	Accept Ho	Not Significant
3-4 researches vs				
Above 5 researches	-0.125	0.197	Accept Ho	Significant

The study found that respondents with 1-2 research/es and 3-4 research/es produced a higher response than those without any research. The null hypothesis was rejected for 0 research versus 3-4 research, and for 0 research versus 5 and above research. The null hypothesis was accepted for respondents with 1-2 research/es and those with 3-4 research/es, and for respondents with 3-4 research/es versus above 5 researches. No significant difference was found among the compared variables.

ANOVA of the Significance Differences in the Assessments on Extent of Manifestation of Teachers' Engagement in Research in Terms of Communication Skills and Their Number of Seminars Attended Profile. Table 31 shows the ANOVA of the significant differences in the assessment on teachers' manifestation in research engagement in terms of communication skills with the number of seminars attended.

Table 31 ANOVA of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of communication skills and their number of seminars attended profile.

Sources	F-value	p-value	Decision	Interpretation
Attitudes and interest via number of seminars attended	3.616	0.028	Reject Ho	Significant

It describes that the null hypothesis was rejected. It implies that there is a significant difference among the responses of the teachers and school heads in their extent of manifestation towards engagement in research in terms of attitudes and attributes and the number of seminars attended. A post-hoc test will be done to determine which number of seminars attended has a significant difference.

Post Hoc Test (Least Square Difference) of the Significance Differences in the Assessments on Extent of Manifestation of Teachers' Engagement in Research in Terms of Attitudes and Interest and Their Number of Seminars Profile. Table 32 provides the Post- hoc test of the significant differences in the assessment on the extent of manifestation of teachers' engagement in research in terms communication skills with the number of seminars attended.

Table 32. Post hoc test (least Square difference) of the significance differences in the assessments on extent of manifestation of teachers' engagement in research in terms of attitudes and interest and their number of seminars profile.

Sources	Mean Difference	p-value	Decision	Interpretation
0-3 seminar/s vs				
4-7 seminars	-0.150	0.056	Accept Ho	Not Significant
Above 8 seminars	-0.292	0.036	Reject Ho	Significant
4-7 seminars vs				
Above 8 seminars	- 0.142	0.339	Accept Ho	Not Significant

It was found out that the null hypothesis was accepted. This shows that there are no significant differences on the matched number of seminars.

On the other hand, for those with 4-7 seminar/s against those with above 8 seminars, the null hypothesis was rejected. This spells that there is a significant difference on the matched number of seminars. The respondents having above 8 seminars provided a higher response than the respondents who had attended 4-7 seminars. However, when the 4-7 seminars and above 8 seminars will be matched, that there are no significant differences between the two variables.

4. Usefulness of Research Engagement of Teachers to Professional and Personal Growth and Development. Table 33 sums up the responses of the respondents with regards to the usefulness of research engagement to the professional and personal growth and development of teachers.

Table 33 Ascertain the usefulness of research engagement of teachers to professional and personal growth and development

Table 33	Teacher		School Head		Teacher and School Head	
	WM	VD	WM	VD	WM	VD
Composite Mean	3.55	Very Useful	3.62	Very Useful	3.59	Very Useful

Legend: 3.50 -4.00 = Very Useful (VU), 2.50 -3.49 = Moderately Useful (MU), 1.50 – 2.49 = Least Useful (LU), 1.00 -1.49 = Not Useful (NM\)

The study found that research engagement among teachers is beneficial for their professional and personal growth, communication skills, and mind nourishment. Teachers' and school heads' responses indicated that this engagement is very useful, with an average weighted mean of 3.59. However, the lowest weighted mean was for taking opportunities to earn extra income in research endeavors. Overall, all indicators were found to be very useful.

5. Proposed Research Management Program for Teachers and School Heads

It has been found out that there is a great essence of teachers to be engaged in research in all means and aspects. Several benefits can add to the personal and professional growth and development of teachers. This may be very beneficial and important to teachers as they have to always be prepared in all aspects of them being educators. Thus, the researcher proposed a capacity building training for teachers and school heads in research engagement in the 2nd Congressional District

CONCLUSION

In the light of the key findings of the study, the following conclusions are drawn:

1. The profile of the respondents plays significant factor in the engagement of the teachers and school heads in research.
2. The teachers' engagement towards research is in moderately extent most especially in terms of their attitude and interest, research competencies and communication skills.
3. The usefulness of research engagement of teachers to their professional and personal growth and development is very evident to be of great important among teachers. Researches obtained many benefits from the conduct of research studies for professional growth and development.
4. The research management program for teachers' engagement in research contains problems/gaps, objectives, strategies, person involved, time frame, source of fund and assistance to be given by the DepEd to sustain the needs of the teachers in research engagement.

RECOMMENDATIONS

Based on the findings and conclusions drawn from the collected data, the researcher recommends the following:

1. Schools may implement more interesting and related activities related to research in order to create an environment of researchers and thus build a culture of research among schools.
2. School heads and administrators may support the passion and enthusiasm of teachers in doing researches for them to be more excited and productive in the field.
3. School heads and administrators may give awards and incentives to teachers who will engage themselves in the activities regarding researches.
4. Teachers may manifest the attitude and behavior of a true researcher for others to treat them as role models and eventually follow their steps in the said career.
5. The proposed research management program may be reviewed, refined, and later used to guide teachers in research engagement.
6. A lateral study using other variables may be conducted in another congressional district of Batangas Province.

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REFERENCES

Healey, M. (2005), Linking Research andteaching Exploring Disciplinary Spaces and the Role of Enquiry Based-Learning, Open University Press, Avenue, New York, NY 10017, ISBN:978-1138-22775-0, p.6

Posecion,Ofelia T.,Go,Mildred B. & Albano,Heidi P.(2011)Language Reseach: Principles and Application, Lorimar Publishing Inc. 776 Aurora Blvd., Cubao, Quezon City. 2011

OTHER RESOURCES

DepEd Order No. 13 s. 2015
DepEd Order No. 24 s. 2010
DepEd Order No. 39 s. 2016
DepEd Order No. 42 s. 2017
DepEd Order No. 43 s. 2013
Division Memorandum No. 298 s. 2020

UTILIZATION AND EFFECTIVENESS OF SCHOOL LEARNING ACTION CELL IN THE IMPROVEMENT OF TEACHERS' PERFORMANCE

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ABSTRACT

The successful implementation of School Learning Action Cell (SLAC) LACs as seen to be the most cost-effective continuing professional development process that improve the teaching-learning process is dependent on how school leaders and teachers understand the process. The consistency of its implementation and monitoring is somehow difficult to achieve when school heads and teachers have limited grasp of the processes and framework of SLACs. To answer the problems, four sets of survey questionnaires were distributed to 79 teachers from School A and School B. Data gathered were analyzed using descriptive statistics. The results revealed that the teachers understanding on SLAC as a strategy for improving instructional delivery was good. The findings provided evidence that there highly utilized SLAC in different area such as curriculum, instruction and assessment and also the SLAC is highly effective to the teachers' respondent in terms of attitude, knowledge and competency. Based on these findings, it is recommended that school heads and teachers must conduct seminar focusing on the instructions as well as in terms of attitude. It is also recommended to strengthen program implementation review to improve the process of conducting SLACs in schools and learning centers.

INTRODUCTION

Modern society demands high quality teaching and learning from teachers. Teachers have to possess a great deal of knowledge and skills with regard to both teaching and assessment practices in order to meet those demands and standards of quality education. Effective teacher learning and professional development is important for student achievement. Teacher learning is a continuous process that promotes teachers' teaching skills, master new knowledge, develop new proficiency, which in turn, help improve students' learning. Previous studies have indicated that when teachers are effective classroom managers, their students achieve at a higher level and display more interest in the class subject matter.

Teachers in today's world are under a growing pressure to perform. Higher expectations and greater needs now pressure the teachers to perform effectively in classroom. It all comes down to quality teachers who are the determinants of pupils' achievement. Even the most prepared and genuinely qualified teacher still has a great deal to learn when they begin to teach. Hence it is vitally essential that teachers are well prepared when they begin to teach and they continue to improve their knowledge and skills throughout their careers.

Therefore, the Department of Education (DepED) issued the policy on The Learning Action Cell (LAC) as a K to 12 Basic Education Program School-Based Continuing Professional Development Strategy for the Improvement of Teaching and Learning (DepEd Order No.35, s. 2016). The School Learning Action Cell (SLAC) should be observed to evaluate individual teachers and their collective performance. This advocacy of the DepEd implies that every teacher should be properly guided and equipped with the know-how of teaching and learning process through revisiting and reviewing some areas or concerned in performing the duties and responsibilities of an effective and efficient teacher. Increased competencies and professional effectiveness as perceived by teachers is ultimately measured by the extent to which teaching enhances student learning.

The School-Based Learning Action Cell during this pandemic provides an opportunity for the teachers to adopt curricular adjustments, alignment of learning materials, awareness of multiple learning mo-

dalities, create innovative ways of designing optimal learning experiences and assessing learning progress. The COVID-19 pandemic has demonstrated yet again how vital a strong and updated knowledge base is for tackling transformational challenges. It enabled teachers to swiftly change to online teaching and to adapt lesson plans, teaching approaches as well as their communication with students, parents and colleagues (OECD, 2020). School Learning Action Cell sessions provide a way for teachers to support each other and continuously learn while they apply these changes in the classroom. According to DepEd Order 35, s. 2016, continuing school-based learning is key to effective teacher development.

The utilization and effectiveness of School Learning Action Cell as an avenue of teacher's for continuous professional development to sustain their capabilities as a vital player in the delivery of quality education among our new normal educational system learners. This is one prevalent reason why after their initial education, teachers are expected to continue learning throughout their careers, to adapt to the changing needs of their society and its learners. The Division Office issuance a Divison Memorandum (DM) 822,s.2022 about the school learning action cell. The SLAC encourage critical reflection amongst teachers which increases the understanding and knowledge of the curriculum and classroom practices, and to make them more productive individuals in front of the students.

The objectives of SLACs are to improve the teaching-learning process that will lead to improved learning among the students, to nurture successful teachers, to enable teachers to support each other to continuously improve their content and pedagogical knowledge, practice, skills and attitudes; and to foster a professional collaborative spirit among school heads, teachers, and the community as a whole. This School Learning Action Cell (LAC) is very important on improving the teaching and learning process, it prepares the teachers for globalization. Their attendance to these seminars will help create an effective environment, improve teaching-learning situations, keep updated on modern instructional devices and inspire them to become better teachers in the modern world.

Statement of the problem

The aim of the research study is to conduct an in-depth examination on the utilization and effectiveness of School Learning Action Cell in the improvement of teacher's performance.

Specifically, this study sought to answer the following questions:

1. What is the extent of utilization of the two groups of respondents on the School Learning Action Cell in terms of:
   1.1 curriculum;
   1.2 instructions; and,
   1.3 assessment?
2. What is the effectiveness of School Learning Action Cell as assessed by the two groups of respondents in terms of:
   3.1 knowledge;
   3.2 attitude; and,
   3.3 competency?
3. Is there a significance differences on the responses of the two groups of respondents on the extent of utilization and effectiveness of School Learning Action Cell?
4. Is there a significant relationship on the extent of utilization and effectiveness of School learning Action Cell?
5. What is enhancement utilization plan can be proposed based on the findings of the study?

METHODOLOGY

This section contains the method of research, population, sample size, and sampling technique, description of the respondents, research instrument, data-gathering procedure, and the statistical treatment of the data.

Research Design

A qualitative research methodology was used since the main goal of the study is to ascertain how the school learning action cell is used and beneficial in enhancing instructors' performance.

Population, Sample Size and Sampling Technique

The respondents of the study were the teachers from Dr. Panfilo Castro National High School (School A) and Atty. Celso Y. Reyes Integrated National High School (School B) in Candelaria, Quezon. A total population of forty-nine (49) junior high school teachers from School A and thirty (30) in School B were identified as respondents in the present study.

Research Instrument

The researcher used a adopted survey checklist to gather necessary data from the respondents of the study. It focused on the extend utilization and effectiveness School Learning Action Cell in the improvement of teachers' performance in terms of curriculum which consist of (5 items), while in terms of instruction consists of (5 items) and in terms of Assessment (5 items). The second question is about effectiveness of School Learning Action Cell with composed 15 items in terms of knowledge, attitude and competency respectively. The respondents answered on a 5-point Likert scale. The research questionnaire is validated by the Head teacher, and Master Teacher of school A.

After making the final draft of the survey checklist, the researcher sought the permission and approval of the Principal to administer the survey questionnaire to the teacher respondents. After securing the endorsement, the researcher personally distributed the instrument to the participants in the first week of September, 2022. The respondents' answers were treated confidential. The instruments were collected a week after. The information gathered were analyzed descriptively and organized in tables. The percentages results were presented in frequency, weighted means and sample t-test.

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Data Analysis

The study used different inferential statistics like Rank weighted mean, T-test and Pearson' Correlation.

1. Rank weighted mean - These were utilized from the interpretation of the extent utilization and effectiveness of School Learning Action Cell.
2. T-Test -This was employed to determine the significance differences on the extend utilization and effectiveness of School Learning Action Cell.
3. Pearsons' Correlation- this was adopted to determine the significant relationships on the extent utilization and effectiveness of SLAC.

RESULTS AND DISCUSSIONS

This chapter gives the presentation, analysis and interpretation of the data gathered from the questionnaires answered by the respondents. Such presentation is in accordance with the specific questions posited on the statement of the problem.

1. Extent of Utilization of the Two-Groups of Respondents on the School Learning Action Cell.

1.1 In Terms of Curriculum

Table 1. Extent of Utilization of the Two-Groups of Respondents on the School Learning Action Cell in Terms of Curriculum

Indicators	School A			School B		
	WM	VI	R	WM	VI	R
Through Learning Action Cell						
1. I study and analyze the K to 12 Curriculum	4.57	HU	5	4.17	U	2
I implement developmentally-appropriate teaching methods that respect the individual differences of learners	4.67	HU	2	4.00	U	5
I master content and performance standards and learning competences	4.59	HU	4	4.20	HU	1
I plan weekly lessons during the LAC which can be implemented for a specified period of time	4.63	HU	3	4.16	U	3
I prepare for lessons and be more relaxed in executing lesson plans	4.94	HU	1	4.13	U	4
Composite Mean	**4.68**	**HU**		**4.13**	**U**	

Legend: HU = Highly Utilized
U = Utilized
WM = Weighted Mean
VI = Verbal Interpretation
R = Ranking

As gleaned in Table 1, the respondents from School A assessed that they highly utilized the Learning Action Cell to prepare for lessons and be more relaxed in executing lesson plans which gained the highest weighted mean of 4.94 and the highest rank of 1.

On the other hand, the said group of respondents responded that they highly utilized the Learning Action Cell to study and analyze the K to 12 Curriculum which got the least weighted mean of 4.57 and least rank of 5. Along this trend, trainings and seminars on information and communication technology, new methods and techniques in teachings, orientations on the K-12 Curriculum, Values Formation Seminars and the likes are being held so as to prepare all the teachers in globalization.

On the part of the respondents from School B, they replied that they highly utilized the Learning Action Cell to master content and performance standards and learning competences which got the highest weighted mean of 4.20 and highest rank of 1. Performance Standards are concrete statements of how well students must learn what is set out in the content standards, often called the "be able to do" of "what students should know and be able to do" Performance standards specify "how good is good enough.

Meanwhile, the said group of respondents revealed that they only utilized Learning Action Cell to implement developmentally-appropriate teaching methods that respect the individual differences of learners which garnered the least weighted mean of 4.00 and least rank of 5

The composite means of 4.68 and 4.13 implied that the Learning Action Cell was highly utilized and utilized by School A and School B, respectively in their curriculum.

1.2. In Terms of Instructions

Table 2. Extent of Utilization of the Two-Groups of Respondents on the School Learning Action Cell in Terms of Instructions

Indicators	School A			School B		
	WM	**VI**	**R**	**WM**	**VI**	**R**
Through Learning Action Cell						
1. I have a full grasp of DepEd Order No. 35, s. 2016 – the Learning Action Cell as School-based Continuing Professional Development for Improvement of Teaching and Learning	4.47	HU	3.5	4.00	U	4
2. I understand the policies stipulated in DepEd Order No. 35, s. 2020 including its approaches to professional development programs.	4.57	HU	1.5	4.07	U	3
3. I have the specific knowledge on the different topics or areas of discussion for LAC	4.37	HU	5	4.43	HU	2
4. I have the full grasp of Progress Monitoring and Evaluation mechanism for LACs	4.47	HU	3.5	3.90	U	5
5. I can identify specific LAC composition with their terms of reference and understand the LAC implementation norms that facilitates critical issues	4.57	HU	1.5	4.50	HU	1
Composite Mean	**4.49**	**HU**		**4.18**	**U**	

Legend: HU = Highly Utilized
U = Utilized
WM = Weighted Mean
VI = Verbal Interpretation
R = Ranking

As given Table 2, the respondents from School A perceived that they highly utilized the Learning Action Cell to understand the policies stipulated in DepEd Order No. 35, s. 2020 including its approaches to professional development programs, and to identify specific LAC composition with their terms of reference and understand the LAC implementation norms that facilitates critical issues which obtained the highest equal weighted means of 4.57 and highest ranks of 1.5. Pursuant to section 15 of Article IV of Republic Act 1032 known as Continuing Professional Development Act, the Professional Regulation Commission (PRC) and Philippine Regulatory Boards (PRB) hereby adopt and promulgate the implementing rules and guidelines to carry out the provisions of 10912.It is hereby promulgated that the State shall institute measures that will continuously improve the competence of professionals in line with the national standards of practice, thereby ensuring their contribution in uplifting the general welfare , economic growth and development of the nation. Continuing Professional Development (CPD) refers to the

inculcation of advanced knowledge, skills and ethical values in a post-licensure specialization or in an inter-or multidisciplinary field of study.

Meanwhile, the said group of respondents answered that they also highly utilized the Learning Action Cell to have the specific knowledge on the different topics or areas of discussion for LAC which made the least weighted mean of 4.37 and least rank of 5. The goal of every teacher to become not only efficient but also effective. Thus, to help young people learn the more complex and analytical skills they need for the 21st century, teachers must learn in ways that develop higher-order thinking and performance.

For the respondents from School B, they assessed that they highly utilized the Learning Action Cell in order to identify specific LAC composition with their terms of reference and understand the LAC implementation norms that facilitates critical issues which made the highest weighted mean of 4.50 and highest rank of 1. To develop the sophisticated teaching required for this mission, they must be offered more and more effective professional learning.

Contrary wise, the said group of respondents acknowledged that they only utilized Learning Action Cell to have the full grasp of Progress Monitoring and Evaluation mechanism for LACs which made the least weighted mean of 3.90 and least rank of 5. It is in the area of promoting instructional effectiveness evaluation of instruction, guided skills and research capabilities where teachers are much needed of further training.

The composite means of 4.49 and 4.18 signified that the Learning Action Cell was highly utilized and utilized by School A and School B, respectively in their instructions. School learning action cells aim to improve the teaching learning process that will lead to improved learning among the students, to nurture successful teacher, to enable teachers to support each other to continuously improve their content and pedagogical knowledge, practice, skills, and attitudes, and to foster a professional collaborative spirit among school heads, teachers, and the community as a whole.

1.3. In Terms of Assessment

Table 3. Extent of Utilization of the Two-Groups of Respondents on the School Learning Action Cell in Terms of Assessment

Indicators	School A			School B		
	WM	VI	R	WM	VI	R
Through Learning Action Cell						
1. I include ways in assessing the learning of students during the LAC session	4.57	HU	5	4.33	HU	3
2. I conduct assessment that provides teachers and learners with necessary feedback about learning outcomes.	4.61	HU	4	3.97	U	5
3. I measure teaching effectiveness based on student's result	4.80	HU	1	4.50	HU	2
4. I reflect on teaching methodologies and-what does and doesn't work and why	4.63	HU	2.5	4.67	HU	1
5. I use evidence of student learning to inform and improve professional practice	4.63	HU	2.5	4.20	HU	4
Composite Mean	**4.65**	**HU**		**4.33**	**HU**	

Legend: HU = Highly Utilized
U = Utilized
WM = Weighted Mean
VI = Verbal Interpretation
R = Ranking

As gleaned in the table, the respondents from School A perceived that they highly utilized the Learning Action Cell to measure teaching effectiveness based on student's result which gave the highest weighted mean of 4.80 and highest rank of 1. Contrary wise, the said group of respondents assessed that they also highly utilized the Learning Action Cell to include ways in assessing the learning of students during the LAC session which gained the least weighted mean of 4.57 and least rank of 5. Every teacher should understand how to implement the learner-centered assessment policies for the K to 12 Curriculum.

In terms of the respondents from School B, they noted that they highly utilized the Learning Action Cell in order to reflect on teaching methodologies and-what does and doesn't work and why which obtained the highest weighted mean of 4.67 and highest rank of 1. The researcher therefore conclude that

the teachers are attentive in any changes happening on their teaching strategies that enhance meaningful learning learner.

Meanwhile, the said group of respondents recognized that they only utilized Learning Action Cell to conduct assessment that provides teachers and learners with necessary feedback about learning outcomes which gained the least weighted mean of 3.97 and least rank of 5.

The composite means of 4.65 and 4.33 concluded that the Learning Action Cell was highly utilized by School A and School B, respectively in their assessment. Assessment provides teachers and learners with the necessary feedback about learning outcomes.

1.4 SUMMARY

Table 4. Summary on the Extent of Utilization of two groups of respondents on the School Learning Action Cell

	School A			School B		
Variables	**C.M**	**Int.**	**R**	**C.M**	**Int.**	**R**
1. Curriculum	4.68	HU	1	4.13	U	3
2. Instruction	4.49	HU	3	4.18	U	2
3. Assessment	4.65	HU	2	4.33	HU	1
Grand Mean		HU			U	

As gleaned on the table, the respondent from school A highly utilized School Learning Action Cell in terms of Curriculum, while on the school B the respondents highly utilized School Learning Action Cell in terms of Assessment.

2. Effectiveness of School Learning Action Cell.

2.1. In Terms of Knowledge

As stated in the table, the respondents from School A answered that the Learning Action Cell is highly effective in improving their classroom management which made the highest weighted mean of 4.82 and highest rank of 1. The researcher therefore concludes that the LAC is big help for the respondents in School A to improve their classroom management in terms of teaching and learning process. It also a guide for the teachers to implement new rules and procedures in the classroom.

Table 5. Effectiveness of Social Learning Action Cell in Terms of Knowledge

Indicators	**School A**			**School B**		
	WM	**VI**	**R**	**WM**	**VI**	**R**
Through Learning Action Cell						
1. I improve my teaching strategies and techniques	4.63	HE	3	4.40	HE	4.5
2. I updated in new knowledge of the content	4.57	HE	5	4.70	HE	1
3. I improve my classroom management	4.82	HE	1	4.40	HE	4.5
4. I empower the mastery of content	4.67	HE	2	4.53	HE	3
5. I provide advancement in every subject content	4.59	HE	4	4.57	HE	2
Composite Mean	**4.66**	**HE**		**4.52**	**HE**	

Legend: HE = Highly Effective
E = Effective
WM = Weighted Mean
VI = Verbal Interpretation
R = Ranking

UNESCO in 2006 opined that teachers are expected to employ interactive methods of teaching to help students learn better. The literature on education quality indicates a strong link between teacher professional development and quality especially in the areas of teachers' beliefs and practices, students' learning and on the implementation of educational reforms

For the assessment of the respondents from School B, they perceived that Learning Action Cell is highly effective in updating the new knowledge of the content which got the highest weighted mean of 4.70 and highest rank of 1.On the contrary, the said group of respondents assessed that Learning Action

Cell is highly effective in improving their teaching strategies and techniques, and in improving their classroom management which got the least equal weighted means of 4.40 and least equal ranks of 4.5. The respondents in school B they consider LAC as effective training for them to improve their teaching strategy as well as their classroom management.

The composite means of 4.66 and 4.52 for Schools' A and B, respectively signified that the School Learning Action Cell was highly effective in terms of knowledge. Learning Action Cell sessions (LACs) provide a way for teachers to support each other and continuously learn while they apply these changes in the classroom. According to DepEd Order 35, s. 2016, continuing school-based learning is key to effective teacher development.

2.2. In Terms of Attitude

Table 6. Effectiveness of School Learning Action Cell in Terms of Attitude

Indicators	School A			School B		
	WM	VI	R	WM	VI	R
Through Learning Action Cell						
1. I have clear communication skills	4.45	HE	2	4.73	HE	1
2. I monitor the process of learning effectively	4.59	HE	1	4.67	HE	2
3. I manage the behaviors of my students competently	4.29	HE	5	4.47	HE	3
4. I create learning communities in my classroom.	4.33	HE	4	4.27	HE	5
5. I evaluate the performances of my students effectively	4.37	HE	3	4.37	HE	4
Composite Mean	**4.41**	**HE**		**4.50**	**HE**	

Legend: HE = Highly Effective
E = Effective
WM = Weighted Mean
VI = Verbal Interpretation
R = Ranking

As reflected in the table, the respondents from School A justified that the Learning Action Cell is highly effective in monitoring the process of learning effectively which yielded the highest weighted mean of 4.59 and highest rank of 1. The effectiveness of using review sessions to monitor student learning is clearly evident in School A.

Meanwhile, the said group of respondents explained that Learning Action Cell is highly effective in managing the behaviors of their students competently which made the least weighted mean of 4.29 and least rank of 5. It is important to help the learners recognize when their actions are disruptive and know that they have the ability to change unruly behavior.

With respect to the assessment of the respondents from School B, they commented that Learning Action Cell is highly effective to have clear communication skills which obtained the highest weighted mean of 4.73 and highest rank of 1. Good communication skills of teacher are the basic need of academic's success of students, and professional success of life. Teacher communicates more instructions orally in the classroom to the students. Teacher with poor communication skills may cause failure of students to learn and promote their academics.

Furthermore, the said group of respondents observed that Learning Action Cell is highly effective in creating learning communities in their classroom which gained the least weighted mean of 4.27 and least rank of 5.

The composite means of 4.41 and 4.50 for Schools' A and B, respectively justified that the Social Learning Action Cell was highly effective in terms of attitude. Continuing Professional Development (CPD) refers to the inculcation of advanced knowledge, skills and ethical values in a post-licensure specialization or in an inter-or multidisciplinary field of study. The CPD programs consists of activities that range from structured and non-structured activities which have learning process and outcomes. These includes formal learning, non-formal learning, informal learning, self-directed learning, online learning and professional work experience. Attendance and participation of professionals to seminars, conferences and conventions shall be given appropriate CPD units in recognition of the fact that it contributes to the professional development and lifelong learning of professionals.

2.3. In Terms of Competency

Table 7. Effectiveness of School Learning Action Cell in Terms of Competency

Indicators	School A			School B		
	WM	VI	R	WM	VI	R
Through Learning Action Cell						
1. I demonstrate leadership.	4.69	HE	5	4.77	HE	1
2. I establish a respectful environment for a diverse population of my students	4.76	HE	4	4.40	HE	5
3. I know the content I teach	4.90	HE	1	4.67	HE	2
4. I facilitate learning for my students	4.86	HE	2.5	4.60	HE	3
5. I reflect on my practice	4.86	HE	2.5	4.47	HE	4
Composite Mean	**4.81**	**HE**		**4.58**	**HE**	

Legend: HE = Highly Effective WM = Weighted Mean R = Ranking
E = Effective VI = Verbal Interpretation

As written in the table, the respondents from School A answered that the Learning Action Cell is highly effective in knowing the content they teach which yielded the highest weighted mean of 4.90 and highest rank of 1. Content and performance standards and learning competencies must be mastered by teachers so that they can plan lessons, deliver instruction effectively, and assess the learning that resulted from their teaching.

Furthermore, the said group of respondents explained that Learning Action Cell is highly effective in demonstrating leadership which got the least weighted mean of 4.69 and least rank of 5. Effective learning is the outcome of effective leadership. Education systems should have proper policies and programmed to develop educational leaders.

For the respondents from School B, they replied that Learning Action Cell is highly effective in demonstrate leadership which gained the highest weighted mean of 4.77 and highest rank of 1. The managing style of the leaders is essential to the success of the teamwork. According to the trait theory of leadership, there have been some important studies, which aimed to provide more valid results to describe the specific traits of leaders that can be learned and taught.

Lastly, the said group of respondents observed that Learning Action Cell is highly effective in establishing a respectful environment for a diverse population of their students which gained the least weighted mean of 4.40 and least rank of 5. LAC help the teachers to know which essential skills will be transferable across different fields of work in the 21st century, if they want to make their instruction more relevant and practical. Many researchers give important reminders on contextualization and localization.

The composite means of 4.81 and 4.58 for Schools' A and B, respectively affirmed that the Social Learning Action Cell was highly effective in terms of competency. A competency is more than just knowledge and skills; it involves the ability to meet complex demands by drawing on and mobilizing psychosocial resources (including skills and attitudes) in a particular context. Competency is essential to an educator's pursuit of excellence. Teachers need a wide range of competencies in order to face the complex challenges of today's world. Teaching competency is an inherent element of an effective training process, one that aspires to contribute to the welfare of a particular country or the world, itself. The central figures in the educational process are teachers. The success of training and education depends on their preparation, erudition and performance quality.

2.4 Summary

Table 8. Summary on the Effectiveness of School Learning Action Cell

Variables	School A			School B		
	CM	Int.	Rank	CM	Int.	Rank
1. Knowledge	4.66	HE	2	4.52	HE	2
2. Attitude	4.41	HE	3	4.5	HE	3
3. Competency	4.81	HE	1	4.58	HE	1
Grand Mean		**HE**			**HE**	

As gleaned on table 8, the respondents from school A and school B the school learning action cell is highly effective in terms of competency which is the rank of 1. A competency involves the capacity to meet complicated demands by utilizing and mobilizing psychological resources (including abilities and attitudes) in a specific setting. Competencies go beyond knowledge and skills. The pursuit of excellence by educators requires competence. To meet the complex problems of the modern world, teachers must possess a wide range of competences. Teaching competency is a fundamental component of a successful training program that aims to advance the welfare of a nation or the entire planet. The central figures in the educational process are teachers. Training and education's effectiveness is based on participants' readiness, knowledge, and level of performance.

2. Difference on the Responses of the Two Groups of Respondents on the Utilization and Effectiveness of School Learning Action Cell.

Table 9. Difference on the Responses of the Two Groups of Respondents on the Utilization and Effectiveness of School Learning Action Cell

Variables Compared	t-value	p-value	Decision	Interpretation
Utilization of School Learning Action Cell				
Curriculum	7.24	8.89E-5	p<0.01, Reject Ho	Highly Significant
Instruction	2.46	0.03932	p<0.05, Reject Ho	Significant
Assessment	2.47	0.03871	p<0.05, Reject Ho	Significant
Effectiveness of School Learning Action Cell				
Knowledge	1.89	0.09543	p>0.05, Failed to Reject Ho	Not Significant
Attitude	0.95	0.37473	p>0.05, Failed to Reject Ho	Not Significant
Competency	3.01	0.01681	p<0.05, Reject Ho	Significant

As seen in the table, when the responses of the two groups of respondents on the extent of utilization of School Learning Action Cell were compared, the computed t-value of 7.24 for curriculum has a corresponding p-value of less than 0.01, thus rejecting the null hypothesis. In addition, the computed t-values of 2.46 for instruction and 2.47 for assessment have corresponding p-values of less than 0.05, thus rejecting the hypothesis.

These safely generalized that when the responses of the two groups of respondents on the extent of utilization of School Learning Action Cell were compared, a high significant difference exists on curriculum and significant differences on instruction and assessment. This means that there is a high significant difference on the extent utilizing the LAC in terms of curriculum and and a significance difference in terms of instruction and assessment as rated by the respondents. The significant difference was established between the responses on the utilization towards Learning Action Cell. This is strongly supported with a belief as a proposition which maybe consciously or unconsciously held, is evaluative in that it is accepted as true by the individual, and is therefore imbued with emotive commitment; further, it serves as a guide to thought and behavior. Teachers' beliefs about learning and teaching are the propositions about learning and teaching that a teacher holds to be true, which in turn guide to her or his thought and behaviors (Jansen, 2018).

In addition, when the responses of the two groups of respondents on the effectiveness of School Learning Action Cell were compared, the computed t-value of 3.01 for competency has a corresponding p-value of less than 0.05, thus rejecting the null hypothesis. On the other hand, the computed t-values of 1.89 for knowledge and 0.95 for attitude have corresponding p-values of more than 0.05, thus failing to reject the hypothesis.

These safely concluded that when the responses of the two groups of respondents on the effectiveness of School Learning Action Cell were compared, a significant difference exists on competency and no significant differences on knowledge and attitude. The researcher often conclude that the two groups are similarly effective the Learning Action Cell in terms competency and not different regarding the effectiveness of School Learning Action Cell in terms of knowledge and attitude. A competency is more than just knowledge and skills; it involves the resources (including skills and attitudes) in a particular context. Relationship on the Extent of Utilization and Effectiveness of School Learning Action Cell.

Table 10. Relationship on the Extent of Utilization and Effectiveness of School Learning Action Cell

Variables Compared	r-value	p-value	Decision	Interpretation
Curriculum versus:				
Knowledge	0.79	0.00655	p<0.01, Reject Ho	Highly Significant
Attitude	0.65	0.04190	p<0.05, Reject Ho	Significant
Competency	0.68	0.03050	p<0.05, Reject Ho	Significant
Instruction versus:				
Knowledge	0.66	0.03783	p<0.05, Reject Ho	Significant
Attitude	0.41	0.23929	p>0.05, Failed to Reject Ho	Not Significant
Competency	0.70		p<0.05, Reject Ho	Significant
Assessment versus:				
Knowledge	0.92	0.00016	p<0.01, Reject Ho	Highly Significant
Attitude	0.69	0.02723	p<0.05, Reject Ho	Significant
Competency	0.66	0.03783	p<0.05, Reject Ho	Significant

As presented in Table 9, when the responses of the respondents on the extent of utilization of School Learning Action Cell in terms of curriculum was compared to the effectiveness, the computed r-value of 0.79 for knowledge has a corresponding p-value of less than 0.01, thus rejecting the null hypothesis. Moreover, the computed r-values of 0.65 for attitude and 0.68 for competency have corresponding p-values of less than 0.05, thus rejecting also the null hypothesis.

These safely inferred that the responses of the respondents on the extent of utilization of School Learning Action Cell in terms of curriculum has high significant relationship with knowledge and significant relationships with attitude and competency. The result implies that the extent of utilization of SLAC in the curriculum is highly effective on the knowledge of the teachers and it is effective when it comes to both attitude and competency of teachers. Teachers should be open to try new techniques and try to learn more and understand new concepts. This can lead to being more reflective and deepening of teacher's learning. Learning Action Cell sessions (LACs) provide a way for teachers to support each other and continuously learn while they apply these changes in the classroom. According to DepEd Order 35, s. 2016

When the responses of the respondents on the extent of utilization of School Learning Action Cell in terms of instruction was compared to the effectiveness, the computed r-values of 0.66 for knowledge and 0.70 for competency have corresponding p-values of less than 0.05, thus rejecting also the null hypothesis.

These safely judged that the responses of the respondents on the extent of utilization of School Learning Action Cell in terms of instruction has high significant relationship with knowledge and significant relationships with attitude and competency. The result implies that the extent of utilization of SLAC in instruction is highly effective on knowledge of teachers. The result also infers that extent of utilization of SLAC in instruction is effective in the competency but not effective when it come to the attitude of teachers.

Finally, when the responses of the respondents on the extent of utilization of School Learning Action Cell in terms of assessment was compared to the effectiveness, the computed r-value of 0.92 for knowledge has a corresponding p-value of less than 0.01, thus rejecting the null hypothesis. Furthermore, the computed r-values of 0.69 for attitude and 0.66 for competency have corresponding p-values of less than 0.05, thus rejecting also the null hypothesis.

These safely concluded that the responses of the respondents on the extent of utilization of School Learning Action Cell in terms of assessment has high significant relationship with knowledge and significant relationships with attitude and competency. The result implies that the extent of utilization of SLAC in assessment is highly effective in the knowledge and effective when it comes to the attitude and competency of the teachers.

5 . What is enhancement utilization plan can be proposed based on the findings of the study?

The findings of the study intend to assess the training needs of teachers and the problems being encountered in the school learning action cell process. The result of which will be disseminated in the school and district learning action cell so that the schools and district will be benefited to the prepared action plan on how the school learning action cell will be institutionalized.

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DR. PANFILO CASTRO NATIONAL HIGH SCHOOL
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UTILIATION PLAN OF SCHOOL LEARING ACTION CELL

Activities	Objectives	Strategies	Time Frame	Person involved
Revisit Div. policies that supports the districts and the schools utilizing new framework of implementing LAC	To revisit division, district and school policies that supports utilization of the learning action cell	Seminar	March, 2023	SH, HT, MT and teacher
Craft Division, District and School Policies to new framework of implementing LAC	To craft division, district and school policies that supports utilization of the learning action cell	Small group meeting	March, 2023	SH, HT, MT and teacher
Create Monitoring and Evaluation team to ensure the utilization and effectiveness of SLAC.	To create a M & E team to monitor and evaluate effectiveness of policies and improvement of SLAC.	Technical Assistance	March, 2023	SH, HT, MT and teacher
Create Monitoring and Evaluation team to ensure the utilization and effectiveness of SLAC.	To provide feedbacks of the effectiveness of the policies and needs improvement for the adjustment.	Technical Assistance	March, 2023	SH, HT, MT and teacher

Prepared by:

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CONCLUSIONS

Based on the findings as summarized, the following were concluded that:

1. Teachers in the young adulthood stage of life were active in seminars and most of them were female because they were more patient and competitive. New teachers were willing to learn and determined to pursue their Master's and Doctor's degree than the experienced teachers.
2. The school implemented the SLAC session in the sense that the objectives were clearly stated and the LAC members perform their role for involvement and active participation but the school needs more efforts in planning and monitoring the effectiveness of SLAC Activities.
3. SLAC Activities enhance teachers' skills in developing, monitoring and reporting school activities and they utilized ICT in enriching lessons for higher understanding to prepare students for real life. This implied that teachers' competence is the focus of SLAC but Students' assessment is still needed to be practiced for improvement.
4. Teachers have different perceptions in the implementation of the SLAC because of their different age bracket, gender, and experience in the field of teaching, position, and educational attainment.
5. Program enhancement is still needed for the improvement of SLAC Implementation among schools.

RECOMMENDATIONS

Based on the conclusions drawn, it is recommended that:

1. Encourage all the teachers in the SLAC regardless of age, gender, position, length of service and educational attainment.
2. It is recommended to plan the LAC activities carefully. Conduct SLAC sessions regularly based on the needs of the teachers and allot budget for the materials to use for SLAC activities from the school MOOE.
3. Using varied strategies and techniques is recommended to improve the teacher's instructional delivery and student's assessment.
4. District orientation about the benefits they could gain from the SLAC session to motivate them in attending the sessions.
5. Adoption of the Proposed Program Enhancement designed by the researcher to improve the implementation of SLAC sessions.

BIBLIOGRAPHY

Bringas, H. A. (2016). Localization-contextualization-slide share. Retrieved July 30, 2014, from www.slideshare.net/lenferndz/localization-contextualization

Catacutan, R. A. & de Guzman, M. F. D. (2017). The Project- Based Learning (PBL) Approach in Secondary Social Studies Instruction at Zone 2, Division of Zambales, Philippines. International Journal of Scientific & Engineering Research Volume 8, Issue 11, November-2017. ISSN 2229-5518. JOURNAL OF INTERNATIONAL ACADEMIC RESEARCH FOR MULTIDISCIPLINARY Impact Factor 4.991, ISSN: 2320-5083, Volume 6, Issue 12, January 2019 15 www.jiarm.com

Catimon, E. L. (2017). Readiness of Public Elementary Schools in Implementing DepEd Order 35 s. 2016: Basis for Policy Improvement. College of Education, Polytechnic University of the Philippines.

Darling-Hammond, L. (Ed.). (2018). Powerful learning: What we know about teaching for understanding. San Francisco, CA: JosseyBass.

Delsa, D., Chalchisa, C. & Lemma, G. (2016). School-based continuous Teacher Professional Development in Addis Ababa: An Investigation of Practices, Opportunities and Challenges. CICE Hiroshima University, Journal of International Cooperation in Education, Vol.15 No.3 (2013) pp.77-94 http://home.hiroshimau.ac.jp/cice/wp-content/uploads/publications/15-3/15-3-05.pdf

Fasko, D. (2001). An analysis of multiple intelligences theory and its use with the gifted and talented. Roeper Review, 23(3), 126–130.

Ferreira, J. de Lima, (2016) Continuing Education for Professional Development in Higher Education Teaching. Pp. 142-150

Garin, R. M., Reyes, R., Domantay, G. F. & Rosals, J. (2017). Contextualized and Localized Teaching as a Technique in Teaching Basic Statistics. Asia Pacific Journal of Education, Arts and Sciences. Vol. 4 No. 1, 62-67. January 2017.

Garet, M.S. (2017). What makes professional development effective? Results from a national sample of teachers. American Educational Research Journal,38(4), 915-945.

Jansen, E. (2013). Teacher's beliefs and continiung professional development. Journal of Educational Administration, 51(2), 213-321

Lee, H. & Yee-Sakamoto, I. (2016). Contextualized pedagogy: New educational approach in the postmodern era. The Journal of Multiculturalism in Education Volume 8.

Lobo, D. (2016). 21st Century Competencies and ICT Integration in the Classroom: Preparing Students for Careers in the Current and Future Employment Market. Master's Thesis. Ontario Institute for Studies in Education of the University of Toronto.

Mouraz, A., & Leite, C. (2018). Putting knowledge in Context: Curriculum Contextualization in History Classes. Transformative Dialogues: Teaching & Learning Journal, 6(3), 1-11.

Murchan, D., Tohasa, J., Loxley, A., & Johnston, K. (2017). Teacher Learning and Policy Intention: Selected Findings from an Evaluation of a Large-Scale Programme of Professional Development in the Republic of Ireland. European Journal.

Panasuk, R., Stone, W., & Todd, J. (2017). Lesson planning strategy for effective mathematics teaching. Education, 122(4), 808-827. Retrieved November 13, 2015 from the Education Research Complete database.
Rotherham, A. J., & Willingham, D. T. (2016). 21st-Century Skills: Not New, but a Worthy Challenge. American Educator, 34(1), 17-20.
Silver, H. F., Strong, R. W., & Perini, M. J. (2000). So each may learn: Integrated learning styles and multiple intelligences. Alexandria, VA: Association for Supervision and Curriculum Development.
Zimmerman (2016), Project Based Learning for Life Skill Building in 12th Grade Social Studies Classrooms: A Case Study. Master of Science in Education. Dominican University of California
Oakley, G., King, R., & Scarparolo, G. (2018). An evaluation of ELLN Digital: Technology-supported teacher professional development on early language, literacy, and numeracy for K-3 teachers. Quezon City, Philippines: Foundation for Information Technology Education and Development.
UNESCO Institute for Statistics (2006). Teachers and Educational Quality: Monitoring Global Needs for 2015. UNESCO Institute for Statistics, Montreal, 2006
DepEd Order 35, s. 2016. Learning Action Cell (LAC) as the Kto12 Basic Education Program School–Based Continuing Professional Development Strategy for the Improvement of Teaching and Learning
Guerriero, S. (2017), Pedagogical Knowledge and the Changing Nature of the Teaching Profession, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264270695-de.
OECD Publishing, P. (ed.) (2020), "Professional growth in times of change: Supporting teachers' continuing professional learning and collaboration", OECD Education Policy Perspectives, Vol. 10, pp. 1-18, https://doi.org/10.1787/753eaa89-en (accessed on 20 July 2021).
Mitchell, T. (2017). The Competency-Based Education Experiment Expanded to Include more Flexibility for Colleges and Students. Retrieved from: https://blog.ed.gov/2015/11/the-competency-based-education- experiment-expanded-to-include-more-flexibility-for-colleges-and-students/
Ryan, S., & Cox, J. (2017). Investigating Student Exposure to Competency-Based Education. Retrieved from, https://eric.ed.gov/?id=EJ1137867
Wraga, W. G. (2017). Understanding the Tyler rationale: Basic principles of curriculum and instruction in historical context. Espacio, Tiempo y Educación, 4(2), 227-252. doi:http://dx.doi.org/10.14516/ete.156.
Saucedo, D. (2019). Reducing behavior problems in the elementary school classroom: A practice guide (NCEE #2008-012) . Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from https://eric.ed.gov/?id=ED502720.
Drucker, P. F. (2016). What business can learn from nonprofits. Harvard business review, 67(4), 88-93.

LEVEL OF MOTIVATION AND ACADEMIC PERFORMANCE IN THE UTILIZATION OF QUIZIZZ IN BIOLOGY OF SELECTED STUDENTS IN LAS PIÑAS CITY

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ABSTRACT

Game-based learning to schools is a real need. It is a challenge for stakeholder in education to meet the need of students of the 21st century who were born with phones in their pockets and has been exposed to digital games in their early years. In such, this study was conducted to investigate the "Level of Motivation and Academic Performance in the Utilization of Quizizz in Biology of Selected Students in Las Piñas City." Studying what drives the behavior change and what can improve students' academic performance may increase quality education in our country. The computed r-values on students' level of motivation on experimental group which used gamified learning through Quizizz is .32. as compared to controlled group which used the traditional teaching methodology had computed r-values of .12. In addition, the computed r-value of .42 for post-test of experimental group as compared to r-values of .28 controlled group shows the level of motivation have significant relationship to students' level of performance during post-test. When the level of performance during the pre-and post-tests of the experimental group were compared, the computed t-value of 2.24 has a corresponding p-value of less than 0.05. This safely inferred that the level of performance during the pre and post-tests of the experimental group have significant differences. This value shows that utilization of Quizizz gamification has positive effect on students' level of motivation and academic performance.

INTRODUCTION

In the modern digital world, students are very interested in technology. Today's learners are learning differently from the traditional educational system. In this setting, technology plays a key role in the classroom. Classrooms are being remodeled to fit the evolving needs of modern digital learners. Technology-based games such as Quizizz, Kahoot, Flippity, Gimkit and more can be included into lessons to encourage active participation from students. Additionally, technology can be used to support learning assessment in addition to teaching and learning.

Gamification is defined by the Gamified Learning Theory (GLT) as the process of leveraging game attribute categories outside of a game to influence learning-related behaviors or attitudes. Each category offers a selection of game components that can be used in non-gamified settings to elicit particular game -like mental states. Just like any other activity, learner-related behavior can affect learning.

UNESCO (2013) has stressed the importance of using mobile devices in education and training instructors so they can take full use of opportunities for students in the 21st century. According to Wieking (2016), digital games into the classroom increases students' motivation and interest in their studies. As a result, it's crucial to use incentive tools in the classroom.

Similarly, in an online environment, simply talking about the subject is not enough; exciting software, like Quizizz must be added. It is one of the wonderful modern educational tools that was launched in 2015 and bills itself as "the world's most engaging learning platform." It is a great way for educators to create exams, pre-test reviews, and impromptu tests for review activities. As of late 2020, Quizizz has more than 65 million global users across 150 countries.

Teachers will be able to influence different members of the community to be more receptive to Quizizz use rather than merely seeing it as a game platform with no advantages if they believe in the effectiveness of Quizizz as change agents. Quizizz and its application in the classroom are highly re-

garded by teachers since it offers students a number of advantages, including an enhancement of their language skills and cognitive abilities. According to the analysis of all the articles, teachers firmly believe that Quizizz is a platform that is efficient, practical, simple to use, and inspiring for their students, making it an online learning tool that can support students' academic success and knowledge development. The pleasant learning atmosphere that Quizizz fosters will undoubtedly improve students' academic performance because they will be more driven to learn and outperform their peers (Lim and Yunus,2021).

In comparison with other online platforms, Quizizz has a more advantages. Quizizz is student directed as it displays all information on the student's device. Another reason why Quizizz is a better option is because Quizizz's features are free compared to others that you need to pay for a premium account to access other features. Just like Kahoot, you can make multiple choices, checkbox, open-ended, true or false, fill in the blanks and other types of formative assessment with audio and pictures. However, Quizizz is more useful in creating quizzes.

Teachers can go to a poll where there are banks of questions made by other teachers which teachers can handpick which Kahoot does not have.

Quizizz can be conducted even if all students do not have personal devices through paper mode. Teachers can engage learner equally with Quizizz fun Paper Mode. What the students need to do is to hold up the unique QR code to answer question. The QR code has for sides, marked 'A', 'B', 'C', and 'D'. Each side represents the corresponding answer option for multiple choice questions. The teacher can quickly scan the paper and Quizizz provides instant feedback on students' responses.

Online gamification-satisfied students passed their courses (Llerena-Izquierdo and Atiaja-Balseca, 2020). Rather than traditional activities, students who passed the courses gained greater satisfaction in performing gamified activities.

In the current era of technology, educators face both a challenge and the possibility of solution with reference to encouraging students (Dichev, Dicheva, Angelova, & Agre, 2015). High school aged pupils are comfortable with, and engage in, a variety of game playing activities regularly, and have been exposed from early life (Hasan, 2018). Whether it be on cell phone, tablet, or PC, students are more able to access information, and can do it more quickly than ever in the past (Dichev et al., 2015). This has drastically altered the environment from the learning process to an end result in accumulation of knowledge (Dichev et al., 2015).

Motivation refers to reasons that underlie behavior that is characterized by willingness and volition (Lai, 2011). Motivation defined as the reasons underlying behavior (Guay et al.2010). Motivation was regarded by experienced and inexperienced teachers' alike as a prerequisite for effective learning, and the greatest challenge for teachers is to make students want to learn (Odera, 2011). According to research, student motivation is crucial and has an effect on their academic performance (Tella, 2007).

Gamification may have a positive impact on learning outcomes, according to the theories of gamified learning and self-determination theory. In the contexts of gamification, self-determination theory has already been successfully utilized. This theory provides explanations of why people engage in specific behavior which can result from intrinsic or extrinsic motivation.

Intrinsic and extrinsic motivators are two significant factors clustering learners with respect to their drives to engage in gamified learning. Intrinsic motivation is observed when one engages in an activity out of genuine interest in contrast with extrinsic motivation where one does something for external incentives such as grades, rewards, and praise. Gamification experience has positive outcomes which is extrinsic in nature. Badges offer recognition of achievement and support competences as per SDT. Students perceive the usefulness of gamified learning as fun learning experience which is intrinsic value.

Our educational system has a special issue with students not being engaged in their studies and lacking the motivation to learn. Studies have shown that traditional tactics such as lecture-based and blackboards are ineffective in addressing low student motivation (Boumeester et al. 2019; Lo & Hew, 2018); they are also ineffective at fostering student engagement in learning (Ortiz-Rojas, Chiluiza & Valcke, 2019). On the other side, students that are motivated to learn work harder at their academics.

All forms of gaming, including those played on mobile devices and home consoles share this feature capable of maintaining students' interest for a long time. Gaming has become a part of everyday life, creating the issue of its application in varied motivational circumstances (Hamari & Koivisto, 2014). The goal of education is to inspire students to learn. Students' interest and motivation in learning are affected by different factors. One of the main roles of teachers is to ensure that there is active engage-

ment among the students. Engagement was found to be positively connected with students' academic performance (Delfino, 2019), implying that more engaged pupils are more likely to excel academically (Casuso-Holgado et al, 2013).

There are many kinds of issues and concerns with the Philippine educational system that must be addressed for educational reform (Durban & Catalan, 2012). These educational issues cover local, national, and international issues. Poor performance in achievement exams is a source of concern on a global and national scale. Filipino students had poor performance in Mathematics and Science for the last nine decades (Tubeza, 2009). The results in the 2003 to 2009 National Achievement Tests showed poor mastery of students in Science and Mathematics (Imam, 2010). We have consistently performed poorly in international examinations (National Center for Education Statistics, 2004). In the 2003 TIMSS, we ranked 23rd out of 25 countries both in Grade IV Math and Science. The Philippines ranked 34th out of 38 countries in High School Math; 43rd out of 46 countries in High School Science; In 2008, the TIMSS Advanced, we ranked 10th out of 10 countries who participated. Truly, there is no question about the country's current poor performance.

Biology is an essential component of a modern educational system and society. Despite its importance, students have often seen it as a subject heavy on memorization. Scientific words are difficult to remember which results in students not being motivated and enthusiastic in learning. The monotonous teaching style of the teacher, the dearth of learning tools, and the students' unfavorable opinions of biology lectures as being unimportant to daily life are other factors in the difficulty of students studying biology.

Endocrine System and hormones were ones of five topics students had most difficulty with. The main reasons underlying the difficulty were nature of the topic, teachers' style of teaching, students' learning and studying habits, students' negative feelings and attitudes towards the topic and a lack of resources (Cimer, 2012).

Different contemporary pedagogical approaches are emerging. However, there haven't been many studies of gamification strategies in Biology. Students must learn the abilities necessary for today's society, including communication, teamwork, creativity, and critical thinking. This means that the aforementioned abilities cannot be taught efficiently via conventional methods (National Education Association, 2012). Additionally, formative evaluation and online gamified learning promote student interest in learning even in times of crisis (Zainuddin et al., 2021). Similar to this, Nieto-Escamez and Roldán-Tapia (2021) show that gamification was a creative, interesting, and effective method of conveying curriculum material. Interactive classroom games can check students' understanding. It is easier for learners to retain knowledge through gamification. Additionally, students found it to be an enjoyable exercise. In order to promote student happiness and perseverance, interactive learning is crucial in online learning (Croxton, 2014).

Many educators used online games to instruct and grade their students. Yldrm and Baran (2021) found that teaching physics through the use of digital and physical activity games boosted student achievement by 90%. Azizah et al. (2021) employed Teams-Games-Tournament utilizing monopoly media and found that it aids students in concentrating, thoroughly understanding the material, and developing logical and analytical thought processes. In addition, Zeng et al. (2020) demonstrated in their study how the educational video group fared the best, while the traditional group performed the worst. Additionally, Rehman et al. (2021) used an interactive computer simulation to test students' understanding of physics concepts; the results showed a substantial change between the students' pre- and post-test scores, with an effect size of 0.97.

Educators need to seek new methodology to motivate and engage students as part of regular instruction. This study comes into picture. Using Quizizz, a learning platform which offers multiple tools to make classroom fun, engaging, interactive and contains as its major gamification elements points and badges, this research attempts to determine whether there are differences in students' motivation and academic performance as compared with those not using the same element.

Statement of the Problem

This study aims to investigate the "Level of Motivation and Academic Performance in the Utilization of Quizizz in Biology of Selected Students in Las Piñas City."

Specifically it will seek to answer the following questions:

1.What is the level of motivation of the controlled and experimental groups of students in Biology?

2.What is the level of performance of the controlled group of students during the pretest and post-test?

3. What is the level of performance of the experimental groups of students before and after the utilization of Quizizz?

4.Is there a significant relationship between the level of performance before and after the utilization of Quizizz; and level of motivation in Biology of selected students in Las Pinas City?

5.Is there a significant difference between the level of academic performance before and after the utilization of Quizizz; and level of motivation in Biology?

6.What program should be proposed to enhance the academic performance of students based from the findings of the study?

METHODOLOGY

Research Design

The study aims to investigate the level of students' level of motivation and academic performance in the utilization of Quizizz. The methods that were used by the researcher in this study are quantitative research with experimental methods.

A quasi-experimental pretest-posttest approach was used. In the control group, pretest-posttest design was given before being exposed to an intervention, and then tested once more to determine whether there are any significant differences between the pre-test and post-tests. To ascertain Quizizz's impact on students' level of motivation and academic performance, the quasi-experimental method was employed.

In experimental group which was treated with Quizizz gamification teaching strategy, a quasi-experimental utilizing pre-test and post-test was employed for data gathering. At the end of the lesson, questionnaire on level of motivation was given.

Participants

The participants were 15 grade eight students for purposive sampling from a private school in Las Pinas. On the first teaching session, the traditional media was used to grade 8 students with topic, Endocrine System. Pre-Test and Post Test was administered. The questionnaire to evaluate the level of motivation was administered before and after the discussion.

After a week, the same group was taught and treated with the Quizizz platform during discussion. Pre-test and post-test were given. The questionnaire to evaluate the level of motivation was also administered before and after the discussion.

Research Instrument

Two instruments were used to collect the data as formative assessments. These are Pre-test which determine students' knowledge and proficiency in the subject matter and the Post-test which measure whether a student gained knowledge and improved in academic performance.

Questionnaires

The questionnaire was created by the researcher to gauge students' motivation in learning Biology before and after Quizizz's intervention. It was utilized to compare the student's motivation in learning biology. The results could be: 4 for strongly agree, 3 for agree, 2 for disagree, and 1 for strongly disagree.

The pre-test and post-test, which the researcher also created, were based on the topic of the Endocrine System.

The post-test of experimental group with Quizizz intervention and control group without Quizizz intervention was compared using statistical tool.

Questionnaires and Test Questions Validity

The questionnaires for motivation and interest in learning Biology particularly, Endocrine System, as well as the items used in the pre-test and post-test, were validated. Three Science professors who are teaching Science were consulted by the researcher. Each item was categorized as essential, useful, but

not essential, and non-essential. Based on the result of pre-test and post-test validation, all items are essential. The level of motivation questionnaire was validated by two college professors.

Procedure

The researcher conducted the studies in a private school in Las Piñas. The study was conducted at 10:00 am in same classroom for two sessions. The participants were 15 students. The controlled group was taught in traditional lecture method with the use of television for PowerPoint presentation. After 3 days, the experimental group which is the same participants were taught with Quizizz intervention gamification.

The researcher assessed the students' motivation in learning Biology with topic, Endocrine System by administering a questionnaire at the end of class for both controlled and experimental group. After pre-test, the researcher delivered the lesson using traditional method of teaching. After the lesson, post-test was administered.

The Instruction

After pre-test, the researcher delivered the lesson using PowerPoint. The researcher used Quizizz intervention after delivery of the lesson to assess students' comprehension during lecture. The paper mode Quizizz was used where the students raised their QR code for multiple choice gameshow in the classroom.

The researcher administered the questionnaire to the students after discussion to assess their motivation in learning Biology. The researcher also administered the subject's post-test. After collecting all data, the t-test for dependent variables was used to identify the differences in motivation and academic performance of the students in Biology before and after applying the gamification, Quizizz.

RESULTS AND DISCUSSION

This part of the study shows the presentation, analysis and interpretation of the data gathered from the respondents.

1. Level of Motivation of the Controlled and Experimental Groups of Students in Biology.

Table 1. Level of Motivation of the Controlled and Experimental Groups of Students in Biology

Items	Controlled Group			Experimental Group		
	WM	VI	R	WM	VI	R
Biology is a fascinating subject, particularly Endocrine System.	3.20	M	7.5	3.67	HM	6
My interest is piqued by my curiosity about Endocrine System.	3.20	M	7.5	3.80	HM	1
I want to learn about Endocrine System because it will help me understand living things better.	3.47	HM	1	3.73	HM	3
Learning about Endocrine System will broaden my biology knowledge.	3.40	HM	3.5	3.73	HM	3
I'm going to work harder to learn more about Endocrine System.	3.40	HM	3.5	3.40	HM	11.5
I intend to devote more time to studying Endocrine System.	3.07	M	11.5	3.07	M	15
I believe I can get a 90% or higher in Endocrine System.	2.93	M	14	3.27	HM	14
My current goal is to achieve a high score in Endocrine System.	3.40	HM	3.5	3.67	HM	6
Experiments and research involving Endocrine System excite me greatly.	3.07	M	11.5	3.53	HM	8.5
I'll be very proficient in learning about Endocrine System.	3.33	HM	6	3.53	HM	8.5
Studying Endocrine System is a very interesting topic. I intend to continue learning about endocrine system, even after I finished this grade level.	3.07	M	11.5	3.40	HM	11.5
I love to do more activities in Biology.	3.40	HM	3.5	3.73	HM	3
I am willing to make a report about Endocrine System and present it to the class.	2.73	M	15	3.33	HM	13
I am willing to answer activity worksheet about Endocrine System	3.07	M	11.5	3.47	HM	10
I am willing to do further research about Endocrine System.	3.13	M	9	3.67	HM	6
Composite Mean	**3.19**	**M**		**3.53**	**HM**	

Legend: HM = Highly Motivated, M = Motivated, WM = Weighted Mean, VI = Verbal Interpretation, R = Ranking

As discussed in Table 1, the student-respondents from the controlled group assessed that they were highly motivated because they want to learn about Endocrine System because it will help them understand living things better which got the highest weighted mean of 3.47 and the highest rank of 1. Self-determination theory provides the foundation of why students engage in this study. This theory explains how humans were motivated and driven by their desire to grow (Legault, 2017). It was observed that students' motivation is result of intrinsic motivation. Students who are intrinsically motivated are studying because they are fascinated by a topic.

On the other hand, the said group of respondents were motivated because they are willing to make a report about Endocrine System and present it to the class which made the least weighted mean of 2.73 and least rank of 15.

The composite mean of 3.19 signified that the student-respondents from the controlled group were motivated in studying Biology. Intrinsic motivation is an internal force that makes a person engaged in an activity for joy and satisfaction (Sun et al., 2017). The finding participants were intrinsically motivated to participate in an activity freely, without being compelled to do so by external or internal forces, and without expecting to be rewarded.

On the part of the respondents from the experimental group, they affirmed that they are highly motivated to study Biology because their interests are piqued by their curiosity about Endocrine System which got the highest weighted mean of 3.80 and the highest rank of 1. In the contexts of gamification, self-determination theory has already been successfully utilized. The findings show that the students think that what they do in learning Endocrine system will have an effect on the outcome.

On the contrary, the said group of respondents answered that they are motivated to intend to devote more time to studying Endocrine System which got the least weighted mean of 3.07 and least rank of 15. It is suggested by self-determination theory that students need for competence, connection, and autonomy must be fulfilled for them to become self-determined. The students need to feel in control of their own behavior and devoting more time to studying Endocrine System is not their interest.

The composite mean of 3.53 implied that the student-respondents from the experimental group replied that they were highly motivational in studying Biology. Social cognitive theory was one of the frameworks employed in this research, playing a crucial role in motivation and self-efficacy.

The impact in the environment such as gamified learning through Quizizz triggered students' motivation to become highly motivated in learning Biology. This teaching methodology arouses and drives students in studying Biology.

2. Level of Performance of the Controlled Group of Students During the Pretest and Post-test.

Table 2. Level of Performance of the Controlled Group of Students During the Pretest and Post-test.

Scores	Pretest			Posttest		
	F	P	R	F	P	R
21 - 27 (Very Satisfactory)	4	26.67	2	7	46.67	1.5
14 - 20 (Satisfactory)	9	60.00	1	7	46.67	1.5
7 - 13 (Fair)	2	13.33	3	1	6.67	3
Total	**15**	**100**		**15**	**100**	
Highest Score	**20 (Satisfactory)**			**25 (Very Satisfactory)**		
Lowest Score	**10 (Fair)**			**10 (Fair)**		
Mean Score	**14.33 (Satisfactory)**			**16.73 (Satisfactory)**		

Legend: F = Frequency P = Percentage R = Rank

As gleaned in Table 2, in terms of the pretest level of performance of the student-respondents from the controlled groups, out of 15, nine of them or 60% at rank 1 gained the satisfactory scores of 14 - 20 while two or 13.33% at rank 3 obtained fair scores of 7 - 13. Endocrine System and hormones were ones of five topics students had most difficulty with.

For the post test result, both the satisfactory and very satisfactory scores of 14 - 20 and 21 - 27, respectively made the highest equal frequency counts of seven or 46.67% at ranks 1.5 whereas the fair scores of 7 - 13 got the least frequency count of one or 6.67% at rank 3. This indicates that simply talking about the subject is not enough. Exciting software, like Quizizz must be added.

The highest scores were 20 (satisfactory) and 25 (very satisfactory); the lowest scores were both 10 (fair); and the average scores were 14.33 (satisfactory) and 16.73 (satisfactory) for pretest and post-test of the controlled group, respectively. Based on findings the average score of 14.33 shows poor performance and lack of mastery in the topic. It has been suggested that series of actions must be taken in order for learning to be a rich, meaningful, and long-lasting experience.

3. Level of Performance of the Experimental Group of Students Before and After the Utilization of Quizziz.

Table 3. Level of Performance of the Experimental Group of Students Before and After the Utilization of Quizziz.

Scores	Pretest			Posttest		
	F	P	R	F	P	R
21 - 27 (Very Satisfactory)	4	26.67	2.5	7	46.67	1.5
14 - 20 (Satisfactory)	7	46.67	1	7	46.67	1.5
7 - 13 (Fair)	4	26.67	2.5	1	6.67	3
Total	**15**	**100**		**15**	**100**	
Highest Score	**22 (Very Satisfactory)**			**24 (Very Satisfactory)**		
Lowest Score	**10 (Fair)**			**12 (Fair)**		
Mean Score	**17.33 (Satisfactory)**			**20.33 (Satisfactory)**		

Legend: F = Frequency P = Percentage R = Rank

As seen in Table 3, the satisfactory scores of 14 - 20 obtained the highest frequency count of seven or 46.67% at rank 1 for the experimental group whereas the fair and very satisfactory scores of 7 - 13 and 21 - 27 have equal frequency counts of four or 26.67% at ranks 2.5. Learning is a dynamic, complex process. We learn intentionally and haphazardly, while we study and have fun (Moran,2015). The pretest poor academic performance in the findings suggested that something must be done to improve the academic performance of the students.

With respect to the post test result of the same group of students, the satisfactory and very satisfactory scores of 14 - 20 and 21 - 27 got the highest and equal frequency counts of seven or 46.67% at ranks 1.5 while the fair scores of 7 - 13 made the least frequency count of one or 6.67% at rank 3.

4. Relationship Between the Level of Performance Before and After the Utilization of Quizizz; and Level of Motivation in Biology of Selected Students in Las Pinas City.

Table 4. Relationship Between the Level of Performance Before and After the Utilization of Quizizz; and Level of Motivation in Biology of Selected Students in Las Pinas City

Variables	Corr. Coeff.	p-value	Decision	Interpretation
Level of Motivational Assessment Versus Pretest				
Controlled Group	0.12	0.52763	p>0.05, Reject Ho	Not Significant
Experimental Group	0.32	0.08473	p>0.05, Reject Ho	Not Significant
Level of Motivational Assessment Versus Posttest				
Controlled Group	0.28	0.13397	p>0.05, Reject Ho	Not Significant
Experimental Group	0.42	0.02085	p<0.05, Reject Ho	Significant

As reflected in Table 4, when the responses of the students from the controlled and experimental groups on their level of motivation in Biology were compared to their performances, the computed r-values of 0.12 for the controlled group and 0.32 for the controlled experimental group have corresponding p-values of more than 0.05, thus failing to reject the null hypothesis. In addition, the computed r-value of 0.42 for posttest in the experimental group has a corresponding p-value of less than 0.05, thus rejecting the hypothesis. On the contrary, the computed r-value of 0.28 for posttest of the controlled group has a corresponding p-value of more than 0.05, thus failing also to reject the hypothesis.

However, the responses of the students from the control group on their level of motivation have no significant relationships to their level of performances during pretest and posttest; and also no significant relationship during pretest of the experimental group.

5. Difference Between the Level of Academic Performance Before and After the Utilization of Quizizz ; and Level of Motivation in Biology.

Table 5. Difference Between the Level of Academic Performance Before and After the Utilization of Quizizz ; and Level of Motivation in Biology

Variables	t-value	p-value	Decision	Interpretation
Problem Solving Skills:				
Pre Test versus Post Test - Controlled Group	1.80	0.08264	p>0.05, Failed to Reject Ho	Not Significant
Pre Test versus Post Test - Experimental Group	2.24	0.03321	p<0.05, Reject Ho	Significant
Pre Tests - Controlled Versus Experimental Groups	2.31	0.02848	p<0.05, Reject Ho	Significant
Post Tests - Controlled Versus Experimental Groups	2.60	0.01472	p<0.05, Reject Ho	Significant
Level of Motivation in Biology	4.24	0.00022	p<0.05, Reject Ho	Significant

As revealed in Table 5, when the responses of the students-respondents from the controlled and experimental groups regarding their level of motivation in studying Biology were compared, the computed t-value of 4.24 has a corresponding p-value of less than 0.01, thus rejecting the hypothesis.

This safely implied that high significant differences were found on the responses of the students-respondents from the controlled and experimental groups regarding their level of motivation in studying Biology.

When the level of performance during the pre-and post-tests of the experimental group were compared, the computed t-value of 2.24 has a corresponding p-value of less than 0.05, thus rejecting the hypothesis. The comparison of the students' level of performance revealed that Quizizz gamification positively improve students' level of academic performance.

In addition, when the level of performance during the pre-test and post-test of the controlled and experimental groups were compared, the computed t-values of 2.31 and 2.60, respectively have corresponding p-values of less than 0.05, thus rejecting also the hypothesis.

These safely concluded that the level of performance during the pretest and post-test of the controlled and experimental groups have significant differences. Likewise, the outcomes demonstrate how effective the application is at raising students' grades and their enjoyment in learning.

The level of performances of the students from the controlled group during pre-test and post-test were found to have no significant differences as evidenced by the obtained t-value of 1.80 with corresponding p-value of more than 0.05. It was observed that exhibited no significant difference requires intervention.

6. What program should be proposed to enhance the academic performance of students based from the findings of the study?

There are ways to improve academic performance. Many students struggle to learn. We need to take advantage on the use of technology. By doing this, we can make a difference in the lives of our learners. Technology can aid in teaching and enhancing students' academic performance. The use of it is vital in classroom. Find the best way to retain knowledge with the use of technology. Quizizz is just one of the gamifications that can help students in retaining and understanding the lessons. PowerPoint and other games like Kahoot can be used to review information. The use of websites like Easy Bib can help students to cite and avoid plagiarism. Making students engage is a key in lesson planning.

Technology is interactive making students engage. Technology helps students to learn in their own pace because not all students learn at the same speed. Students got low score can be given drill as homework using Quizizz application. Canva is one application which can help students collaborate. They can make posters and presentation together. Teachers should realize that technology plays an important role in classroom.

CONCLUSIONS

The evidence suggests that the utilization of Quizizz gamification in Biology in classroom could enhance students' level of motivation and academic performance. It was observed that higher statistical significance in level of motivation and post-test scores suggests that Quizizz is beneficial for the students with difficulty in learning many terminologies like in Endocrine system in Biology. Quizizz assess students' comprehension or give quick feedback on their progress. The students were extrinsically motivated when they saw their rank and points which made them engaged. Students' level of students' level motivation has significant relationship to their level of performance. When students are motivated, they learn.

RECOMMENDATIONS

The use of Quizizz can lead to improvement in learning Biology. The study recommends the use of Quizizz in the classroom as the evidence suggests the application of this gamification could result to increase the level of motivation and academic performance. However, more studies must be done to represent the total population in the Philippines. There might be unmeasured variable or potential confounders that were not accounted in this study.

The data gathered in this study provides basis for curriculum revision in pedagogies in teaching.

REFERENCES

Anak Yunus, C. C., & Hua, T.K. (2021) Exploring a Gamified Learning Tool in the ESL Classroom: The Case of Quizizz. Journal of Education and e-Learning Research, 8 (1), pp. 103 – 108.

Bal, Samet. (2018). Using Quizizz.Com To Enhance Preintermediate Students' Vocabulary Knowledge. International Journal of Language Academy, 6(3), 295-303.

Barros, DMV, Amaral, SF 2007. Estilos de aprendizagem para uso das tecnologias. Pátio. Revista Pedagógica, Porto Alegre, 4.

Barrot, J. S., Llenares, I. I., & Del Rosario, L. S. (2021). Students' online learning challenges during the pandemic and how they cope with them: The case of the Philippines. Education and Information Technologies, 26(6), 7321-7338. https://doi.org/gj8tdt

Bernardo, SF 2018. Avaliação Por Gamificação, Por que Não? In: Proceedingsof 16th Congresso Internacional de Tecnologia Na Educação, Recife, Senac, pp. 1-15.

Carvalho, AAA 2015. Apps para ensinar e para aprender na era mobile learning. Apps para Dispositivos Móveis. In: Manual para professores, Formadores e Bibliotecários. Ministério da Educação Direção-geral da Educação,Lisboa, pp. 9-17.

Croxton, R. A. (2014). The role of interactivity in student satisfaction and persistence in online learning. Journal of Online Learning and Teaching, 10(2), 314-325. https://bit.ly/3P7sLYu

Demo, P 2008. Habilidades do século XXI. Boletim Técnico do SENAC, 34(2): 4-15.

Durban, J. M., & Catalan, R. D. (2012). Issues and concerns of Philippine education through the years. Asian Journal of Social Sciences & Humanities, (2), Retrieved from http://www.ajssh.leena- luna.co.jp/AJSSHPDFs/Vol.1(2)/AJSSH2012(1.2-08).pdf

Gardner, H 1996. Inteligências Múltiplas: a teoria na prática. Artes Médicas,Porto Alegre.

Glynn, S. M., Brickman, P., Armstrong, N., & Taasoobshirazi, G. (2011). Science motivation questionnaire II: Validation with science majors and nonscience majors. Journal of Research in Science Teaching, 48(10), 1159-1176.

Gonzalez, AG. (2019). Real-Time Assessment Tool Implementation: Practical Experience With Kahoot !, Plickers And Quizizz. Master's Thesis, University of La Laguna, La Laguna.

Imam, B. R. (2009). Reading comprehension skills and learning achievements of high school students in the Division of Cotabato City. Unpublished Master's Thesis, Cotabato City State Polytechnic College, Cotabato City, Philippines.

Irwansyah, R., & Izzati, M. (2021). Implementing Quizizz as Game Based Learning and Assessment in the English Classroom. Tefla Journal, 3 (1), pp. 13 – 18.

João Batista Bottentuit JuniorASSESSMENT FOR LEARNING WITH MOBILE APPS: EXPLORING THE POTENTIAL OF QUIZIZZ IN THE EDUCATIONAL CONTEXT 31st January, 2020
Joaquin, J. J. B., Biana, H. T., & Dacela, M. A. (2020). The Philippine higher education sector in the time of COVID19. Frontier Education, 5, 1-6. https://doi.org/h693
Junior, João Batista Bottentuit. (2020). Assessment For Learning With Mobile Apps: Exploring The Potential Of Quizizz In The Educational Context. International Journal of Development Research, 10 (01), 33366-33371.
Lim, T.M.; Yunus, M.M. Teachers' Perception towards the Use of Quizizz in the Teaching and Learning of English: A Systematic Review. Sustainability 2021, 13, 6436. https://doi.org/10.3390/su13116436
Lim, Thomas Mason, and Melor Md Yunus. 2021. "Teachers' Perception towards the Use of Quizizz in the Teaching and Learning of English: A Systematic Review" Sustainability 13, no. 11: 6436. https://doi.org/10.3390/su13116436
Llerena-Izquierdo, J., & Atiaja-Balseca, L. (2020). Gamification within the learning evaluation process using ardora at the Salesian Polytechnic University (Guayaquil, Ecuador). In M. Botto-Tobar, S. Montes León, O. Camacho, D. Chávez, P. Torres-Carrión & M. Zambrano Vizuete (Eds.), Proceeding of the International Conference on Applied Technologies (pp. 139-150). Springer. https://doi.org/h694
Moran, J 2015. Educação Híbrida: um conceito-chave para a educação, hoje. In: Bacich, L,Tanzi Neto, A,Trevisani, FM (Org.). Ensino Híbrido:personalização e tecnologia na educação (2. ed.),Penso,Porto Alegre, pp. 27-45.
National Center for Education Statistics. (2004). Highlights from the trends in international mathematics and Science Study.
National Education Association 2012. Preparing 21st century students for a global society: an educator's guide to the "Four
Orhan Göksün, D., & Gürsoy, G. (2019). Comparing success and engagement in gamified learning experiences via Kahoot and Quizizz. Computers & Education, 135, 15-29.
Purba, Leony Sanga Lamsari. (2019). Increasing Student Learning Concentration through Utilization of Quizizz Learning Evaluation in Physics Chemistry Subject I. Educational Dynamics Journal, 12(1), 29-39.
Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. American Psychologist, 55(1), 68-78.
Safitri, D., & Putra, Z. F. F. (2019). Empowerment of Teacher Groups in Making Quizizz Learning Media. Proceedings of Devotion, 1(1), 1-6.
Sukmadinata, N. S. (2006). Metode penelitian pendidikan. PT. Remaja Rosdakarya.
Tubeza, P. (2009). We aren't better than we were 10 years
UNESCO, 2013. UNESCO Policy Guidelines for Mobile Learning. United Nations Educational, Scientific and Cultural Organization, Paris. Available at: http://unesdoc.unesco.org/images/0021/002196/219641e.p df, 05 jan. 2020.
Wieking, B. A. (2016). Technology integration and student learning motivation [Master's thesis, Northwestern College, Orange City, IA]. Northwestern College. https://bit.ly/3OSYEDP
Yunus, A., Callista, C., & Hua, T. K. (2021). Exploring a gamified learning tool in the ESL classroom: The case of quizizz. Journal of Education and e-Learning Research, 8(1), 103-108. https://doi.org/h66c
Zainuddin, Z., Farida, R., Keumala, C. M., Kurniawan, R., & Iskandar, H. (2021). Synchronous online flip learning with formative gamification quiz: Instruction during COVID-19. Interactive Technology and Smart Education, 19(2), 236- 259. https://doi.org/h7bg
Zhao, F. (2019). Using Quizizz to Integrate Fun Sugilar, H., Nuraida, I., Irwansyah, F. S., & Ramdhani, M. A. (2018, November).

THE IMPACT OF BLENDED LEARNING IN THE PHILIPPINES: AN EXTENSIVE ANALYSIS OF ACADEMIC WORK

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ABSTRACT

This article explored the impact of blended learning in the specific context of the Philippines. It aimed to comprehensively understand how blended learning is implemented and impacts student learning outcomes in the Philippine educational system. It employed a literature review by examining existing research and empirical evidence to enhance knowledge of blended learning's potential in addressing challenges in Philippine education. It highlighted the positive effects of blended learning on student engagement, motivation, and achievement and its ability to provide flexibility and personalized learning experiences. Challenges such as limited access to technology and internet connectivity were identified as barriers to successfully implementing blended learning in the Philippines. It aimed to fill the gap by examining the impact of blended learning in the Philippine context, contributing to the existing literature on learning outcomes, access to education, student autonomy, and collaboration. The findings are valuable to educational policymakers, administrators, and educators in designing effective strategies for implementing and maximizing the benefits of blended learning in the Philippines. Thus, there is a need for further research and investment in infrastructure and teacher training to fully harness the benefits of blended learning in the Philippine educational system.

Keywords: Blended learning, Student learning outcomes, Challenges, Educational system, literature review, Philippines

INTRODUCTION

Blended learning, a teaching method that combines face-to-face teaching with online teaching and activities, has received great attention for its ability to improve learning outcomes (Garrison & Vaughan, 2008). This literature review aims to explore the impact of blended learning in the specific context of the Philippines, highlighting its importance, benefits, challenges, and future implications. This study aims to understand better how blended learning is integrated into the Philippine education system and its impact on student learning. By reviewing the available research and evidence, this review aims to add to the knowledge on blended learning and gain insight into its potential to address Philippine education's unique challenges. The main aim is to contribute to the policymakers, educators, and stakeholders on the benefits and challenges of blended learning, ultimately guiding the development of effective strategies and implementation requirements in the Philippines.

Various studies have shown the positive effects of blended learning on student engagement, motivation, and achievement (Picciano 2009; Means et al. 2013). In addition, blended learning allows students to be flexible and have a self-learning experience (Graham, 2006). However, technology and internet connectivity are obstacles to successfully implementing blended learning in the Philippines (Bersamin et al., 2017). Despite these challenges, the potential of blended learning to transform education in the Philippines and improve educational outcomes should be considered. Therefore, more research and investment in infrastructure development and teacher training are needed to achieve the best results of blended learning in the Philippine education system.

The research gap in the given article is based on the need for further research on the characteristics of blended learning in the Philippine context. While the article acknowledges that blended learning is a cause for concern and discusses its potential benefits, it does not mention research or studies done in the

Philippines. Therefore, there is a research gap in the need for a comprehensive literature review that explores the impact of coeducation on educational outcomes in the Philippines, including impact effects, benefits, challenges, and future implications. Given the unique challenges and opportunities faced in the country, more research is needed to explore the unique impact of blended learning on the Philippine education system. This study aims to contribute to the existing literature on blended learning in the Philippines by providing a better understanding and understanding of its impact on all aspects of education. Focusing on learning outcomes, learning opportunities, student autonomy, and collaboration, this work sheds light on the unique challenges and opportunities of implementing blended learning in the Philippine context.

The findings of this study are very important for policymakers, administrators, and teachers because they will provide a better understanding of developing effective strategies for practice. The effectiveness of blended learning in Philippine education. One of the main goals of this study is to unravel the mystery of the long-term effects of blended learning on student retention and graduation. Exploring the ongoing impact of blended learning on student achievement, this study aims to provide evidence-based recommendations to help schools in the Philippines increase student achievement and improve the overall quality of education. Also, this study aims to explore the potential of blended learning in bridging the digital divide and increasing access to education for powerless Filipinos.

This research contributes to developing educational practices that ensure equity for all students by examining the challenges and opportunities associated with technology, technology, and internet connection use. This study aimed to explore the role of blended learning in promoting student independence and collaboration. By examining how blended learning environments facilitate individualized learning and collaborative problem-solving, this research offers insights into teaching practices and strategies to engage and involve students more fully in the learning process. Thus, this study expanded knowledge on blended learning in the Philippines. Education comprehensively analyzes its impact on access to education, student autonomy, and collaboration. The findings of this study will provide Filipino education stakeholders with valuable resources to guide the development and implementation of effective blended learning strategies that enhance learning and positive outcomes for all students.

METHODOLOGY

The paper employed a literature review by examining existing research and empirical evidence to enhance knowledge of blended learning's potential in addressing challenges in Philippine education. Various academic databases, scientific journals, and other online resources are used to gather valuable information and opinions. These resources have been selected for their credibility and reputation in academic and blended learning. Key search terms such as' blended learning',' Philippines',' technical education' and 'e-learning' were used to feature relevant studies. These topics have been carefully selected to identify and retain certain elements that discuss the impact of blended learning in the Philippine context. This review focuses on general research and insights along with the research topic. Only peer-reviewed and reputable sites were considered for review. Candidate evaluations are meticulously evaluated by experts in the field in order to ensure the validity and reliability of the research findings. Based on these resources, this review aims to provide an accurate analysis and evidence of the impact of blended learning in the Philippines. Overall, the research methodology has adopted a good and careful way to gather important and reliable information from reliable sources where the research findings presented in this literature review are complete and valid.

RESULTS AND DISCUSSIONS

Blended learning has emerged as a successful learning method in the Philippines and offers many benefits thanks to extensive research. First, research shows that blended learning improves learning outcomes by integrating multiple media, interactive and online resources into classroom instruction. This combination ultimately improves learning by encouraging student engagement, knowledge retention, and critical thinking skills. Inclusive education also bridges the digital divide and facilitates access to

quality education, especially in remote or marginalized areas. Students can overcome geographic limitations and use connected devices and platforms to access educational materials and interactive learning.

Blended learning provides students with independence and collaboration through self-learning and virtual projects. Students can manage their own progress and change their own learning; collaborative and interactive activities encourage collaboration and communication. But the widespread use of blended learning faces challenges such as low internet connectivity, digital literacy and limited access. Efforts should be made to remove these barriers and ensure equal access to education for all Filipino students.

1. Enhancing Learning Outcomes

Many studies have shown that blended learning has a positive impact on education in the Philippines. Integrating multimedia, interactive and online resources complements traditional classroom teaching and promotes better student engagement, retention, and a feel-good experience (Garcia et al, 2019; Tan et al, 2020). Blended learning improves learning outcomes by providing teaching materials and activities to students. Garcia et al. (2019) conducted a study investigating the impact of blended learning on student achievement in the Philippines. The findings showed that students who participated in blended learning performed better academically compared to students who only received face-to-face instruction. Integrating various activities such as videos and interactive experiments allows students to visualize complex concepts and participate in learning experiences. Tan et al, (2020) conducted a meta-analysis of coeducational studies in the Philippines. The review covers all education levels from primary to higher education. The results show that blended learning has a positive effect on learning outcomes by subject and age. The use of online resources and interactive sessions, as well as face-to-face teaching, helps students understand content and develop critical thinking skills. Combining traditional classroom teaching with online resources and activities in blended learning provides students with self-learning and self-learning opportunities (Garcia et al., 2019). This change strengthens their understanding of the content by allowing students to review and review information on their own. Thus, integrating multimedia, interactive and online resources into blended learning improves learning outcomes in the Philippines. Combining traditional face-to-face education with technology-based learning promotes student engagement, retention and positive thinking. These findings highlight the potential of blended learning as an approach to education in the Philippines.

2. Promoting Access to Education

Blended learning is effective in bridging the digital divide and providing quality education to remote areas or regions of the Philippines. This approach uses internet-connected devices and online platforms to enable students to access educational content even in areas with limited resources (Balansay et al., 2018; Balansay et al., 2021). Salazar et al. (2018) investigated the impact of blended learning on access to education in the Philippines. The findings show that blended learning effectively overcomes the challenges of limited resources and infrastructure, allowing rural students to access educational materials and engage in conversations with one another. Access to quality education has a positive impact on student engagement and academic achievement. Balansay et al. (2021) examines the implementation of integrated education in marginalized communities in the Philippines. Research shows that blended learning can provide opportunities for students in underserved areas to access education and participate in interactive learning experiences.

The authors emphasize that blended learning plays an important role in promoting equality in education by reducing the impact of students on geographic or geographic boundaries. Blended learning through the use of technology and online platforms has the potential to overcome geographical limitations and provide equal learning opportunities to Filipino students. It allows students in rural or remote areas to access quality educational content, interact with their teachers and peers, and engage in meaningful learning.

3. Fostering Student Autonomy and Collaboration

Blended learning encourages self-learning as students manage their own progress and explore content through online modules. It also promotes collaborative learning and enhances collaboration and communication through virtual teams, interactive sessions, and real-time discussions (Dela Cruz et al, 2017; Santos et al, 2020). Blended learning allows students to take control of their learning and enhance self-learning. By participating in the online model, students can access the curriculum at their own pace

and revisit the content as needed (Dela Cruz et al., 2017). This change allows students to tailor their own learning to their needs and interests and encourages self-learning (Santos et al., 2020). Blended learning offers an effective way of learning and provides students with many opportunities to collaborate effectively. An important benefit is the ability to participate in virtual projects that allow students to share their work and develop a sense of work (Dela Cruz et al., 2017). This collaborative environment helps students develop critical skills needed in real workplaces. In addition, blended learning uses interactive forums as a platform where students can exchange ideas, share ideas and learn from each other (Santos et al., 2020). These forums encourage students to engage in meaningful discussions and develop their thinking and analytical skills. By participating in these exchanges, students broaden their understanding of various disciplines and gain new knowledge from their peers.

Also, real-time communication via videoconferencing or discussion is important for blended learning (Dela Cruz et al., 2017). This allows students to interact with their peers in a positive environment, develop their communication skills and encourage their participation in the learning process.Face-to-face interaction with students will enhance their learning by allowing students to ask questions, seek explanations, and collaborate effectively. As a result, blended learning creates an environment that fosters collaboration among students and fosters important skills such as collaboration, communication and critical thinking. By integrating virtual group projects, meetings and real-time chat features, students can participate in the learning process, exchange ideas and learn from each other, ultimately improving their learning outcomes.

Research supports the positive effects of blended learning on student autonomy and collaboration. Dela Cruz et al.(2017) conducted a study in the context of Philippine higher education. They found that blended learning allowed students to take control of their own learning and develop self-regulation. Santos and others. (2020) investigated the effect of blended learning in secondary school and found that there is cooperation and communication among students. Thus, blended learning supports student autonomy by allowing students to manage their own progress and explore content independently, and encourages collaboration through virtual teams, forums and real-time discussions.These features of blended learning help improve collaboration, communication, and independent learning. Dela Cruz et al. (2017) and Santos et al. (2020) provides evidence for the positive impact of blended learning on promoting student autonomy and collaboration.

4. Overcoming Challenges and Concerns

Although blended learning has many benefits, applying this approach in the Philippines presents unique challenges. Low internet connectivity, lack of digital literacy among students and teachers, and poor infrastructure create major challenges for adoption (Alipio et al, 2019; Alipio et al, 2021). Limited internet connectivity is a major challenge in the Philippines, particularly in rural areas where access to reliable internet services is limited (Dizon et al., 2017)., 2019). This hinders students' ability to participate in online learning and access adequate education. In addition, the lack of digital information among students and teachers makes the use of blended learning difficult (Alipio et al., 2021).

Many students and teachers may be more interested in using digital tools and platforms for learning, which may affect their ability to search and use online resources.In addition, infrastructure limitations such as insufficient technology and limited access to equipment are additional barriers to the widespread use of blended learning in the Philippines (Dizon et al., 2019). Students and teachers use computers, tablets or smartphones, which can limit their participation in online learning. Addressing these issues is important to ensure equitable access to inclusive education across the country. Efforts should be made to improve internet connectivity in rural areas and to provide the necessary equipment and materials to schools and students (Dizon et al., 2017)., 2019). In addition, a digital literacy program is needed to increase the ability of students and teachers to use digital learning tools (Alipio et al., 2021).

The Educational Empowerment Model

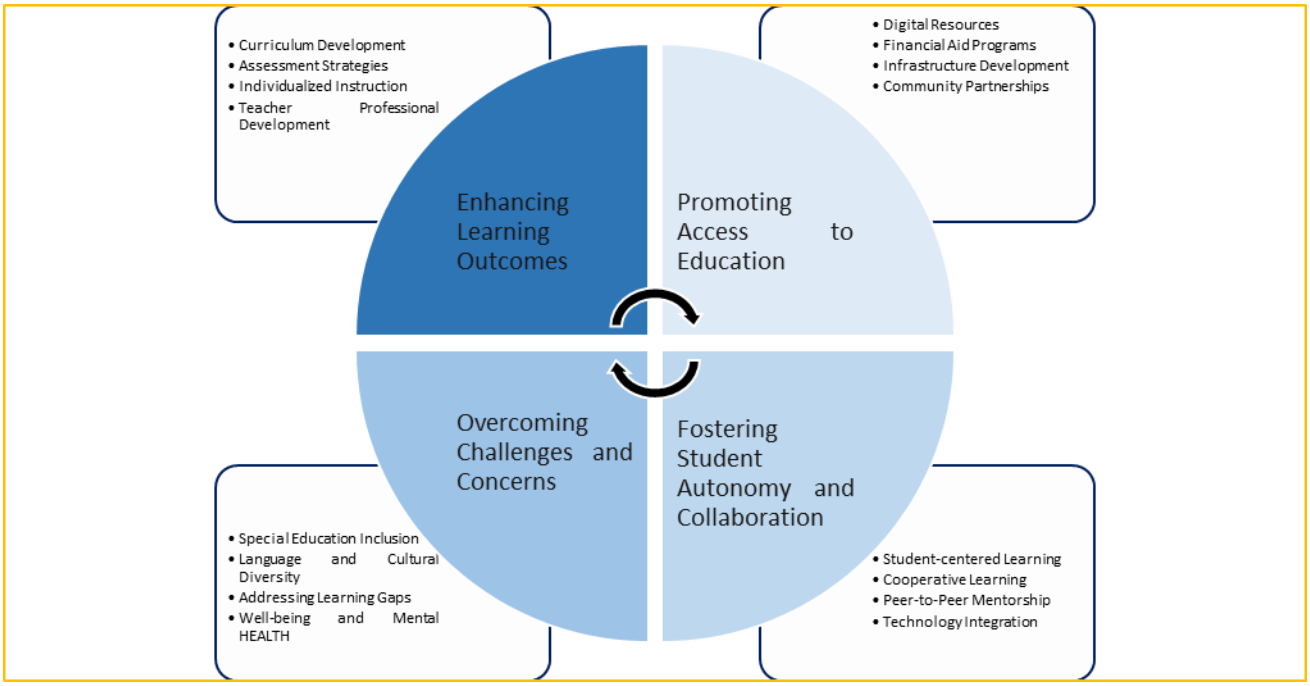

Figure 1. Educational Empowerment Model

The diagram shows the educational empowerment model. It addresses four main points based on a literature review of the impact of blended learning in the Philippines. In this conceptual model, each element is represented by an objective whole and related concepts or objects. The key point is to improve learning outcomes through various strategies. It includes curriculum development, aligning the curriculum with learning objectives, and promoting active learning. In addition, performance evaluations are important in terms of measuring learning outcomes. Individualized instruction plays an important role in meeting students' diverse needs and learning styles. Teachers need continuing education and support to improve teaching practices and learning outcomes.

Another important issue in the literature review is educational support. Digital resources and online platforms can expand education, especially in remote areas. Financial aid such as grants or loans is important to ensure that education is affordable for all students. In addition, it is important to create appropriate facilities and infrastructure to accommodate many students. Working with local communities can create educational opportunities in underserved areas. Promoting student independence and cooperation is another important issue. By encouraging self-learning, students are given the power to take responsibility for their own learning. A collaborative learning environment that encourages collaboration and problem-solving is also important. A peer education program can provide students with additional support and guidance. Technology integration is another factor that supports student independence and encourages collaboration.

Finally, the literature review acknowledges the challenges and concerns associated with blended learning. Students with special needs should be prioritized to ensure equal access to education and appropriate services. The implementation of cultural practices is important in terms of educating students from different languages and cultures. An intervention plan should be prepared for students in difficult situations to eliminate inequality in education. It is also important to ensure the well-being of students by providing counseling and creating a good atmosphere at school. In conclusion, the literature review demonstrates the importance of improving educational outcomes, promoting access to education, promoting student independence and collaboration, and tapping the challenges and concerns in blended learning in the Philippines. These topics provide insight into educational development and policy, ultimately improving students' overall learning experience.

CONCLUSION AND RECOMMENDATIONS

In the Philippines, blended learning is widely accepted as a promising approach to improve educational outcomes and increase access to education. Extensive research highlights the importance, advantages, implications and future implications of blended learning in this unique context. It is clear that blended learning can increase student engagement, motivation and success while providing flexible and personalized learning. But successful implementation of blended learning must overcome certain challenges. Limited use of technology and internet connectivity is a major problem in parts of the Philippines. To tackle this challenge, policy makers, institutions and stakeholders need to prioritize infrastructure development. It includes improving internet access in remote areas and ensuring schools have the technology resources they need to support blended learning. By investing in infrastructure, schools can bridge the digital divide and provide equal opportunities for all students to enjoy the benefits of blended learning.

Another important factor to consider is teacher training. Teachers need to have the necessary skills and knowledge to apply blended learning strategies. A professional development program can improve teachers' understanding of blended learning, digital tools, and instructional design. By investing in teacher training, schools can ensure that teachers are prepared to deliver consistent learning. It is also important to develop digital knowledge among students. Students may be given opportunities to develop digital skills, information literacy and critical thinking skills. The digital literacy program allows students to effectively search for online resources, evaluate the reliability of information, and participate in online collaboration. Finally, blended learning has the potential to improve educational outcomes in the Philippines. To fully reap the benefits, policymakers, schools and stakeholders must invest in infrastructure, teacher training and digital literacy programmes. By applying these recommendations, the Philippine education system can realize the potential of blended learning and pave the way for increasingly effective learning.

REFERENCES

Alipio, M. M., et al. (2021). Challenges and strategies in implementing blended learning in higher education institutions in the Philippines. *Journal of Educational Technology Systems, 49(1), 3-23.*

Alipio, M. M., et al. (2021). Digital Literacy of Filipino Teachers: A Mixed-Methods Study. *Journal of Information Technology Education: Research, 20, 1-24.*

Balansay, M. B., et al. (2021). Blended learning in the Philippines: A case study on the impact of blended learning on student performance. *International Journal of Educational Technology in Higher Education, 18(1), 1-19.*

Bersamin, M. M., Williamson, V. M., & Williamson, P. (2017). Blended learning in the Philippines: A case study examining the impact of blended learning on student outcomes in a Philippine university. *Journal of Educational Technology Systems, 45(3), 409-428.*

Dela Cruz, P., Alzaté, C., & Guha, D. (2017). The role of blended learning and technology in promoting students' classroom engagement. *Computers & Education, 114, 222-230.*

Dela Cruz, R. M., Bautista, A. M., & Liwanag, M. L. (2017). Blended learning in higher education: A case study of student experiences and preferences. *Journal of Educational Technology Systems, 45 (4), 551-570.*

Dela Cruz, J. M., et al. (2017). Blended learning in the Philippines: A case study on student perceptions and outcomes. *Journal of Interactive Learning Research, 28(4), 413-432.*

Dizon, J. M., et al. (2019). Blended Learning in Philippine Higher Education: Insights from Students and Faculty. *International Journal of Instruction, 12(1), 139-156.*

Dizon, J. M., et al. (2019). Challenges and opportunities in implementing blended learning in a Philippine university. *Journal of Educational Technology Development and Exchange, 12(1), 1-14.*

Garcia, R. R., et al. (2019). The impact of blended learning on student achievement in the Philippines. *Asia Pacific Journal of Education, 39(4), 487-502*.

Garcia, R. R., Abella, R. M., & Bautista, R. R. (2019). Blended learning and its impact on student performance in a Philippine university. *Journal of Educational Technology Systems, 47(2), 243-259.*

Garrison, D. R., & Vaughan, N. D. (2008). Blended learning in higher education: Framework, princi-

ples, and guidelines. John Wiley & Sons.
Graham, C. R. (2006). Blended learning systems: Definition, current trends, and future directions. In C. J. Bonk & C. R. Graham (Eds.), *Handbook of blended learning: Global perspectives, local designs (pp. 3-21). Pfeiffer Publishing.*
IGI Global (2015) Curriculum design and classroom management : concepts, methodologies, tools, and applications / Information ResourcesManagement Association, editor.volumes ; cmISBN 978-1-4666-8246-7 (hardcover) -- ISBN 978-1-4666-8247-4 (ebook) .
Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2013). Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies. *US Department of Education.*
Picciano, A. G. (2009). Blending with purpose: The multimodal model. *Journal of Asynchronous Learning Networks, 13(1), 7-18.*
Poirier, M., Law, J. M., & Veispak, A. (2019). A Spotlight on Lack of Evidence Supporting the Integration of Blended Learning in K-12 Education: A Systematic Review. *International Journal of Mobile and Blended Learning (IJMBL), 11*(4), 1-14. http://doi.org/10.4018/IJMBL.2019100101
Roberts-Graham, Faith LaJoy, "Veteran K–5 Teachers' Perceptions of Implementing Blended Learning as an Innovation for English Language Art Instruction" (2023). *Walden Dissertations and Doctoral Studies*. 13717. https://scholarworks.waldenu.edu/dissertations/13717
Salazar, J. M., et al. (2018). Blended learning in the Philippines: A case study on access and equity. *Journal of Open, Flexible, and Distance Learning, 22(1), 1-15.*
Sun MG, Park SJ, Kim YJ, Moon KS, Kim IY, Jung S, Oh HJ, Oh IJ, Jung TY 2023). Intracranial Efficacy of Systemic Therapy in Patients with Asymptomatic Brain Metastases from Lung Cancer. J Clin Med. 2023 Jun 27;12(13):4307. doi: 10.3390/jcm12134307. PMID: 37445347; PMCID: PMC10342302.
Salazar, M. R., et al. (2018). Blended learning in rural areas of the Philippines: An evaluation of its impact on students' performance and engagement. *International Journal of Educational Technology in Higher Education, 15(1), 1-17.*
Santos, A. M., Gomes, A. S., & Fernandes, A. P. (2020). Blended learning in secondary education: A systematic review. *Education Sciences, 10(2), 45.*
Santos, J. L., Judson, E., & López-Meneses, E. (2020). Collaborative discussion forums and student interaction in an online learning environment. *Journal of Interactive Learning Research, 31(2), 309-331.*
Santos, R. M., et al. (2020). Blended learning and student engagement in the Philippines: A mixed-methods study. *Journal of Interactive Online Learning, 18(2), 157-174.*
Tan, M. C., et al. (2020). The effects of blended learning on student performance in the Philippines. *Journal of Educational Technology and Society, 23(3), 1-14.*
Tan, R. R., Abella, R. M., & Garcia, R. R. (2020). The impact of blended learning on student learning outcomes: A meta-analysis of studies in the Philippines. *Journal of Blended Learning, 12(1), 45-62.*

LEADERSHIP STRATEGIES OF SCHOOL PRINCIPALS IN MONITORING TEACHING PEDAGOGIES IN THE NEW NORMAL AND ITS INFLUENCE ON THE SENIOR HIGH SCHOOL TEACHING PERFORMANCE

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ABSTRACT

This study aimed to determine how school principals' leadership strategies in monitoring teaching pedagogies in the new normal influence the senior high school teaching performance in the three campuses of CSTC College of Sciences, Technology and Communications, Inc. To serve the purpose of the study, the descriptive correlational research method was used. It is a type of research design that studies the relationship between two variables with the help of statistical analysis. An explanatory sequential mixed-method was used. This method was appropriate for this research since it aimed to determine the relationship of the leadership strategies of school principals in monitoring teaching pedagogies in the new normal and its influence on Senior High School teaching performance. It targeted the total population of senior high school teachers to participate in the study. The researcher used a questionnaire and institutional classroom observation tool to collect the needed data. Based on the given result, a proposed faculty development plan was developed to enhance senior high school teachers' teaching pedagogies and ensure effective teaching performance in the new normal using different modalities. Lastly, based on the study's findings, the researcher recommends that the school principals pursue these strategies in carrying out their leadership responsibilities for the operational effectiveness of the school. Teachers under this study should also be more prepared to facilitate the delivery of instruction during unprecedented time. In addition, they should consider the proposed developmental plan in implementing the needed teaching modalities in the new normal education.

Keywords: Leadership Strategies, Teaching Pedagogies, Teaching Performance

INTRODUCTION

The education system is one of the agencies profoundly affected by coronavirus. This Covid-19 changed the educational landscape dramatically all over the world. In the history of the field of education, it is one of the most difficult and overwhelming times for educators (Altemose and Lampron, 2021). Teachers and schools are constantly being compelled to adjust due to the pandemic's ever-changing conditions in order to safely educate learners. Many schools found it challenging to respond swiftly and effectively as the COVID-19 pandemic spread quickly around the world. It has provided a chance to reconsider common beliefs about education. This situation has unpredictably produced opportunities and problems for schools' delivery of teaching and learning to students outside the conventional four walls of the classroom. There is a growing understanding that, despite divergent and contentious views for the future of basic education, nothing could be worst than a return to normality.

The sudden shift in the mode of delivering quality education serves as a great challenge on the basic institutions in the Philippines as well. In response to this, the basic education levels strategize different forms of teaching pedagogy, start the school year with the 'new normal' teaching and learning. Schools operate in accordance with the laws set by DepEd following the learning continuity plan (LCP) which is designed to carry out the conduct of classes amidst pandemic (Briones, 2020). In addition, DepEd Order No. 34 s. 2022 indicates the School Calendar and Activities for the School Year 2022-2023 in accord-

ance with its commitment to the resumption of 5 days-in person classes despite the health crisis brought on by the Covid-19 pandemic. DepEd intends schools to be given ample time to slowly transition it by implementing any of the following options: a. 5 days of in-person classes; b. blended learning modality; and c. full distance learning.

It is also important to take note that the duties and expectations for performance of teachers are also modified by changes in the way that education is delivered in the new normal setting. Teachers provide learning opportunities in a variety of methods. Some of them employ synchronous instruction which involves sharing information in real time with pupils while incorporating audio, video, and visual aids. This approach can be done virtually or on a face to face set-up. A different strategy is asynchronous instruction, in which the presentation of the material and the students' responses occur at different times. This method allows teachers to prerecord video classes that students may watch at their own pace while also utilizing communication options like threaded comments and email. In order to successfully shift from traditional classroom settings to online learning environments, and new normal set up of teaching and learning, teachers require help and feedback. Teachers will require additional assistance on how to modify these practices in a modified and differentiated learning environment in light of the shifting context of instruction in the new normal (Giffin, 2020).

Teachers now more than ever require high-quality, job-integrated professional learning to create teaching strategies for the new normal setup and plans for helping students who may experience learning loss and social emotional difficulties. By encouraging cooperation, fostering evidence-based feedback, and fostering a shared understanding of good teaching, a well-designed and effectively implemented teacher assessment system can encourage professional learning. In this regard, the leadership strategies of principals matters. They play a central role and responsibility to monitor, foster, and improve the learning process. In addition, they make an effort in fostering teacher to improve the quality of learning by going through planning steps, actual teaching performances, and making decisions rationally to enhance student learning outcomes (Ismaya, 2021). They play an important role in monitoring education and make various efforts to improve the quality of education by evaluation of programs oriented towards the school's mission-vision (Fitrah, 2017).

Like teachers and students most school administrators haven't handled a crisis of this size and scope for so long, and they've received little to no training in this situation. They are facing new pressures since the pandemic has caused many gaps and inequities in the education sector (UNESCO, 2020). Not only do students and instructors need to gain new skills in order to adapt to this change, but school principals in particular. The sudden shift to remote learning made school principals managed in helping their staff and students with the emergency response in times of crises (Henebery, 2020). Leaders in the classroom and at the school are bravely taking the reins and developing creative, dynamic programs to guarantee that learners have profoundly meaningful learning experiences. Principals are required to prepare strategic steps that will be applied in managing the school (Rosyadi & Pardjono, 2015).

Despite unexpected changes in the modes and methods of teaching and learning, including student evaluations and assessments, schools continue to make sure that learning objectives and outcomes are fulfilled, if not exceeded. Developing new and efficient pedagogies is essential to this endeavor, putting aside concerns with access to technology and quick infrastructure changes and modifications. The big picture now shows a willingness to try new things and take advantage of new learning possibilities that wasn't as obvious in the past. The pandemic's overall crisis forced educators across all grade levels and situations to reevaluate their duties, methods for assisting students with their academic work, and the idea of students as self-organizing learners, engaged citizens, and independent social beings.

Likewise, since one of the concerns of this study is the leadership strategies of school principal in the new normal, careful monitoring to come-up with intervention plan is done by the principal in coordination with teachers and stakeholders are to be implemented as per DepEd guidelines. All these require proper communication, participation, facilitation, negotiation, manipulation and coercion.

The leadership strategies model by Kotter and Schlesinger (2008) provides enlightenment to the researcher that there is a need to assess the different leadership strategies rendered by the school principal to monitor the teaching performance of the Senior High School teachers. The teachers' assessment of leadership strategies is a manifestation of a relationship between them. Insights from this research will contribute to better understanding of the importance of leadership strategies in monitoring teaching pedagogies in the new normal. Furthermore, it will also help the researcher to craft an intervention plan to improve teaching performance appropriate for the Senior High School teachers in the new normal.

Statement of the Problem

The study aimed to examine how the leadership strategies of school principal in monitoring teaching pedagogies in the new normal can influence Senior High School teaching performance.

Specifically, it sought to answer the following questions:

1. What are the leadership strategies of school principals to monitor the teaching pedagogies in the new normal as rated by the teacher respondents in terms of:
   1.1 communication,
   1.2 participation,
   1.3 facilitation,
   1.4 negotiation,
   1.5 manipulation, and
   1.6 coercion?
2. How do principals monitor the Senior High School teaching performance in the following areas:
   2.1 synchronous,
   2.2 asynchronous,
   2.3 face-to-face, and
   2.4 assessment?
3. What is the performance of the Senior High School Teachers in the New Normal in terms of:
   3.1 synchronous,
   3.2 asynchronous,
   3.3 face-to-face, and
   3.4 assessment?
4. Is there a significant relationship between the leadership strategies of school principals in monitoring the teaching pedagogies in the new normal to Senior High School teaching performance?
5. Based from results of the study, what plan can be proposed to enhance the teaching performance of Senior High School teachers?

METHODOLOGY

This section contains the method of research, population, sample size, and sampling technique, description of the respondents, research instrument, data-gathering procedure, and the statistical treatment of the data.

Research Design

This study utilized the descriptive correlational research method. It is a type of research design that studies the relationship between two variables with the help of statistical analysis. The study is descriptive in nature because certain variables were described such as leadership strategies of school principals to monitor the teaching pedagogies in the new normal and the Senior High School teaching performance in the following areas: synchronous, asynchronous, face-to-face and assessment . In addition to this method was appropriate to be considered as correlational for this research aimed to determine the relationship of the leadership strategies of school principals in monitoring teaching pedagogies in the new normal and the Senior High School teaching performance.

Participants of the Study and Sampling Technique

The study used the total population sampling. Total population sampling is a sort of sample selection in which the researcher decided to look at the entire population (i.e., the total population) that has a specific set of characteristics. In this study there are certain characteristics of the population chosen that helped to define the focus of the study.

The total population of Senior High School teachers from the three campuses of CSTC College of Sciences, Technology and Communications, Inc. comprised of forty-nine (49) teachers in Sariaya, Quezon, sixteen (16) teachers in Atimonan, Quezon and twenty (20) teachers in Lucena City. Considering that these schools are under one operational mechanism and standards thus has the particular set of characteristics that might be significant piece of the puzzle that the researcher is trying to understand may be missing.

Research Instrument

The study utilized survey questionnaires and institutional classroom observation tool to gather the data needed in the study. The first part of the survey determined the level of observation on the leadership strategies of school principals in monitoring teaching pedagogies in the new normal. The second part determined the level of observation on the principals' monitoring of the Senior High teaching performance used in the different modalities. The survey questionnaires were answered personally with the respondents' written consent that was approved by the ethics committee and validated by experts. On the other hand, institutional classroom observation tool was utilized by the school principal to evaluate the teaching performance of Senior High School teachers. Proper treatment of documents was considered appropriately. The researcher assured the confidentiality of the answer of the respondents.

The research instrument employed in this study underwent a meticulous validation process to ensure its reliability and efficacy. Consisting of three distinct parts, the instrument's development strategy was both comprehensive and well-considered. The initial two parts, were self-made by the researcher with a foundation firmly anchored in existing literatures. These self-made sections, were thoughtfully designed to address the nuances of the research problem and were composed of statements that reflected the key dimensions of interest. Their formulation was informed by a systematic review of relevant literature, ensuring their alignment with the study's objectives.

In order to establish the validity and comprehensiveness of the instrument, a panel of experts was convened for the validation process. This esteemed panel included a school administrator, an education program supervisor, and the vice president for academic affairs. These experts, drawn from diverse roles within the educational landscape, provided a multifaceted perspective on the instrument's content and structure. Part 3 of the research instrument, however, took a slightly different approach. This section was adapted from an existing teacher performance evaluation tool that was already in use within the school. By incorporating this established tool, the research aimed to leverage the expertise and experience encapsulated in its design. In summation, the research instrument's journey from inception to validation reflects a fusion of meticulous craftsmanship and collaborative expertise. The resulting instrument emerges as a well-rounded, validated tool poised to yield insightful and credible findings in the study of teacher performance.

Procedures

An instrument is valid only if it serves a purpose of which it is designed for. In order to ensure that the unstructured questionnaire provided the necessary data and information, the researcher coordinated with other principals to validate the questionnaire. Furthermore, the results of the survey were validated and checked by a statistician whether the computations and the formula used were correct.

Data Analysis

The statistical instruments used in this study were as follows:

Weighted Mean. This was utilized to compute or identify the average of the respondents in the leadership strategies of school principals in monitoring teaching pedagogies, and the performance of the Senior High School teachers in the new normal.

Pearson Correlation Coefficient Formula. This was used in determining if there is any significant relationship between leadership strategies of school principals in monitoring teaching pedagogies in the new normal and the teaching performance of Senior High School teachers.

RESULTS AND DISCUSSIONS

This part of the study gives the presentation and analysis of the gathered data from the questionnaires answered by the respondents in accordance with the specific objectives of the study.

1. Leadership Strategies of School Principals to Monitor the New Normal

Tables 1 - 6 present the leadership strategies of School Principals to monitor the new normal.

1. 1 In Terms of Communication

Table 1. Leadership Strategies of School Principals to Monitor the New Normal in Terms of Communication

Indicators	Weighted Mean	Int.	Rank
The Principal…			
1. notifies us about the goals and objectives of the school.	3.74	Always	2
2. provides formal communication channels to let us know clearly what is going on in the school.	3.69	Always	4
3. holds meetings to discuss equipment design for effective instruction.	3.78	Always	1
4. maintains an open door policy in running the school.	3.72	Always	3
5. allows us to give our own suggestions on matters concerning us.	3.64	Always	5
Composite Mean	**3.71**	**Always**	

As shown in the table, the respondents revealed that the principal always holds meetings to discuss equipment design for effective instruction which got the highest weighted mean of 3.78 and the highest rank of 1.

The composite mean of 3.71 implied that the school principals always used communication as leadership strategy to monitor the new normal of education.

1.2. In Terms of Participation

Table 2. Leadership Strategies of School Principals to Monitor the New Normal in Terms of Participation

Indicators	Weighted Mean	Int.	Rank
The Principal…			
1. monitors and ensures preparation and administration of summative assessments and performance task.	3.78	Always	1
2. provides us proper guidance and technical assistance.	3.59	Always	5
3. manages school operations in accordance to school's goals.	3.74	Always	3
4. makes sure that our professional development activities aligned with school goals and curricular objectives	3.75	Always	2
5. supports us to make autonomous decision.	3.65	Always	4
Composite Mean	**3.70**	**Always**	

As stated in Table 2, the respondents affirmed that the principal always monitors and ensures preparation and administration of summative assessments and performance task which made the highest weighted mean of and the highest rank of 1.

1.3. In Terms of Facilitation

Table 3. Leadership Strategies of School Principals to Monitor the New Normal in Terms of Facilitation

Indicators	Weighted Mean	Int.	Rank
The Principal…			
1. checks class program vis-à-vis New Normal Learning schedule	3.74	Always	3
2. ensures presence of MELCs per teacher.	3.71	Always	5
3. checks teacher-made summative and performance task	3.75	Always	1.5
4. monitors intervention provided by the teachers for our learners.	3.75	Always	1.5
5. utilizes available facilities/materials and human resources.	3.73	Always	4
Composite Mean	**3.74**	**Always**	

As seen in Table 3, the respondents acknowledged that the principal always checks teacher-made summative and performance task, and always monitors intervention provided by the teachers for our learners which garnered the highest equal weighted means of 3.75 and the highest equal ranks of 1.5.

Moreover, the said group of respondents answered that the principal always ensures presence of MELCs per teacher with the least weighted mean of 3.71 and the least rank of 5.

The composite mean of 3.74 signified that the school principals always used facilitation as leadership strategy to monitor the new normal of education. Building the capacity of individuals and groups to do more on their own, both now and in the future, is the main goal of facilitative leaders. Facilitative leadership goes beyond the current task. It also entails assisting a team or group in learning collectively so they can go on to produce more in the future.

The school administrator has a ninety-six (96) percent direct and indirect impact on the quality and support of vocational programs and the quality of teaching, hence the role of school administrators in leading and Teacher professional development management is increasingly expanding, and many experts have emphasized the supportive role of the school principal in the improvement, development, and growth of schools as vocational learning communities, both implicitly and in some cases explicitly. In order to decide on the best course of action and then create a template for carrying it out, effective facilitation uses tools and processes to maximize the collective intelligence of group members. Although it has often been thought of as the role of those who lead workshops, planning sessions, or other group activities, facilitation actually involves a wide range of consulting and coaching abilities that are too important to be left to a select few.

1.4. In Terms of Negotiation

As gleaned in the table, the respondents agreed that the principal always considers all aspects of the situation to address the challenges before giving a decision which gained the highest weighted mean of 3.78 and the highest rank of 1. The importance of principal involvement in any school change process is abundantly documented.

Table 4. Leadership Strategies of School Principals to Monitor the New Normal in Terms of Negotiation

Indicators	Weighted Mean	Int.	Rank
The Principal…			
1. solves problems with teachers when there are challenges to teaching-learning in a particular classroom.	3.76	Always	2
2. works with us to address weaknesses and pedagogical problems.	3.66	Always	5
3. provides a win-win solution in a situation	3.73	Always	4
4. considers all aspects of the situation to address the challenges before giving a decision.	3.78	Always	1
5. uses bargaining agreement /exchange of possible of solution	3.74	Always	3
Composite Mean	**3.73**	**Always**	

Conflicts do occur occasionally in all organizations. Organizational operations might suffer from intractable conflict, which also makes communication nearly difficult. Without a positive work environment, organizations will fall apart and fail to meet their objectives. Effective leaders, on the other hand, will be able to avoid conflicts while upholding the mission of their organizations if they possess the appropriate skills

On the contrary, the said group of respondents affirmed that the principal always works with us to address weaknesses and pedagogical problems with the least weighted mean of 3.66 and the least rank of 5.

Principals must slowly cultivate these relationships while taking the time to get to know each teacher's strength and weaknesses. In addition, he mentioned that all principals should continuously offer their teachers advice, direction, or assistance. This is especially true for beginning teachers, but it is true for teachers throughout all levels of experience. The principal is the instructional leader, and providing advice, direction, or assistance is the primary job of a leader. This can be done through a variety of ways. Sometimes a principal can simply provide a teacher with verbal advice. Other times they may want to show the teacher by having them observe another teacher whose strengths are in an area where that teacher needs assistance. Providing the teacher with books and resources are another way to provide advice, direction, or assistance.

The composite mean of 3.73 concluded that the school principals always used negotiation as leadership strategy to monitor the new normal of education.

1.5. In Terms of Manipulation

Table 5. Leadership Strategies of School Principals to Monitor the New Normal in Terms of Manipulation

Indicators	Weighted Mean	Int.	Rank
The Principal…			
1. conducts alternative classroom observation	3.71	Always	2.5
2. utilizes available facilities/materials and human resources	3.68	Always	5
3. requires presence of MELCs per teacher	3.74	Always	1
4. monitors the delivery of instruction to improve teaching and learning performances.	3.71	Always	2.5
5. directs us on what to do during the teaching-learning practices.	3.69	Always	4
Composite Mean	**3.71**	**Always**	

As reflected in Table 5, the respondents replied that the principal always requires presence of MELCs per teacher which yielded the highest weighted mean of 3.74 and the highest rank of 1. This result can be supported by the fact that MELCs served as the guide guides for teachers as they address the instructional needs of learners while ensuring that curriculum standards are maintained and achieved and is mandated by the Department of Education to be used.

Contrary wise, the said group of respondents affirmed that the principal always utilizes available facilities/materials and human resources with the least weighted mean of 3.68 and the least rank of 5. Schools won't unquestionably go back to the way they were in the education sector. It must accept the new standard of living. Curriculum, operations, maintenance, and even building design all change. Class size drastically decreased to facilitate safe separation in an efficient manner. Blended learning, a newer strategy in education that mixes in-person instruction with remote learning, will be presented. These aforementioned scenarios actually support this result principals have the tendency to look for new facilities/materials that would support the current condition. Design parameters of academic facilities will take on new considerations. While academic spaces may have historically been designated for particular uses, options now exist to employ flexible planning techniques.

The composite mean of 3.71 implied that the school principals always used manipulation as leadership strategy to monitor the new normal of education. Getting workers to accomplish duties to the best of their abilities is, of course, an important aspect of good management. To achieve their goals, manipulative leaders rely on control. In order to increase productivity on teams, they identify the buttons that an employee has a tendency to push. This condition is observed by the respondents in the study gentle manipulation is being exercised by the principals that involves encouragement, positive reinforcement, and inspiration. In other words, positive emotional stimuli.

1.6. In Terms of Coercion

Table 6. Leadership Strategies of School Principals to Monitor the New Normal in Terms of Coercion

Indicators	Weighted Mean	Int.	Rank
The Principal…			
1. establishes clear and effective rules on DepEd approved instructional approaches.	3.79	Always	1
2. ensures observance of health protocols.	3.73	Always	3
3. remains consistent in rule management and follows through with the rules established.	3.71	Always	4
4. ensures disciplinary actions remain the same for all.	3.68	Always	5
5. recognizes one's success through recognition and encourages to perform better.	3.75	Always	2
Composite Mean	**3.73**	**Always**	

As revealed in the table, the respondents answered that the principal always establishes clear and effective rules on DepEd approved instructional approaches which made the highest weighted mean of 3.79 and the highest rank of 1. This result can be explained by the fact that all schools throughout the country follows the DepEd mandate through their memoranda and orders that stipulates rules, regulations and policies. As school principals it is their responsibility to ensure that all teaching and non-teaching staffs strictly follow directions, rules and policies within the workplace to meet objectives faster, safer and more efficiently

The composite mean of 3.73 judged that the school principals always used coercion as leadership strategy to monitor the new normal of education. In the new normal setting wherein seems to be something new , school leaders or principals instruct teachers on what to do and how to do it, all while expecting strict compliance. This coercive manner is not a personal choice of the principals but rather mandated by the governing body such as the Department of education and the IATF for continuity of education while making sure of the safety of the different stakeholders. New insights and perspectives, as well as best practices and emerging behaviors, dictate the strategies to be employed thus coercive leadership is observed.

Table 7. Summary Table on Leadership Strategies of School Principals to Monitor the New Normal

Variables	Composite Mean	Interpretation	Rank
1. Communication	3.71	Always	4.5
2. Participation	3.70	Always	6
3. Facilitation	3.74	Always	1
4. Negotiation	3.73	Always	2.5
5. Manipulation	3.71	Always	4.5
6. Coercion	3.73	Always	2.5
Grand Mean	**3.72**	**Always**	

As seen on the table, the leadership strategies of the school principals in monitoring the new normal yielded a grand mean of 3.72. It signified the school principals always play their role in the educational system as leaders and facilitators of learning, hence leading to quality of teaching by the senior high school teachers.

Meanwhile, facilitation ranked 1 among the leadership strategies of principals. It implies that the school principals effectively lead, support and assist in carrying out the goals of the institution in the implementation of new normal education.

According to the role management theory, one of the most important roles of managers is the "facilitating role". The term facilitation is a term that became common in the second half of the twentieth century in the fields of business, education, development and social work. In fact, the growth of facilitation owes much to the notion that one can help people communicate better and have a better understanding of the world through the use of a set of group methods and skills.

2. Monitoring of Senior High School Teachers Teaching Performance by the Principal.

Tables 8 - 11 discuss the monitoring of Senior High School Teachers teaching performance by the principal.

2.1. In Terms of Synchronous

Table 8. Monitoring of Senior High School Teachers' Teaching

Indicators	Weighted Mean	Int.	Rank
During synchronous sessions with my students, my principal checks ..			
1.on my personality in terms of grooming, mannerisms, dynamism and enthusiasm during online class	3.72	Always	12
2. my voice if it is clear and understandable.	3.73	Always	11
3. my lesson / learning plan if it is well written and with KSA objectives aligned with MELCS.	3.80	Always	3

4. my learning plan if it contains relevant and appropriate activities.	3.78	Always	6.5
5. if I exhibit mastery of the subject matter during my delivery.	3.80	Always	3
6. if I relate the lessons to an actual life situation.	3.76	Always	8.5
7. if I provide sufficient examples and concrete explanations.	3.80	Always	3
8. if I employ suitable methodologies to the needs and capabilities of students under online classes.	3.78	Always	6.5
9. if I employ suitable methodologies to the needs and capabilities of students under online classes.	3.79	Always	5
10. if I utilize e-instructional materials to illustrate the lesson.	3.74	Always	10
11.on my virtual classroom management.	3.89	Always	1
12.if I am skilled in various electronic media (Zoom, Google Meet, Google Classroom, etc.) as my teaching platform.	3.76	Always	8.5
Composite Mean	**3.78**	**Always**	

As discussed in the table, the respondents answered that during synchronous sessions with their students, their principal always check on their virtual classroom management which got the highest weighted mean of 3.89 and the highest rank of 1.

The composite mean of 3.78 signified that the principals always monitor the synchronous teaching performance of the Senior High School teachers. The results revealed that the school principals carried out monitoring supervision of teaching performance using information technology which has been directed to digital-based learning.

2.2. In Terms of Asynchronous

Table 9. Monitoring of Senior High School Teachers' Teaching Performance by the Principal in Terms of Asynchronous

Indicators	Weighted Mean	Int.	Rank
During asynchronous sessions with my students, my principal checks ..			
1. if I prepare my self-learning modules that are informative and engaging.	3.79	Always	2.5
2. if my self-learning modules are properly formatted, brief, and grammatically correct	3.78	Always	5.5
3. if my SLM probes the learner's understanding	3.79	Always	2.5
4. if my prepared SLM provides sufficient examples and concrete explanations to create meaningful lifelong experiences.	3.79	Always	2.5
5. if I use tools to provide interaction to my students during asynchronous sessions	3.75	Always	10
6. if I provide video discussion to my students that will help them understand the lesson.	3.76	Always	8
7. if I provide my students references they can use in answering their activities during asynchronous set-up.	3.76	Always	8
8. if I give corrective feedback or pointers to improve my students performance.	3.74	Always	11
9. if I am approachable.	3.76	Always	8
10. if I am considerate regarding the completion of the activities.	3.78	Always	5.5
11.if I monitor students' progress and performance.	3.79	Always	2.5
Composite Mean	**3.77**	**Always**	

As written in the table, the respondents replied that during asynchronous sessions with their students, their principal always checks if they prepare their self-learning modules that are informative and engaging, if their SLM probes the learner's understanding, if their prepared SLM provides sufficient examples and concrete explanations to create meaningful lifelong experiences, and if they monitor students' progress and performance which got the highest equal weighted means of 3.79 and the highest equal ranks of 2.5.

In this regard, principals really takes time to monitor this modality. It takes leadership to integrate asynchronous learning into the heart of instruction, and that leadership starts with the principal selecting the monitoring approaches that are best suitable for the students who are distant to the school.

2.3. In Terms of Face to Face

As gleaned in the table, the respondents agreed that during face to face sessions with their students, their principal principals always checks if they establish safe and secure learning environments to enhance learning through consistent implementation of policies, guidelines and procedures; if they maintain learning environment that promote fairness, respect and care to encourage learning; if they maintain supportive learning environment that nurture and inspire learners to participate, cooperate and collaborate in continued learning; and if they apply range of successful strategies that maintain learning environments that motivate their learners to work productively by assuming responsibility for their own learning which made the highest equal weighted means of 3.76 and the highest equal ranks of 2.5.

Table 10. Monitoring of Senior High School Teachers' Teaching Performance by the Principal in Terms of Face to Face

Indicators	Weighted Mean	Int.	Rank
During face to face classes with my students, my principal checks …			
1. if I apply knowledge of content within and across curriculum teaching area.	3.74	Always	7
2. if I use research-based knowledge and principles of teaching and learning to enhance professional practice.	3.66	Always	10
3. if I display proficient use of proper communication skills to facilitate teaching and learning.	3.74	Always	7
4. if I use effective verbal and non-verbal classroom communication strategies to support learner understanding, participation, engagement and achievement.	3.74	Always	7
5. if I establish safe and secure learning environments to enhance learning through consistent implementation of policies, guidelines and procedures.	3.76	Always	2.5
6. if I maintain learning environment that promote fairness, respect and care to encourage learning.	3.76	Always	2.5
7. if I maintain supportive learning environment that nurture and inspire learners to participate, cooperate and collaborate in continued learning.	3.76	Always	2.5
8. if I apply a range of successful strategies that maintain learning environments that motivate my learners to work productively by assuming responsibility for their own learning.	3.76	Always	2.5
9. if I design, adapt and implement teaching strategies that are responsive to learners with disabilities, giftedness and talents.	3.75	Always	5
10. if I adapt and use culturally appropriate teaching strategies to address the needs of learners from indigenous groups.	3.69	Always	9
Composite Mean	**3.74**	**Always**	

The sense of community and face-to-face social connection will remain significant components of student life even though physical distance and digital involvement will have such a significant impact on student dynamics on campus. The focus of student contact will still be in the areas designated for socializing. Cleanliness and sanitation will be a priority in all academic institution. The new challenge for school principals will be to accept the huge paradigm shift in institutions of higher learning. Existing projects will be enhanced or completely abandoned, and new initiatives that are discovered along the road will be modified.

The composite mean of 3.74 signified that the principals always monitor the face to face teaching performance of the Senior High School teachers.

2.4. In Terms of Assessment

As disclosed in the table, the respondents affirmed that during assessment with their students, their principal principals always checks if they utilize assessment data to inform the modification of teaching and learning practices and programs which made the highest weighted mean of 3.77 and the highest rank of 1.

Table 11. Monitoring of Senior High School Teachers' Teaching Performance by the Principal in Terms of Assessment

Indicators	Weighted Mean	Int.	Rank
During assessment of my students, my principal checks …			
1. if I probe for learner's understanding.	3.74	Always	7
2. if it helps students articulate their ideas and thinking process.	3.74	Always	7
3. if it promotes risk-taking and problem-solving skills among them.	3.71	Always	11
4. if it facilitates factual learning.	3.71	Always	11
5. if it encourages divergent and convergent thinking.	3.74	Always	7
6. if I utilize assessment data to inform the modification of teaching and learning practices and programs.	3.77	Always	1
7. if I provide space-assessed tasks to enable students to allocate sufficient time to study over a suitable time period and avoid "cramming."	3.74	Always	7
8. if I design the assessment that my students tackle the task appropriately, i.e., they engage in the process of learning rather than simply producing a final product.	3.71	Always	11
9. if I give students the opportunity to practice the skills they need for each assessment.	3.74	Always	7
10. if I use feedback to enhance learning.	3.75	Always	4
11. if I provide timely feedback, or feedback that is given while it matters to the student and can be used to improve future performance.	3.76	Always	2.5
12. if I align feedback with the learning goals of the assignment and assessment criteria.	3.76	Always	2.5
Composite Mean	**3.74**	**Always**	

The said group of respondents replied that during assessment with their students, their principal always checks if it promotes risk-taking and problem-solving skills among them; if it facilitates factual learning; and if they design the assessment that my students tackle the task appropriately, i.e., they engage in the process of learning rather than simply producing a final product which got the least equal weighted means of 3.71 and least ranks of 11.

The composite mean of 3.74 signified that the principals always monitor the teaching performance of the Senior High School teachers during assessment.

Table 12. Summary Table on Monitoring Senior High School Teachers' Teaching Performance

Variables	Composite Mean	Interpretation	Rank
1. Synchronous	3.78	Always	1
2. Asynchronous	3.77	Always	2
3. Face-to-Face	3.74	Always	3.5
4. Assessment	3.74	Always	3.5
Grand Mean	**3.72**	**Always**	

The table shows monitoring senior high school teachers' teaching performance got the grand mean of 3.72. Among the modalities used in the new normal, synchronous was ranked 1 and got the highest mean 3.78.

Since the teaching and learning process were conducted online, monitoring of teachers was also done online (Fendi, H., 2021). During the Covid-19 pandemic, the school principal as the supervisor has shifted the form of conventional supervision into IT-based supervision so that the quality of education and teaching could be maintained and even improved.

On the other hand, face-to-face and assessment received a composite of 3.74 respectively.

3. Performance of Senior High School Teachers in the New Normal.

The performance of Senior High School Teachers in the New Normal are seen in Tables 13 - 24.

3.1. In Terms of Synchronous

3.1.1 Teacher Personality

As reflected in Table 13.1, the respondents affirmed that during the online teaching, the teacher looks neat, well-groomed and professional which got the highest mean of 4.61 (outstanding) and the highest rank of 1. Actions do speak louder than words, and the correct demeanor can further deepen and increase the effect of communication.

Table 13.1. Performance of Senior High School Teachers in the New Normal in Terms of Teacher Personality

Indicators	Weighted Mean	Int.	Rank
During the online teaching, the teacher…			
1. looks neat, well-groomed and professional.	4.61	Outstanding	1
2. frees from mannerisms that tend to disturb the student's attention	4.39	Outstanding	2
3. exhibits personality strong enough to command, gain respect and attention to the students.	4.38	Outstanding	3.5
4. shows dynamism and enthusiasm.	4.36	Outstanding	5
5. speaks with a clear and understandable voice.	4.38	Outstanding	3.5
Composite Mean	**4.42**	**Outstanding**	

The said group of respondents agreed that during the online teaching, the teacher is outstanding in showing dynamism and enthusiasm which obtained the least weighted mean of 4.36 and the least rank of.

In addition, he also revealed that there is a wide range of studies showing that the more enthusiastic and dynamic teachers were, the more engaged students were, behaviorally, cognitively and emotionally. This finding makes sense because student engagement is malleable and responsive to teachers' emotions and teaching styles, and positive emotions are likely to produce positive social behaviours.

The composite mean of 4.42 concluded that the teachers are outstanding in their performance in the new normal in terms of personality traits.

3.1.2 In Terms of Content Knowledge

Table 13.2. Performance of Senior High School Teachers in the New Normal in Terms of Content Knowledge

Indicators	Weighted Mean	Int.	Rank
During the online teaching, the teacher…			
1. exhibits mastery of the subject matter.	4.44	Outstanding	2
2. relates lessons to an actual life situation.	4.38	Outstanding	3
3. shows new ideas and understanding in the field he/she is teaching.	4.61	Outstanding	1
4. provides sufficient examples and concrete explanations to create meaningful lifelong experiences.	4.31	Outstanding	4
Composite Mean	**4.44**	**Outstanding**	

As revealed in the table, the respondents affirmed that during the online teaching, the teacher shows outstanding new ideas and understanding in the field he/she is teaching which made the highest mean of 4.61 and the highest rank of 1. The result revealed that Senior High School teachers effectively shared their subject-related knowledge practices with the support technology in teaching and learning

Meanwhile, the said group of respondents agreed that during the online teaching, the teacher outstandingly provides sufficient examples and concrete explanations to create meaningful lifelong experiences which got the least weighted mean of 4.31 and the least rank of 4.

The composite mean of 4.44 inferred that the teachers are outstanding in their performance in the new normal in terms of content knowledge. As a result of constant training and workshops and with the proper use of the learning continuity plan which requires the use of MELCs it is no doubt that teachers will have an outstanding knowledge in terms of content. All throughout the pandemic and even in the

preparation for the new normal the initiative of the Department of education and the other related agencies equipped the teachers with all the necessary trainings to enhance their capacities in this aspect.

3.1.3 Pedagogical Competence

Table 13.3. Performance of Senior High School Teachers in the New Normal In Terms of Pedagogical Competence

Indicators	Weighted Mean	Int.	Rank
During the online teaching, the teacher…			
1. employs methodologies suitable to the needs and capabilities of the students under virtual platform	4.33	Outstanding	2.5
2. shows creativity to match his/her methodologies to the students' diverse needs and capabilities confined in platform	4.36	Outstanding	1
3. utilizes various e-instructional materials to illustrate the lesson.	4.33	Outstanding	2.5
4. effectively uses activity/test results during online teaching.	4.31	Outstanding	4
5. speaks with a clear and understandable voice.	4.38	Outstanding	3.5
Composite Mean	**4.33**	**Outstanding**	

As stated in Table 13.3, the respondents answered that during the online teaching, the teacher shows outstanding creativity to match their methodologies to the students' diverse needs and capabilities confined in platform which garnered the highest mean of 4.36 and the highest rank of 1.

The composite mean of 4.33 signified that the teachers are outstanding in their performance in the new normal in terms of pedagogical competence.

3.1.4 Virtual Classroom Management

Table 13.4 Performance of Senior High School Teachers in the New Normal In Terms of Virtual Classroom Management

Indicators	Weighted Mean	Int.	Rank
During the online teaching, the teacher…			
1. has a systematic way of checking attendance before the class starts and ends, reminding students the do's and don'ts of the virtual classroom, monitoring students' online learning engagement, checking individual/group work, and distributing and collecting individual activity and group work	4.43	Outstanding	1
2. maintains order and discipline inside the virtual classroom.	4.34	Outstanding	2
3. utilizes e-instructional materials properly without experiencing any delay and other technical difficulties during the delivery of his/her lesson	4.21	Outstanding	3
Composite Mean	**4.33**	**Outstanding**	

As given in the table, the respondents agreed that during the online teaching, the teacher has a systematic and outstanding way of checking attendance before the class starts and ends, reminding students the do's and don'ts of the virtual classroom, monitoring students' online learning engagement, checking individual/group work, and distributing and collecting individual activity and group work which got the highest mean of 4.43 and the highest rank of 1.

Meanwhile, the said group of respondents also agreed that during the online teaching, the teacher outstandingly utilizes e-instructional materials properly without experiencing any delay and other technical difficulties during the delivery of his/her lesson which got the least weighted mean of 4.33 and the least rank of 3.

The composite mean of 4.33 implied that the teachers are outstanding in their performance in the new normal in terms of virtual classroom management.

3.1.5 Questioning Skills

Table 13.5. Performance of Senior High School Teachers in the New Normal in Terms of Questioning Skills

Indicators	Weighted Mean	Int.	Rank
During the online teaching, the teacher can stimulate virtual discussion in different ways such as…			
1. probing for learner's understanding	4.25	Outstanding	1.5
2. helping students articulate their ideas and thinking process	4.21	Outstanding	3
3. promoting risk-taking and problem-solving	4.14	Very Satisfactory	6.5
4. facilitating factual recall	4.25	Outstanding	1.5
5. encouraging convergent and divergent thinking	4.18	Very Satisfactory	5
6. stimulating curiosity	4.19	Very Satisfactory	4
7. helping students to ask questions	4.14	Very Satisfactory	6.5
Composite Mean	**4.19**	**Very Satisfactory**	

As written in Table 13.5, the respondents affirmed that during the online teaching, the teacher can outstandingly stimulate virtual discussion in different ways such as probing for learner's understanding; and facilitating factual recall which yielded the highest equal means of 4.25 and the highest ranks of 1.5. The composite mean of 4.19 generalized that the teachers are very satisfactory in their performance in the new normal in terms of questioning skills.

3.1.6 Technological Competence

Table 13.6. Performance of Senior High School Teachers in the New Normal in Terms of Technological Competence

Indicators	Weighted Mean	Int.	Rank
During online teaching, the teacher…			
1. prepares presentation (thru PowerPoint, Canva, etc.) that is appropriate for the given activities, informative and engaging, adequate for the students to react in a scholarly manner, brief, grammatically correct, and written in correct spelling, properly formatted (employs the law of art like balance, harmony, rhythm, and colors are blended harmoniously), and rule of the "6" complaint	4.29	Outstanding	3.5
2. uses e-instructional materials properly and effectively.	4.34	Outstanding	2
3. uses e-instructional materials independently.	4.41	Outstanding	1
4. uses e-instructional materials without technical difficulties.	4.29	Outstanding	3.5
Composite Mean	**4.33**	**Outstanding**	

As seen in the table, the respondents affirmed that during the online teaching, the teacher outstandingly uses e-instructional materials independently which got the highest mean of 4.41 and the highest rank of 1.

3.2. In Terms of Asynchronous

3.2.1 Teacher-Learner Support

Table 14.1. Performance of Senior High School Teachers in the New Normal in Terms of Teacher-Learner Support

Indicators	Weighted Mean	Int.	Rank
During the asynchronous teaching, the teacher…			
1. provides reinforcements to teaching such as video tutorials and additional guides.	4.26	Outstanding	7
2. gives corrective feedback or pointers to improve when minor standards or competencies are not met by the students.	4.22	Outstanding	10

3. conducts a meeting and provides a reviewer before the examination.	4.26	Outstanding	7
4. is approachable and interactive.	4.31	Outstanding	2
5. is enthusiastic in addressing queries for clarification.	4.29	Outstanding	3.5
6. motivates the students to aim for improved learning.	4.26	Outstanding	7
7. monitors students' progress and performance.	4.28	Outstanding	5
8. has mastery of the module's content.	4.32	Outstanding	1
9. is considerate regarding the completion of the activities.	4.29	Outstanding	3.5
10.checks my output objectively, analytically, and/or according to well-defined standards/rubrics.	4.25	Outstanding	9
Composite Mean	**4.27**	**Outstanding**	

As gleaned in the table, the respondents declared that during the asynchronous teaching, the teacher has outstanding mastery of the module's content which got the highest weighted mean of 4.32 and the highest rank of 1. On the other hand, the said group of respondents also acknowledged that during the asynchronous teaching, the teacher outstandingly gives corrective feedback or pointers to improve when minor standards or competencies are not met by the students which made the least weighted mean of 4.22 and least rank of 10. The composite mean of 4.27 generalized that the Senior High School Teachers were outstanding in their performance during asynchronous sessions in terms of teacher-learner support.

3.2.2 Module Preparation

Table 14.2. Performance of Senior High School Teachers in the New Normal in Terms of Module Preparation

Indicators	Weighted Mean	Int.	Rank
During the asynchronous teaching, the teacher prepares self-learning modules / home based activities…..		Outstanding	
1. that are informative and engaging.	4.28	Outstanding	1
2. that are properly formatted, brief and grammatically correct.	4.22	Outstanding	3
3. that probes the learner's understanding.	4.21	Outstanding	4.5
4. that provides sufficient examples and concrete explanations to create meaningful lifelong experiences.	4.19	Very Satisfactory	6
5. that are easy to understand, self-learning phase and can track student's progress.	4.18	Very Satisfactory	7.5
that has a clear and easy to understand instructions or directions for each activity.	4.21	Outstanding	4.5
7.that follows a sequential plan of all steps necessary to complete the task.	4.18	Very Satisfactory	7.5
8. that is constructively align with the intended Most Essential Learning Competencies	4.27	Outstanding	2
9. that has an enough minimum number of pages needed for the lesson	4.12	Very Satisfactory	10
10. that provide guides and references the students can use in answering the activities.	4.16	Very satisfactory	9
Composite Mean	**4.20**	**Outstanding**	

As presented in Table 14.2, the respondents stated that during the asynchronous teaching, the teacher outstandingly prepares self-learning modules / home based activities that are informative and engaging which got the highest weighted mean of 4.28 and the highest rank of 1.

On the other hand, the said group of respondents also acknowledged that the teacher during the asynchronous teaching very satisfactorily prepares self-learning modules / home based activities that has enough minimum number of pages needed for the lessonwhich made the least weighted mean of 4.12 and least rank of 10.

The composite mean of 4.20 concluded that the Senior High School Teachers were outstanding in their performance during asynchronous sessions in terms of module preparation.

3.3 In Terms of Face to Face

3.3.1 Knowledge of the Subject Matter

As seen in the table, the respondents revealed that during the face to face sessions, the teachers are outstanding in their subject matter/content which got the highest weighted mean of 4.30 and the highest rank of 1.

Table 15.1 Performance of Senior High School Teachers in the New Normal in Terms of Knowledge of the Subject Matter

Indicators	Weighted Mean	Int.	Rank
Subject Matter/ Content	**4.30**	**Outstanding**	**1**
Teaches concepts correctly	*4.38*	*Outstanding*	*1*
Connects present lesson with past and future topics	*4.28*	*Outstanding*	*2.5*
Relates topics to practical solutions	*4.27*	*Outstanding*	*4*
Has full grasp of the topic/ curriculum	*4.28*	*Outstanding*	*2.5*
Pedagogy/ Clarity of Explanation	**4.26**	**Outstanding**	**2**
Explains concepts effectively to address learning needs of students	*4.29*	*Outstanding*	*1*
Employs varied ways of presenting and organizing concepts understood by all students	*4.25*	*Outstanding*	*2.5*
Simplifies complex concepts/ operations to slow learners	*4.25*	*Outstanding*	*2.5*
Use and Implementation of Lesson Plan:	**4.25**	**Outstanding**	**3**
Writes and implements learning/module delivery plan	*4.35*	*Outstanding*	*1*
Teaches the prescribed curriculum	*4.29*	*Outstanding*	*2*
Observes objectives that are clear and specific	*4.27*	*Outstanding*	*3*
Attains the objectives for the day/ lesson	*4.16*	*Very Satisfactory*	*5*
Gives meaningful assignment/ activities	*4.18*	*Very Satisfactory*	*4*
Composite Mean	**4.27**	**Outstanding**	

In a face-to-face learning environment, a group of students receive in-person teaching on course material and other learning materials. This enables real-time communication between a learner and a teacher. It is the oldest style of educational instruction. A higher level of interaction amongst students is advantageous to learners. In face-to-face instruction, students are responsible for their development during the scheduled meeting time for the class. Face-to-face instruction ensures a better grasp and retention of the lesson material and provides an opportunity for students to form relationships with one another.

On the other hand, the said group of respondents also acknowledged that during the face to face teaching, the teacher was also outstanding in using and implementing the lesson plan which made the least weighted mean of 4.25 and least rank of 3. The composite mean of 4.27 generalized that the Senior High School Teachers were outstanding in their performance during face to face classes in terms of knowledge of the subject matter.

3.3.2 Facilitating Learning

As given in the table, the respondents replied that during the face to face sessions, the teacher was outstanding in communication skills which got the highest weighted mean of 4.26 and the highest rank of 1.

Table 15.2 Performance of Senior High School Teachers in the New Normal in Terms of Facilitating Learning

Indicators	Weighted Mean	Int.	Rank
1. Communication Skills	4.26	**Outstanding**	**1**
a. Uses appropriate medium of instruction	*4.31*	*Outstanding*	*1*
b. Uses persuasive and non-threatening techniques in proposing ideas	*4.22*	*Outstanding*	*3*
c. Has rapport with students	*4.24*	*Outstanding*	*2*
2. Teaching/ Classroom Strategies	4.18	**Outstanding**	**3.5**
a. Employs quality student experience (QSE) technique	*4.21*	*Outstanding*	*1*
b. Employs varied ways of presenting and organizing concepts understood by both bright and average students	*4.20*	*Outstanding*	*2*

c. Uses strategies that develop higher level of thinking and sustain students' enthusiasm	*4.15*	*Very Satisfactory*	*4*
d. Encourages students to participate in class discussion	*4.19*	*Very Satisfactory*	*3*
e. Elicits reactions from students	*4.14*	*Very Satisfactory*	*5*
3. Questioning Technique	4.13	**Outstanding**	**5**
a. Uses a variety of questioning techniques to include higher level of cognitive questions	*4.12*	*Very Satisfactory*	*3*
b. Asks questions that make the students think critically and creatively	*4.15*	*Very Satisfactory*	*1.5*
c. Uses questioning technique that stimulates students to investigate/ react further on the subject matter investigate/react further on the subject matter	*4.15*	*Very Satisfactory*	*1.5*
d. Rephrases/ follows up questions to draw responses from students	*4.09*	*Very Satisfactory*	*4*
4. Use of Instructional and Multimedia Materials	4.22	**Outstanding**	**2**
a. Uses appropriate instructional materials effectively	*4.25*	*Outstanding*	*1*
b. Uses a variety of teaching aids to help facilitate learning	*4.24*	*Outstanding*	*2*
c. Integrates the use of traditional methods and modern technology	*4.18*	*Very Satisfactory*	*3*
5. Conduct of Lesson Proper	4.18	**Outstanding**	**3.5**
a. Uses motivation technique to start a lesson and maintain interest in the lesson that get students excited about the lesson	*4.28*	*Outstanding*	*1*
b. Paces the lesson accordingly and employs effective and smooth transition in moving from one part of the lesson to another	*4.20*	*Outstanding*	*2*
c. Keeps the students busy to maximize class time and ends the class with proper closure and wrap-up	*4.18*	*Very Satisfactory*	*3*
d. Plans and implements lessons where values are integrated	*4.09*	*Very Satisfactory*	*5*
e. Uses varied methods of teaching and tries new ways of teaching	*4.14*	*Very Satisfactory*	*4*
Composite Mean	**4.19**	**Very Satisfactory**	

On the other hand, the said group of respondents also answered that during the face to face teaching, the teacher was very satisfactory in questioning technique which made the least weighted mean of 4.13 and least rank of 5. The composite mean of 4.19 concluded that the Senior High School Teachers were very satisfactory in their performance during face to face sessions in terms of facilitating learning.

3.3.3 Classroom Management

Table 15.3 Performance of Senior High School Teachers in the New Normal in Terms of Classroom Management

Indicators	Weighted Mean	Int.	Rank
During the face-to-face teaching, the teacher…			
1. implements disciplinary policies of the school in the classroom consistently.	4.28	Outstanding	3
2. sets/ implements targets, routines and procedures to ensure a conducive learning environment.	4.24	Outstanding	4
3. starts and ends class on time.	4.72	Outstanding	1
4. adopts creative practices/ structures that will help foster classroom discipline	4.71	Outstanding	2
Composite Mean	**4.49**	**Outstanding**	

As stated in Table 15.3, the respondents replied that during the face to face teaching, the teacher was outstanding in starting and ending the class on time which got the highest weighted mean of 4.72 and the highest rank of 1.

The composite mean of 4.49 concluded that the Senior High School Teachers were outstanding in their performance during face to face sessions in terms of classroom management.

3.3.3 Teacher's Personality

Table 15.4 Performance of Senior High School Teachers in the New Normal in Terms of Teacher's Personality

Indicators	Weighted Mean	Int.	Rank
During the face-to-face teaching, the teacher…			
1. use voice adapted to situation.	4.31	Outstanding	2
2. has enthusiasm and vitality.	4.29	Outstanding	3
3. has healthy sense of humor.	4.28	Outstanding	4
4. has poise and good grooming.	4.33	Outstanding	1
5. has wholesome attitude towards students.	4.26	Outstanding	5
Composite Mean	**4.29**	**Outstanding**	

As cited in the table, the respondents affirmed that during the face to face teaching, the teacher has outstanding poise and good grooming which got the highest weighted mean of 4.33 and the highest rank of 1. The composite mean of 4.29 concluded that the Senior High School Teachers were outstanding in their performance during face to face sessions in terms of teacher's personality.

3.4. In Terms of Assessment

Table 16. Performance of Senior High School Teachers in the New Normal in Terms of Assessment

Indicators	Weighted Mean	Int.	Rank
1. assesses tasks to enable students to allocate sufficient time to study over a suitable time period and avoid "cramming."	4.22	Outstanding	1
2. designs the assessment so that students tackle the task appropriately, i.e., they engage in the process of learning rather than simply producing a final product.	4.11	Very Satisfactory	8
3. gives students the opportunity to practice the skills they need for each assessment.	4.11	Very Satisfactory	8
4. provides sufficient and detailed feedback.	4.11	Very Satisfactory	8
5. focuses their feedback on student performance, learning, or actions the student can control.	4.20	Outstanding	3
6. provides timely feedback, or feedback that is given while it matters to the student and can be used to improve future performance.	4.18	Very Satisfactory	4
7. aligns feedback with the learning goals of the assignment and the assessment criteria.	4.16	Very Satisfactory	5.5
8. provides feedback that is appropriate to the student's breadth and depth of background, experience, and level of independence.	4.21	Outstanding	2
9. gives feedbacks that are read and noticed.	4.16	Very Satisfactory	5.5
10. follows-up the feedback and make sure that encourages students.	4.05	Very Satisfactory	10
Composite Mean	**4.15**	**Very Satisfactory**	

As revealed on Table 16, the respondents affirmed that the Senior High School Teachers outstandingly assess tasks to enable students to allocate sufficient time to study over a suitable time period and avoid "cramming." which got the highest mean of 4.22 and the highest rank of 1.

The composite mean of 4.15 signified that the teachers have very satisfactory performance in the new normal in terms of assessment.

4. Relationship Between the Leadership Strategies of School Principals in Monitoring the Teaching Pedagogies in the New Normal to Senior High School Teaching Performance.

Table 17. Relationship Between the Leadership Strategies of School Principals in Monitoring the Teaching Pedagogies in the New Normal to Senior High School Teaching Performance

Variables Compared	r-value	p-value	Decision	Interpretation
Communication Versus High School Teaching Performance				
Communication:				
Synchronous	0.34	0.00145	p<0.01, Reject Ho	Highly Significant
Asynchronous	0.58	1.00 E-8	p<0.01, Reject Ho	Highly Significant
Face to Face	0.62	0.00000	p<0.01, Reject Ho	Highly Significant
Assessment	0.69	0.00000	p<0.01, Reject Ho	Highly Significant
Participation:				
Synchronous	0.26	0.01626	p<0.05, Reject Ho	Significant
Asynchronous	0.25	0.02103	p<0.05, Reject Ho	Significant
Face to Face	0.34	0.00145	p<0.01, Reject Ho	Highly Significant
Assessment	0.37	0.00049	p<0.01, Reject Ho	Highly Significant
Facilitation:				
Synchronous	0.20	0.06648	p>0.05, Failed to Reject Ho	Not Significant
Asynchronous	0.24	0.02694	p<0.05, Reject Ho	Significant
Face to Face	0.35	0.00102	p<0.01, Reject Ho	Highly Significant
Assessment	0.19	0.08156	p>0.05, Failed to Reject Ho	Not Significant
Negotiation:				
Synchronous	0.24	0.02694	p<0.05, Reject Ho	Significant
Asynchronous	0.22	0.04306	p<0.05, Reject Ho	Significant
Face to Face	0.32	0.00283	p<0.01, Reject Ho	Highly Significant
Assessment	0.36	0.00071	p<0.01, Reject Ho	Highly Significant
Manipulation:				
Synchronous	0.43	0.00004	p<0.01, Reject Ho	Highly Significant
Asynchronous	0.49	1.94 E-6	p<0.01, Reject Ho	Highly Significant
Face to Face	0.50	1.10 E-6	p<0.01, Reject Ho	Highly Significant
Assessment	0.53	1.80 E-7	p<0.01, Reject Ho	Highly Significant
Coercion:				
Synchronous	0.42	0.00006	p<0.01, Reject Ho	Highly Significant
Asynchronous	0.39	0.00022	p<0.01, Reject Ho	Highly Significant
Face to Face	0.28	0.00945	p<0.01, Reject Ho	Highly Significant
Assessment	0.26	0.01626	p<0.05, Reject Ho	Significant

As stated in Table 17, when the responses of the respondents on the leadership strategies of school principals in monitoring the Teaching pedagogies in the new normal in terms of communication were compared to the Senior High School teaching performance, the computed r-values of 0.34 for synchronous, 0.58 for asynchronous, 0.62 for face to face and 0.69 for assessment have corresponding p-values of less than 0.01, thus rejecting the null hypothesis.

CONCLUSIONS

This study delved comprehensively into the leadership strategies adopted by school principals to monitor teaching pedagogies in the new normal and their consequential influence on Senior High School (SHS) teaching performance. The findings underscore the prominence of various leadership strategies employed by school principals to oversee teaching practices within the context of the new normal. Notably, communication, participation, facilitation, negotiation, manipulation, and coercion emerged as central strategies consistently observed by teachers.

These strategies have significant implications for SHS teaching performance across diverse modes of instruction, including synchronous, asynchronous, face-to-face, and assessment. The study revealed that the proactive engagement of school principals in monitoring enhances teaching efficacy and consequently contributes to outstanding teaching performance in all instructional modalities.

Moreover, the research highlighted the multifaceted role of school principals in shaping the educational landscape. Principals, as education leaders, play a pivotal part in fostering a positive school culture, promoting high standards, and driving instructional quality. Their influence extends beyond the direct realm of instruction, encompassing the establishment of a conducive learning environment and the management of school resources in the dynamically changing new normal setting.

The findings indicate that a combination of leadership strategies, including communication, participation, facilitation, and negotiation, best fit in monitoring teaching pedagogies in the new normal. These strategies collectively enable effective oversight, guidance, and alignment of teaching practices with the evolving educational landscape.

The influence of these leadership strategies on SHS teaching performance is unequivocal. Principals who adeptly employ these strategies foster an environment conducive to continuous improvement in teaching quality. This results in enhanced student engagement, learning outcomes, and overall academic success. The study establishes that leadership strategies of school principals play a pivotal role in orchestrating a collaborative, effective, and responsive teaching ecosystem, thereby positively influencing SHS teaching performance.

In essence, this study reinforces the vital role of school principals as leaders who not only monitor pedagogical practices but also significantly impact the teaching and learning experience in the new normal. The demonstrated effectiveness of their leadership strategies underscores the potential to further elevate the quality of education during these transformative times.

RECOMMENDATIONS

Based on the conclusions drawn from this study, several research-based recommendations can be proposed to enhance the role of school principals in monitoring teaching pedagogies during the new normal and consequently improve Senior High School (SHS) teaching performance:

Professional Development for Principals: Schools may prioritize professional development opportunities for principals that focus on leadership strategies tailored for the new normal. Training sessions could emphasize effective communication, participatory decision-making, facilitation of online teaching, and negotiation skills to enable principals to guide and support teachers more effectively.

Leadership Training for Teachers: Schools may implement leadership development programs for teachers that empower them to take ownership of their pedagogical approaches during remote and hybrid teaching. When teachers are equipped with leadership skills, they can collaborate better with principals in adapting to the challenges of the new normal.

Collaborative Learning Communities: Schools may establish collaborative learning communities that bring together principals, teachers, and other stakeholders to discuss and exchange successful practices in monitoring and enhancing teaching pedagogies. Such communities can foster a culture of continuous improvement and shared learning.

Technology Integration for Monitoring: Schools may encourage principals to adopt and integrate technology tools specifically designed for monitoring online and hybrid teaching. These tools can aid in real-time observation, feedback, and evaluation of teaching methods, ensuring alignment with the educational goals of the institution.

Individualized Support for Teachers: Principals may offer individualized support to teachers based on their unique needs and challenges in the new normal. This could involve targeted mentoring, resources, and strategies to help teachers adapt their pedagogies effectively to different modes of instruction.

Transparent Communication: Principals may foster transparent communication channels between principals and teachers to ensure a clear understanding of monitoring processes, expectations, and support mechanisms. They may also open dialogues can build trust and encourage teachers to embrace new teaching methods.

Data-Driven Decision-Making: Schools may encourage principals to use data collected from monitoring efforts to inform decision-making. Regularly analyzing the data can identify trends, areas for improvement, and successful practices that contribute to overall teaching performance enhancement.

Recognition and Acknowledgment: Schools may recognize and acknowledge the efforts of both principals and teachers who demonstrate innovative leadership strategies and effective teaching performance

during the new normal. This recognition can serve as motivation for continuous improvement and dedication to excellence.

Adaptive Leadership Training: Schools may provide principals with training in adaptive leadership, which equips them to navigate complex and rapidly changing situations. This skillset will enable principals to lead confidently even in unpredictable educational environments.

Research-Practice Partnerships: Schools may foster collaborations between educational researchers and practitioners to develop evidence-based strategies for monitoring teaching pedagogies and improving teaching performance. Such partnerships can bridge the gap between research findings and their practical application.

Incorporating these research-based recommendations can contribute to a more holistic and effective approach to monitoring teaching pedagogies in the new normal. By enhancing the leadership strategies of school principals and fostering a supportive ecosystem, schools can navigate the challenges of modern education and elevate teaching performance for the benefit of students.

REFERENCES

Adams, et al. (2021). Resilience in the Time of Pandemic. Sage Journals. Vol. 66, Issue No. 1.

Agayon &.Agayon (2020). Teachers in The New Normal: Challenges and Coping Mechanisms in Secondary Schools. International Journal of Humanities and Education Development. Vol. 4, Issue No.1.

Akyol, B. (2019). Power Sources Used by School Principals: A Mixed-Method Study. Journal of History Culture and Art Research, 8(3), 17-31. doi:http://dx.doi.org/10.7596/taksad.v8i3.2201.

Alenezi, A. (2020). The Role of e-Learning Materials in Enhancing Teaching and Learning Behaviors. International Journal of Information and Technology. Vol. 10, No. 1.

Alkawaldeh and Al-Sharafat (2022). The Effect of the Negotiation Strategy on Value-Based Management among the Principals of Public Schools in Zarqa Governorate. Al-Balqa Journal for Research and Studies .البلقاء للبحوث والدراساتVol. 23, Special Issue.

Altemose, M. & Lampron, L. (2021). Leading in the 'new normal' — A mini-series on school leadership during COVID-19. Essential Education News (EdNC).

Ampofo, S.Y, et al. (2019). Influence of Heads on Teacher Role Performance in Public Senior High School, Central Region, Ghana. IAFOR Journal of Education, Vol. 7, Issue 2.

Aguiling, M. A., & Racelis, A. (2021). Virtuous Leadership for the New Normal: Identifying Leadership Virtues in a Philippine Leadership Program. Philippine Academy of Management, 4(1), 23-34.

Almaiah M. A, Al-Khasawneh A & Althunibat, A. (2020). Exploring the critical challenges and factors influencing the e-learning system usage during covid-19 pandemic. Educational Information Technology, 1(20). https://doi.org/10.1007/s10639-020-10219-y

Ancheta, R., & Ancheta, H. (2020). The New Normal in Education: A Challenge to the Private Basic Education Institutions in the Philippines. International Journal of Educational Management and Development Studies, 1(1), 1-19.

Ancho, I. V. (2020). Old Mind-set, Values and Ethics, and Stakeholder Partnership and Accountability:Inputs to School Leadership in the New Normal. Jayapangus Press Books, 17-32.

Asuncion, J.(2022).Teaching EPP/TLE/TVE/TVL in the New Normal.DepEdSchool Division of Aurora.

Bagood,J.(2020).Teaching-Learning Modality under the New Normal.Retrieved on November 10, 2020.

Basit, A., Khotimah, H., & Hartono, R. (2020). Madrasah Principal's Leadership in the Face of an Era New Normal. Educational Technology Perspective, 5 (9), 1308- 1311.

Bozkurt, A. (2020). Educational Technology Research Patterns in the Realm of the Digital Knowledge Age. Journal of Interactive Media in Education, 1, 1-17. https://doi.org/10.5334/jime.570

Bozkurt, A., & Sharma, R. C. (2020). Education in Normal, New Normal, and Next Normal: Observations from the Past, Insights from the Present and Projections for the Future. Asian Journal of Distance Education, 15(2), i-x. https://doi.org/10.5281/zenodo.4362664

Briones, L. (2020). Basic Education – Learning Continuity Plan (BE-LCP). Department of Education.

Brown, A. H., and Green, T. D. (2018). Beyond Teaching Instructional Design Models: Exploring the Design Process to advance Professional Development and Expertise. J. Comput. High Educ. 30 (1), 176–186. doi:10.1007/s12528-017-9164-y

Cahapay, M. B. (2020). Rethinking Education in the New Normal Post-Covid-19 Era: A Curriculum Studies Perspective. Aquademia, 4(2). https://doi.org/10.29333/aquademia/8315
Carag, E. A. (2020). Pedagogical Approaches Used by Teachers in Teaching MAPEH in the Division of Tuguegarao City, Philippines. International Journal of Psychosocial Rehabilitation, 24(08).
Carpena, J.M. (2022). Going Back to Face-to-Face Classes. Dela Salle University.
Centeno, Z. (2021). A Review of Digital Competencies of Teachers in the New Normal. Ascendens Asia Journal of Multidisciplinary Research Conference Proceedings. Vol. 4, No. 1.
Chimezie, N. (2021).Teacher Personality Traits and Their Teaching Effectiveness : Important Factor in Student's Success. European Journal of Research and Reflection in Educational Sciences Vol. 8 No. 3, 2020.
Ching, Y. H., Hsu, Y. C., & Baldwin, S. (2018). Becoming an online teacher: An analysis of prospective online instructors' reflections. Journal of Interactive Learning Research, 29(2), 145-168. Retrived on November 2, 2020.
Daniel, S. J. (2020). Education and the Covid-19 Pandemic. Prospects, 49, 91–96.
Daniel, D. L., Villa, J. R., Howell, J. P. & Dorfman, P. W. (2003). Problems with Detecting Moderators in Leadership Research Using Moderated Multiple Regression. Leadership Quarterly, 14(1), 3-23.
Darling-Hammond L., Flook L., Cook-Harvey C., Barron B.& Osher D.(2020). Implications for educational practice of the science of learning and development, Applied Developmental Science, 24:2, 97-140.
De Leon, P. & Pouezevara, S. (2021). Returning to classroom learning in the Philippines. RTI International's Shared Resources for International Education.
Department of Education (2020). DepEd Basic Education Learning Continuity Plan in the time of COVID-19.
DepEd Order o. 34 s. 2022.The Implementing Guidelines on the SY 2022-2023 Calendar and Activities.
DepEd Order 8, S. 2015 – Policy Guidelines on Classroom Assessment for the K TO 12 Basic Education Program.
DepEd Order No. 031, s. 2020. Interim Guidelines for Assessment and Grading in Light of the Basic Education Learning Continuity Plan.
Dimas,M. and Dargo, J. (2021)Modular Distance Learning: Its Effect in the Academic Performance of Learners in the New Normal. ctober 2021.JETL(Journal Of Education Teaching and Learning) 6 (2):204
Dizon Jr., R. (2021). Instructional Planning and Assessment Training Needs in the Senior High Schools : Addressing the "New Normal" in the Basic Education. International International Journal of Engineering Sciences & Research Technology. June 2021. ISSN: 2277-9655.
Donato, Noruel M. (2020). The Relationship of the Strategies and Practices of the School Heads and Master Teachers and Teachers' Competencies and Skill in the New Normal. International Journey of Theory and Application in Elementary and Secondary Education. Vol. 3 No. 2. 125-139.
Egeli, S. & Ozdemir, M. B. (2020). Koronavirüs (Covid-19) pandemi sürecinin KKTC eğitim sistemine yansımalarına genel bir bakış, [An overview of the reflections coronavirus (covid-19) pandemic process on the TRNC education system]. 21.
Eickelmann, B. and Gerick, J. (2020) Learning with digital media: Objectives in times of Corona and under special consideration of social Inequities. Dtsch. Sch. 16, 153–162.
Evans, M. G. (1970). The effects of supervisory behavior in the path-goal relationship. Organizational Behavior and Human Performance, 5, 277-298.
Evans, M. G. (2002). Path-Goal Theory of Leadership. In L. L. Neider & C. A. Schriesheim (Eds.), Leadership (pp. 115-138).Greenwich, CT: Information Age Publishing.
Fendi, H. (2021) Online-Based Academic Supervision during the Covid-19 Pandemic. Journal of Physics: Conference Series 1779 (2021) 012027.
Fernandez, A.A, & Shaw, G. P (2020). Academic Leadership in a Time of Crisis: The Coronavirus and COVID-19, Journal of Leadership Studies,14(1), Springer 202, 39-45 https://doi.org/10.1002/jls.21684
Finol, M.O. (2020). Asynchronous vs. Synchronous Learning : a Quick Overview. 28 July 2020.
Francisco, C. D., & Nuqui, A. V. (2020). Emergence of a Situational Leadership during Covıd-19 Pandemic called New Normal Leadership. International Journal of Academic Multidisciplinary Research 4(10), 15-19.

Francisco, C. D., Sagcal, N. C., & Nuqui, A. V. (2020). Development and Validation of New Normal Leadership Competency Scale: An offshoot of Emerging Type of Situational Leadership in the New Normal Education. International Journal of Multidisciplinary Studies, 4(11), 51-55.
Garba, S. (2020). Principals' Instructional Supervision and Its Influence on Pedagogical Practices of Teachers in Public Junior Secondary School in Bauchi State, Nigeria. Kenyata University.
Gardiner, E. (2020). Remote Teaching: When and How to Use Synchronous vs. Asynchronous Methods. Available online at: https://tophat.com/blog/remote-teaching-when-and-how-to-use-synchronous-vs-asynchronous-methods/. Date Accessed, 28 July 2020
Ginting, J. and Purba, C. (2019) The Effect of Principal's Leadership, Discipline and Competence on Teacher Performance in Saint Yakobus Foundation Jakarta. International Journal of Innovative Science and Research Technology. Volume 4, Issue 8, August – 2019.
Gocen, A. (2021a). Preface. In A. Gocen (Ed.). Eğitimde Yeni Normal: Liderlik Yaklaşımları [The New Normal in Education: Leadership Approaches] (pp. V). Nobel Akademik Yayıncılık.
Goncz, L. (2017).Teacher Personality: A review of Psychological Research and Guidelines for a More Comprehensive Theory in Educational Psychology. Open Review of Educational Research, Vol. 4, No. 1, pp. 75-95.
Govindasamy, Vanitha. (2018) The Principal as Instructional Leader in the Facilitation of Curriculum Changes: Implications for the Provision of Quality Education. University of Johannesburg (South Africa) ProQuest Dissertations Publishing.
Grace, A. et al. (2020). Participatory Management, Professional Development, and Teachers' Job Performance in Public Secondary Schools in Ogun State, Nigeria. Journal of Learning for Development, v7 n2 p161-173 2020.
Gupta, P. (2022).Best Ways To Do Assessment In Virtual Classrooms. RedTech Review.
Hance,M.(2020).Strategies to Boost Participation inYourVirtual Classroom.Carson-Newman University.
Harris, A. (2020). Covid-19 – School Leadership in Crisis? Journal of Professional Capital and Community, 3(4), 321-326. https://doi.org/10.1108/JPCC-06-2020-0045
Henebery(2020).Principals of the Pandemic: How school leadership is changing. https://www.theeducatoronline.com/k12/news/principals-of-the-pandemic-how-school-leadership-is-changing/272885
Huma, A.; Yang, Y.X.; Samed, A.A.; Ali, A. (2021). Technology Integration in Higher Education during COVID-19: An Assessment of Online Teaching Competencies Through Technological Pedagogical Content Knowledge Model. Front. Psychol. 12, 736522.
Indeed Editorial Team (2020). 10 Effective Leadership Styles in Education. https://www.indeed.com/career-advice/career-development/leadership-styles-in-education.
Ingersoll, R., et al. (2018). Seven Trends: The T ends: The Transformation of the T ansformation of the Teaching Force.
Ismaya, E. a. (2021). Correlation Principal Leadership Style with Teacher Motivation in Online Learning During Covid-19. aNP Journal of Social Science and Humanities, 2(2), 123-127.
Itow, R. C.(2020). Fostering Valuable Learning Experiences by Transforming Current Teaching Practices:Practical Pedagogical Approaches from Online Practitioners. Information and Learning Sciences.
Jabbarova, A. (2020). The importance of the Teaching Method-Theory and Its application. Архив Научных Публикаций JSPI.
Karakas, M. (2020). The Multi-Sociological Aspects of the Covid-19 Pandemic and the New Normal. İstanbul University Journal of Sociology, 40(1), 541-573.
Kaul, Ma., VanGronigen, B. and Simon, N. (2020). Calm During Crisis: School Principal Approaches to Crisis. Consortium for Policy Research in Education. University of Pennsylvania.
Kazemi Nasab, F., Mehralizadeh, Y., & Farhadi Rad, H. (2022) Investigating the role of facilitating principals in the professional development of high school teachers. Journal of School Administration Vol 9, No 4, Winter 2022.
Kazemi Nasab, F., Mehralizadeh, Y., & Farhadi Rad, H. (2021). Investigating the Role of Facilitating Principals in the Professional Development of High School Teachers, 9 (4), 93-107.
Khlaif, Z., Salha, S. and Kourachi, B. (2021). Emergency Remote Learning during COVID-19 Crisis: Students' Engagement. Education and Information Technologies . 26, 7033–7055.
Khan, F. N., Hussain. S., and Imad. M. (2019). Classroom Assessment, Literacy and Practices of Teacher Educators in Pakistan. Vol IV.

Korochentseva, A., Suroedova, E., Khachaturyan, N. and Nikolenko, O. (2019). Pupil's representation about the socio-psychological qualities of teachers in the process of effective meaning transmission, SHS Web of Conferences 70, 08020. https://doi.org/10.1051/shsconf/20197008020.
Kotter, J. P., & Schlesinger, L. A. (2008). Choosing Strategies for Change. Harvard Business Review, 86(7/8), 130-139.
Kporyi, E. and Arko, A. (2021). Pedagogical Competence of Teachers and Student Academic Achievement of Junior High School in Ashaiman, Ghana. Innovare Journal of Education.Vol 9,Issue3, 2021.
Kunter, M. et al. (2018). Students' and mathematics teachers' perceptions of teacher enthusiasm and instruction. DOI:10.1016/j.learninstruc.2008.06.00
Lagua, B. (2020). Teaching in the New Normal. The Manila Times. October 30, 2020.
Lanepal, L. (2022). The best attitude of the teacher is the enthusiasm (A=E). Education Jagat.
Laska, Lon (2016). Monitoring and Evaluating the Performance of Teachers Through the Process of Observation in the Classroom. European Journal of Multidisciplinary Studies. Vol.1 No. 2.
Llego, M.A. (2020). DepEd Learning Delivery Modalities for School Year 2020-2021. https://www.teacher.com/deped-learning-delivery-modalities/
Lopez, Silvia V. (2022). School Leadership During Covid-19 Pandemic : Implementing Organizational Change in Unprecedented. Concordia University Irvine ProQuest Dissertations Publishing, 29397478.
Loveless, E. (2020). Strategies for Building a Productive and Positive Learning Environment. https://www.educationcorner.com/ building-a-positive-learning-environment.html
Makewa, Lazarus Ndiku (2019). Teacher Technology Competency Base. Lukenya University, Kenya. Technology-Supported Teaching and Research Methods for Educators
Mallillin, L., et al. (2021). Strategies, Trends, Methods and Techniques of Teaching in the New Normal Learning Perspective of Students. July 2021. DOI:10.36349/easjehl.2021.v04i07.001
Mallillin, L. et al. (2020). A Framework in Online Learning Process : A Guide to Educational Teaching During Covid 19 Pandemic. European Journal of Open Education and E-learning Studies, 5(2).
Masry-Herzalah, A. and Dor-Haim, P. (2022). Teachers' Technological Competence and Success in Online Teaching during the COVID-19 Crisis: The Moderating Role of Resistance to Change", International Journal of Educational Management, Vol. 36 No. 1, pp. 1-13. https://doi.org/10.1108/IJEM-03-2021-0086.
Masters,G.(2018).Principal Performance Improvement Tool.AustralianCouncil or Educational Research.
McLeod, S., & Dulsky, S. (2021). Resilience, reorientation, and reinvention: School leadership during the early months of the COVID-19 pandemic. In Frontiers in Education (p. 70).
Meador, D. (2019) The Role of the Principal in Schools. https://www.thoughtco.com/role-of-principal-in-schools.
Mehralizadeh, et al. (2021). Developing a model for selecting educational approaches for employees of small and medium-sized industrial companies in Ahvaz. Educational Sciences, 28(1), 1-22.
Mestry R. (2017). Principals' perspectives and experiences of their instructional leadership functions to enhance learner achievement in public schools. Journal of Education. 69 Durban 2017; On-line version ISSN 2520-9868.
Motala, S. & Menon, K. (2020). In Search of the "New Normal": Reflections on Teaching and Learning during Covid-19 in a South African University. Southern African Review of Education 26(1), 80-89.
mPowerO. Elearning Solution (2020). Online Learning-Virtual Classrooms are the New Normal. https://www.mpowero.com/blogs/educations/online-learning-virtual-classrooms-are-the-new-normal/
Munzil and Puji R. Mentari (2021). Development of E-learning Teaching Material with Augmented Reality Based on Problem Based Learning for Nature of Chemistry and Scientific Methods Topic as Teaching Material in Covid-19 Pandemic. AIP Conference Proceedings 2330, 020029.
Murkatik, K., Harapan, E., & Wardiah, D. (2020). The Influence of Professional and Pedagogic Competence on Teacher's Performance. Journal of Social Work and Science Education, 1(1), 58-69.
Nacar, CJ. (2021). Lived Experiences of Teachers in Implementing Modular Distance Learning in Philippine Setting. Pangasinan State University.
Naimah, S. N., & Utaminingsih, S. (2021). The Leadership of Schools to Improve Teacher Performance in Al-Amin Kids Park. ANP Journal of Social Science and Humanities, 2(2), 99-103.
Nasab, et al. (2021). Developing a model for selecting educational approaches for employees of small and medium-sized industrial companies in Ahvaz. Educational Sciences, 28(1), 1-22.

Narimo, S. et al. (2020) The Effect of Principal Leadership and Internal Communication on Teacher Performance in Indonesia. Universal Journal of Educational Research 8(12A): 7864-7869, 2020 http://www.hrpub.org
Nasser, F. (2019). The Application Degree of Participative School Leaderships at Al-Isha Governorate and Its Correlation with Teachers' Professional Development. Canadian Center of Science and Education. International Education Studies, Vol. 12, No. 12.
Nurjannah, E. et al., (2021) "Teacher Performance Management in Improving Islamic Religious Education (IRE) Lesson Learning," Nidhomul Haq : Jurnal Manajemen Pendidikan Islam 6,no.2: 400–412.
Nwankwo, N. et al. (2019) Principal's Communication Strategies for Teachers' Effectiveness in Secondary School in Anambra State. Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS) 10(3): 175-181.
Nwosu, J. (2017) Principals' Communication Strategies and Teachers' Job Performance in Public Secondary Schools in Ikenne Local Government Area of Ogun State. European Centre for Research Training and Development UK. Vol.5, No.9, pp.1-12.
Olmstead, Levi (2022). Online Learning vs. Face-to-Face Learning: Which Is Best?. https://whatfix.com/blog/online-learning-vs-face-to-face-learning/
Otieno, M. and Magoma C. (2022). Principals' Role in Monitoring Instructional and Its Influence on Teaching and Learning Outcome in Secondary Schools in Kajiado Country, Kenya. European Journal of Education Studies - Volume 9, Issue 2, 2022.
Owen, D. & Doncillo, J. (2022). Getting Back to Normal Learning. https://worldmissionmagazine.com/archives/back-school-after-covid/getting-back-normal-learning
Pascua, A. D. (2020). DepEd: Technology to Play Big Role in New Normal Education.
Pasia, A. J. (2019). Educational Leadership Strategies to Facilitate a School Transition into Philippine K to12 BasicEducationCurriculum.InternationalJournalofEducationandResearch Vol.7 No.7 July 2019.
Pedroso, J. E. P., Siason, N., &Tangco-Siason, A. (2021). Principal‟s Leadership Practices during the COVID 19 Pandemic: An Exploratory Study. International Journal of Arts and Humanities Studies, 1(1), 76–87. https://doi.org/10.32996/ijahs.2021.1.1.12
Philippines Remote Learning Study (2020-2021). USAID. School Leadership, 1-6.
Pollock, K. (2020). School Leaders' Work During the COVID-19 Pandemic: A Two-Pronged Approach. Western University. International Studies in Educational Administration. Vol. 48, Issue 3.
Pratama, H., Purnomo, Utaminingsih, & S., Su'ad. (2022). Implementation of School Principal Academic Supervision During the COVID-19 Pandemic in Learning. ICCCM Journal of Social Sciences and Humanities, 1(1), 29–36. https://doi.org/10.53797/icccmjssh.v1i1.5.2022.
Remind (2022). Communication Between Principals and Teachers in Successful Schools.
Rinchen, P. (2022). Impact of Transformational Leadership Practice on Management of Secondary Schools under Zhemgang Dzongkhag. Science. Archives, Vol. 3 (1), 35-49.
Rosyadi, Y.I. & Pardjono (2015). The Principal' Role as Manager in Improving Quality Education at SMP 1 Cilawu Garut. Journal of Educational Management . Accountability. 3 (1) pp. 124-133.
Ruth, U., Dick, M. and Chioma, D. (2021). Influence of Teachers Creativity on the Academic Performance of Senior Secondary School Students in Port Harcourt Metropolis: Implication for Counselling. International Journal of Innovative Education Research 9(3):84-99, July-Sept., 2021.
Sajid, S. (2018). The Impact of Leadership Styles on Teachers' Effectiveness. International Seminar on "Recent Trends in Marketing Technology. Vol. 6. Special Issue 1.
Santosa, achadi B. (2022).Principal's Leadership Strategy in the Development of Teacher Professionalism. JaMP: Jurnal adminitrasi dan Manajemen Pendidikan. Volume 5 Nomor 1 Maret 2022,Hal: 1-7.
Sarı, E. & Sarı, B. (2020). Education Management in Time of Crisis: The Case of Covid-19. International Journal of Leadership Studies: Theory and Practice 3(2), 49-63.
Saxena R., and Saxena, S.K. (2020). Preparing Children for Pandemics. Medical Virology : From Pathogenesis to Disease Control. Springer, Singapore.
Shehzadi, S.; Nisar, Q.A.; Hussain, M.S.; Basheer, M.F.; Hameed, W.U.; Chaudhry, N.I.(2020) The role of e-learning toward students' satisfaction and university brand image at educational institutes of Pakistan: A post-effect of COVID-19. Asian Educ. Dev. Stud. 10, 275–294.
Skerlavaj, M. (2020). New Normal, New Leaders? Time for Resilience and Post-Heroic Leadership. In Domadenik, P., Koman, M. & Redek, T. (Eds.) The Virus After-math: A Socio-Economic twist? (pp.347-366). Časnik Finance.

Syukkur, A. (2021). Improving the Quality of Education Through the Principal's Strategy to Develop Teacher Competence. Nazhruna: Jurnal Pendidikan Islam Vol. 4 Issue 3, 2021. pp. 563-574.
Smith-Peavler, E., Gardner, G. E., & Otter, R. (2019). PowerPoint Use in the Undergraduate Biology Classroom: Perceptions and Impacts on Student Learning. Journal of College Science Teaching, 48 (3), 74-83.
Soliman, H. (2022) Post-pandemic Education Strategy: Framework for Artificial Intelligence-Empowered Education in Engineering (AIEd-Eng) for Lifelong Learning. https://link.springer.com/chapter/10.1007/978-3-031-03918-8_45
Sudhakar, R. & Basariya, S. (2017). Perspectives and the factors influencing effectiveness of training and development on employees' performance. International Journal of Civil Engineering and Technology 8(9):135-141
Sukawati, N., et al. (2020). Human Resource Management in Basic Education Schools. Proceedings of the 2nd Early Childhood and Primary Childhood Education (ECPE 2020) Advances in Social Science, Education and Humanities Research, Vol. 487.
Tarek, S. (2016). Distance Leaning : the Role of the Teacher. Competencies for Distance Education Professionals. ETR&D43, 57-79 (1995).
The Best School (2018). Synchronous Learning vs Asynchronous Learning in Online Education. 26 July 2020.
Thompson, E. (2022). Disadvantages of Online Classes for Higher Education [Updated 2023]
Tirrozi, G. (2016). The Artistry of Leadership: The Evolving Role of the Secondary School Principal. https://www.researchgate.net/publication/275514194_The_Artistry_of_Leadership_The_Evolving_Role_of_the_Secondary_School_Principal
Turan, S. (2020). Technological Leadership of School Principals during the Covid-19 Period. National Education, 49(1), 175-199. https://doi.org/10.37669/milliegitim.788133
Tuscano, F. (2020). It's not about Online Learning: a Reflection on the "New Normal" in Education. 16 August 2020.
UNESCO. (2020). Learning through Radio and Television in the Time of COVID-19.
UNESCO's International Institute for Educational Planning (2021). Using Data to Improve the Quality of Education. Learning Portal. 16 August 2021.
Varela, D. & Fedynich, L. (2020). Teaching from a Social Distance: Teacher Experiences in the Age of COVID-19. Research in Higher Education Journal, Vol. 39.
Villar, R. et al. (2020). School Heads' Leadership Practices in The New Normal, Administrative Disposition, and Readiness of The Public Schools in Laguna. https://journals.researchsynergypress.com/index.php/ijtaese/article/view/683
Vital L. M. (2021). Understanding Self to Engage With the "Other" : Pedagogical Approaches to Teaching about Identity and Belonging in Graduate Education in Reshaping Graduate Education through Innovation and Experiential Learning. IGI Global, 147-166.
Vroom, V. H. and Jago, A. G. (1995) Situation Effects and Levels of Analysis in the Study of Leader Participation. Leadership Quarterly, Vol. 6 (1995). pp. 169–181.
VVOB (2020). Education for Development. Leadership for Inclusive Schools. https://inclusiveschools.org/category/resources/leadership-for-inclusive-schools/
Wang, E., Kaufman J., Tuma, A., Lawrence, R., Doan, S., Woo, A., and Henry, D. (2021). Supporting Principals to Lead on the Selection and Use of Instructional Materials in Classrooms. Rand Corporation. https://doi.org/10.7249/RBA134-1
Winston, B.E. & Patterson, K. (2006). An Integrative Definition of Leadership. International Journal of Leadership Studies. 1(6), 6-6.
Wintemute, D. (2022). Synchronous vs. Asynchronous Classes: What's the Difference?. The Best Schools.
Yarovaya, et al. (2020). Distance Learning During Coronavirus: Problems and Solutions. January 2020. E3S Web of Conferences 210(3):18051.
Yi-Wu, S. (2021). How Teachers Conduct Online Teaching During the COVID-19 Pandemic: A Case Study of Taiwan. Front. Educ., 28 May 2021. Sec. Digital Education. https://doi.org/10.3389/feduc.2021.675434

TRACER STUDY OF LIPA CITY COLLEGES CRIMINOLOGY GRADUATES SCHOOL YEAR 2014-2018

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ABSTRACT

This study aims to assess the employability of the Criminology graduate for the school year 2014-2018. This study followed a descriptive research design with two hundred forty-nine respondents. A tracer survey questionnaire was used, lifted from existing standard tracer surveys, and rephrased by the researchers so that it would be jived with the objectives of this research work. Results of the study revealed that most of the respondents were in the Philippine National Police whereas their course is relevant to their present job; and communication skills, information technology skills, and human relations skills are the skills they acquired in college that they were able to apply in their present work. Eventually, it took them 1-5 years to land to their first job and majority of their positions are ranked. For the recommendations, improve the other services of Lipa City Colleges, such as more accessible books and technology that can be used as a reference for a thesis and other academic purposes; updated laboratory and criminalistics equipment for proper demonstration and familiarization; improving school facilities to become a more conducive learning environment; lower the tuition fee and provide more percentage in scholarships. Moreover, it would be better to focus on the linkages outside the academe regarding the students' future profession. Lastly, enhance communication and technical writing skills and develop self-confidence to become more competent and adaptable to various life situations.

Keywords: tracer study, criminology graduates, employability, employment status, school services

INTRODUCTION

In today's ever-changing economy and highly competitive labor market, the Philippine school system is challenged to produce appropriately educated college graduates necessary to ensure continuity in the country's development. It appears however, that college education is seemingly lacking: there is a significant supply of professions but a shortage of graduates with applicable correlated skills and/or education. In other words, the Philippine school system is failing to prepare and train students to acquire employability skills that employers expect of workers and which they, the employers, expect the development thereof through education.

Graduate tracer studies contribute to the program's continued relevance. Graduate tracer studies are one form of empirical study that can appropriately provide valuable information for evaluating the results of the education and training of a specific institution of higher education. It can collect essential information concerning the employment profile of graduates, their undergraduate experience, the first and current jobs of graduates and the relevance of their educational background and skills required in their job. Tracer studies play a vital role in gathering information on the curriculum's applicability and graduates' level of satisfaction with their academic preparation (Woya, 2019). In the challenges of 21st century education, higher education stands out as one of the major keys to cope with reforms through instruction, research, and extension. It has become a big challenge for all Philippine Higher Education Institutions (HEIs) to cater these reforms. According to the Tertiary Education Commission, one method to address these concerns is by producing graduates who are fully ready to take what they have learned in school and apply it to their respective works (Cuadra et al., 2019).

Employability is viewed as more than merely 'having a work'; instead, it includes a set of achievements like specialization, understanding, and personal characteristics that provide graduates a better

chance to find a job and be successful in their chosen field of career which benefits themselves, the labor force, the entire community, and the national economy (Abelha et al., 2020).

This tracer study will offer helpful information to evaluate the efficacy of LCC's criminology program. Administrators can assess whether their educational programs effectively prepare students for the workforce by monitoring graduates' employment outcomes and job satisfaction. The results can guide program improvements, such as modernizing course material, integrating new technology, or creating experiential learning opportunities to increase graduates' employability.

STATEMENT OF THE PROBLEM

The study entitled "Tracer Study of Lipa City Colleges Criminology Graduates for School Year 2014-2018" deals with the employment of the graduates after their graduation and their present employment status.

Specifically, sought to answer the following questions:

1. What is the profile of the graduate-respondents in terms of:
    1.1. General Information
        1.1.1 sex,
        1.1.2 monthly salary, and
        1.1.3 year when you got your first job?
    1.2. Educational Background
        1.2.1 year of graduation in college,
        1.2.2 age graduated, and
2. What is the employment status of the graduate-respondents (if they are employed) in terms of:
    2.1 present employment status,
    2.2 present department where the criminology graduates are employed,
    2.3 if their present job also their first job after college,
    2.4 if their course is relevant to their first job and,
    2.5 skills acquired in college that they be able to apply in their present job?
3. What is the detail of the first job of the graduate-respondents in terms of:
    3.1 time it took them to land to their first job and
    3.2 job level in their first job?
4. What are the suggestions of the graduate-respondents to improve Lipa City Colleges' academic and other services?

METHODOLOGY

This study used quantitative features in the design, data collection, and analysis. Quantitative research applies scientific inquiry and depends on observed or measured data to investigate questions about the sample population (Allen, 2017). It is a method to learn about a particular group known as a sample population. Researcher also employed a quantitative descriptive method to describe a research problem accurately. It concerns collecting numerical data and generalizing it across individuals or explaining a specific situation (Creswell, 2013).

Two hundred forty nine (249) criminology graduates were the respondents of the study. Snowball sampling was also used since one or more members of a population were located and used to lead the researcher to other members of the population.

Moreover, the researcher used the following statistical measure for the computation of the gathered data, frequency count, percentage and the ranking.

FINDINGS

Table 1.1 General Information of the Respondents

Variables	Frequency	Percentage	Rank
Sex:			
Male	177	71.08	1
Female	72	28.92	2
Total	**249**	**100**	
Monthly Salary:			
P10,000- P19,999	16	6.43	3
P20,000- P29,999	144	57.83	1
P30,000- P39,999	82	32.93	2
P40,000- P49,999	6	2.41	4
P50,000andabove	1	0.40	5
Total	**249**	**100**	
Year When the Graduates Got Their First Job			
2011	1	0.40	10.5
2012	1	0.40	10.5
2014	5	2.01	8
2015	21	8.43	5
2016	29	11.65	4
2017	71	28.51	1
2018	45	18.07	3
2019	50	20.08	2
2020	16	6.43	6
2021	6	2.61	7
2022	4	1.61	9
Total	**249**	**100**	

As stated in the table, out of 249 graduate-respondents, 177 of them or 71.08% at rank 1were male while 72or 28.92%at rank 2 were female. In terms of monthly salary, P20,000 - P29,999 gained the highest frequency count of 144 or 57.83% at rank 1 whereas one or 0.40% at rank 5 received P50,000 and above salary per month. For the respondents' year when they first got their first job 2017 garnered the highest frequency count of 71 or 28.51% at rank1.On the contrary, 2011 and 2012 made the least and equal frequency counts of one or 0.40% at ranks 10.5.

Table 2. Educational Background of Respondents

Variables	Frequency	Percentage	Rank
Year of Graduation in College:			
2014	48	19.28	5
2015	50	20.08	3
2016	51	20.48	1
2017	50	20.08	3
2018	50	20.08	3
Total	**249**	**100**	
Age Graduated (in years):			
18	2	0.80	9.5
19	8	3.21	5
20	50	20.08	3

21	86	34.54	1
22	66	26.51	2
23	22	8.84	4
24	5	2.01	6
25	3	1.20	8
26	4	1.61	7
27	1	0.40	11
28	2	0.80	9.5
Total	**249**	**100**	

As given in Table 2, 51 of the graduate-respondents or 20.48% at rank 1 graduated on 2016 while 48 or 19.28% at rank 5 graduated on 2014.

With respect to the graduate-respondents age graduated, 21 years old obtained the highest frequency count of 86 or 34.54% at rank 1 while 27 years old got the least frequency count of one or 0.40% at rank 11.

Table 3.1. Employment Status of the Respondents

Variables	Frequency	Percentage	Rank
If Employed: Present Employment:			
Private	31	12.45	2
Public	218	87.55	1
Total	**249**	**100**	
Private:			
Airport Police	6	2.41	1.5
Business Process Outsourcing Industry	3	1.20	5
Customer Service Representative	1	0.40	8
Juris Doctor	1	0.40	8
Managerial/Executive/Supervisor	6	2.41	1.5
Professional	5	2.01	3.5
Sales-Associate	1	0.40	8
Security Officer	2	0.80	6
Self-Employed	5	2.01	3.5
Total	**31**	**12.45**	
Public:			
Academe	1	0.40	13.5
Armed Forces of the Philippines	4	1.61	5
Bureau of Fire Protection	50	20.08	2
Bureau of Jail Management	17	6.83	3
City Disaster Risk Reduction Management Office	3	1.20	6
Department of Health	1	0.40	13.5
Department of Justice	1	0.40	13.5
Department of Labor and Employment	1	0.40	13.5
Government Employee	1	0.40	13.5
Philippine Air Force	5	2.01	4
Philippine Coast Guard	2	0.80	7
Philippine National Police	126	50.60	1
Rescuer	1	0.40	13.5
Security	1	0.40	13.5

Sangguniang Kabataan Chairman	1	0.40	13.5
Scene of the Crime Operatives	1	0.40	13.5
Under the Office of the President	1	0.40	13.5
Witness Protection Program	1	0.40	13.5
Total	**218**	**87.55**	
Grand Total	**249**	**100**	

As seen in Table 3.1, 218 graduate-respondents or 87.55% at rank 1 were presently employed in public while 31 or 12.45% at rank 2 were employed in private. The result shows that many of the graduate-respondents are employed as police officers and assigned as jail officer, port police personnel, firefighter, and drug enforcement agent. The field of criminal justice continues to have growing demands for highly trained workers and those with the appropriate academic background will certainly have an advantage.

Current demands and the consequences of responding to them in new and innovative ways intensify the critical role played by the police in Philippines society.

Out of the 31 private employees, six of them or 2.41% at rank 1.5 were presently employed airport police, and manager/executive/supervisor whereas Customer Service Representative, lawyer and sales associate made equal frequency count of one or 0.40% at ranks 8.

The results show that the respondents in private sectors obtained work in airports, managerial, executive and supervisor position, also opened businesses and be self-employed. This is an indication that the program of this institution provides graduates with attractive skills and knowledge because of good employability rate and the flexibility of work they can do.

For the 218 graduates who were presently public employees, 126 of them or 50.60% at rank 1 were in the Philippine National Police whereas employees in an academe, Department of Health, Department of Justice, Department of Labor and Employment, Government, Rescuer, Security, Sangguniang Kabataan Chairman, Scene Of the Crime Operatives, Office of the President, and Witness Protection Program made equal frequency counts of one or 0.40% at ranks 13.5. Regardless of the sophistication and predictive validity of selection program, it is almost always necessary to expose the graduates of criminology as newly hired employees to some kind of training before they can be maximally effective on a new job, even if the employees are already experienced with the machinery or equipment they will be operating. Working in private sectors as shown in the results are commonly the experiences, skills and knowledge of the graduate – respondents before they apply for the public employees.

Table 3.2 Employment Status of the Respondents

Variables	Frequency	Percentage	Rank
If Their Present Job also Their First Job After College			
Private:			
Yes	10	4.02	2
No	21	8.43	1
Total	**31**	**12.45**	
Public:			
Yes	180	72.29	1
No	38	15.26	2
Total	**218**	**87.55**	
Grand Total	**249**	**100**	
Was the Course They Had in College Relevant to Their Present Job			
Private:			
Yes	15	6.02	2
No	16	6.43	1
Total	**31**	**12.45**	

Public:			
Yes	211	84.74	1
No	7	2.81	2
Total	**218**	**87.55**	
Grand Total	**249**	**100**	
If Employed, What Skills Acquired in College Were They Able to Apply in Their Work			
Communication Skills	215	86.35	1
Information Technology Skills	148	59.44	2
Human Relation Skills	111	44.58	3
Problem Solving Skills	69	27.71	6
Entrepreneurial Skills	91	36.55	5
Critical Thinking Skills	93	37.35	4

As reflected in the table, 21 of the respondents who were presently employed in private institutions disagreed that their present job is also their first job after college while 10 or 4.02% at rank 2 agreed. For the graduate-respondents who were presently employed in public institutions, 180 or 72.29% at rank 1 answered that their present job is also their first job after college whereas 38 or 15.26% at rank 2 answered no. There are many factors that can be considered in the working experiences of the graduate – respondents. The researchers found out that most of the graduate – respondents have their own working experiences while they are still studying in college and considered it as their first job.

Out of 31 graduate respondents who were presently employed in private institutions, 16 of them or 6.43% at rank 1 affirmed that the course they had in college was relevant to their present job and 15 or 6.02% at rank 2 disagreed. In addition, 211 respondents who were presently employed in public institutions responded that their course in college was relevant to their present job. Seven or 2.81% at rank 2 answered no. To a student in the beginning years of his studies, a criminology graduate has more chances of getting employed. A criminology graduate may become a police officer or assigned as jail officer, port police personnel, firefighter, and drug enforcement agent. Others may work as hotel and resort in-house security, security officer in department stores, security consultant, civilian investigators, local traffic enforcer and criminology instructor. Despite all these possibilities, there are criminology graduates who may have jobs not related to their chosen course which have molded, prepared, and enhanced their ability.

In terms of the skills the graduate-respondents acquired that they applied in their present work, 215 or 86.35% at rank 1 answered communication skills whereas 30 69 or 27.71% at rank 6 answered problem-solving skills. Criminology is a branch of sociology that focuses on the causes, effects and social impact of crimes. In many ways, the social aspect of criminology defines the field. For the criminologist, the ability to shift between conveying information with authority and listening carefully with compassion lies at the heart of communication in criminal justice.

Table 4. Details of First Job of the Respondents

Variables	Frequency	Percentage	Rank
After Graduation, How Long Will It Take Them to Land Their First Job			
Below1year	20	8.03	2
1-5years	227	91.16	1
6- 11Months	2	0.80	3
Total	**249**	**100**	
Job Level in Their First Job			
Rank	166	66.67	1
Professional	27	10.84	2
Clerk	13	5.22	4
Technical	24	9.64	3
Management/Executive	8	3.21	5

Supervisor	2	0.80	7.5
Probationary	2	0.80	7.5
Self-Employed	6	2.41	6
Not Indicated	1	0.40	9
Total	**249**	**100**	

As seen in Table 4, 227 of the graduate-respondents or 91.16% at rank 1 took 1 - 5 years to land their first job after graduation while two or 0.80% at rank 3 took them 6 to 11 months.

A job search typically takes two to six months, and sometimes longer for leadership positions. The duration it takes to find a job will vary depending on a variety of factors including the overall strength of the economy, the power of one industry, the number of jobs available in the city or region, and the employment strategy and efforts.

In terms of their job level in their first job, 166 or 66.67% were in rank positions whereas one or 0.40% at rank 9 did not indicate the job level in their first job.Every year, thousands of criminology graduates all over the Philippines try their best effort to attend classes to make sure that they will be able to pass the Criminology Licensure Examination and become licensed criminologists.

In the field of criminology, however, graduates may encounter difficulty to be hired in the PNP, which is under the administrative control of the National Police Commission (NAPOLCOM) because of the stringent provisions under Title IV-B (Qualifications Upgrading), Section 14, of the Republic Act No. 8551, which amended section 30 of Republic Act 6975. The general qualifications for appointment specify possession of minimum qualification which include citizenship, physical test, formal baccalaureate degree, and eligibility set by the commission; have never been dishonorably discharged from military employment; never been convicted of an offense or crime involving moral turpitude, as well as age, height and weight requirements. All these may also contribute as factors which may hinder a criminologist from becoming members of law enforcement agencies.

Suggestions/Comments of the Graduate-Respondents to Improve Academic and Other Services of Lipa City Colleges

The following suggestions/comments were given by the graduate respondents to improve the academic and other services of Lipa City Colleges such as: more accessible books and technology that can be used as reference for thesis and other academic purposes; updated laboratory and criminalistics equipment for proper demonstration and familiarization; improving of school facilities to become a more conducive learning environment; lower the tuition fee and provide more percentage in scholarships. Moreover, it would be better to give focus on the linkages outside the academe regarding future profession of the students. Continue to maintain high quality education and produce more dedicated public servants. Lastly, enhance communication and technical writing skills as well as develop self-confidence to become more competent and adaptable to a variety of life situations.

CONCLUSIONS

Based on the significant findings of the study, the following conclusions were made:

1. Majority of the respondents were male, most of them graduated at the age of 21, has monthly salary of P20,000 - P29,999 and landed their first job as early 2017.

2. Most of the respondents were employed in the Philippine National Police whereas their present job is also their first job after college; that their course is relevant to their present job; and communication skills, information technology skills, human relation skills are the skills they acquired in college that they were able to apply in their present work.

3. Most of the respondents took 1-5 years to land to their first job and majority of their positions are ranked.

RECOMMENDATIONS

In light of the conclusions drawn, the researchers offer the following recommendations:

1. To the institution of Lipa City Colleges, the researchers ought to encourage to continue keeping databases of their graduates on completion and work to broaden alumni associations, create a specific Committee or group designed in the monitoring of the whereabouts of the graduates, and develop a system where the graduates can easily access and update their employment status.

2. The researchers also propose to enhance the skills required by the employment sector and school program through actual activities such as hands on laboratory experiment and marksmanship that should be tailored to match the required skills for faster employment.

3. In addition, the researchers encourage the institution to further enhance graduate employment locally and create international opportunities through career orientation by increasing efforts in creating additional linkages with institutions that are intended to recruit graduates upon completion of their studies to maintain or improve the 1-5 years span of landing to their first job after graduation.

4. Furthermore, the researchers ought to persuade future researchers to conduct similar studies to explore into other variables related to graduates' employability like reasons of the unemployment of some of the graduates, number of times the respondents changed job, number of graduates whose jobs are not related to their course yet remain with the present work, job satisfaction and promotion, congruence between curriculum and skills that industry expects from would-be employees.

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REFERENCES

Abelha, M., Fernandes, S., Mesquita, D., Seabra, F., & Olivera, A.T. (2020). Graduate Employability and Competence Development in Higher Education-A Systematic Literature Review Using PRISMA. https://doi.org/10.3390/su12155900

Allen, M. (2017) The SAGE Encyclopedia of Communication Research Methods. https://doi.org/10.4135/9781483381411

Creswell, J.W. (2013) Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. 4th Edition, SAGE Publications, Inc., London.

Cuadra, 2019.The Use of Tracer Study in Improving Undergraduate Programs in the University. https://www.researchgate.net/publication/335429907_The_Use_of_Tracer_Study_in_Improving_Undergraduate_Programs_in_the_University.

National Police Commission (NAPOLCOM). An Act Providing for the Reform and Reorganization Of The Philippine National Police and for Other Purposes, amending Certain Provisions Of Republic Act Numbered Sixty-Nine Hundred And Seventy-Five Entitled, "An Act Establishing The Philippine National Police Under A Reorganized Department Of The Interior And Local Government, And For Other Purposes". https://napolcom.gov.ph/

Woya,A. (2019). Employability among Statistics Graduates: Graduates' Attributes, Competence, and Quality of Education, Education Research International, p.7. https://doi.org/10.1155/2019/7285491

LEVEL OF SATISFACTION AND RETENTION AMONG SELECTED BS CRIMINOLOGY STUDENTS OF LIPA CITY COLLEGES

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ABSTRACT

This research study explores the level of satisfaction and retention among criminology students at Lipa City Colleges. The objectives of the study include examining the demographic profile of the respondents, assessing satisfaction levels in terms of school facilities, school services, and quality of teaching, evaluating the level of retention across various dimensions, exploring the relationship between academic satisfaction and retention, investigating differences in satisfaction and retention based on student profiles, and proposing a plan of action based on the study's findings. The study used a descriptive research design and a self-made questionnaire to collect data. Stratified random sampling was used to select a representative sample of criminology students. The results revealed a high satisfaction with school facilities, indicating a favorable learning environment. Additionally, student satisfaction with the services provided by the college improved, and their expectations increased, suggesting effective service delivery. Quality of teaching emerged as a significant factor influencing satisfaction and retention. The analysis of retention levels identified psychological support, a supportive learning environment, and addressing financial difficulties as critical factors for promoting student retention. Furthermore, the study established a significant relationship between academic satisfaction and retention, highlighting the importance of creating a positive academic environment. These findings contribute to the existing knowledge on student satisfaction and retention and emphasize the need for comprehensive support services and increased institutional financial support to enhance student competence and improve retention rates. The study's implications provide actionable recommendations for enhancing the academic experience of criminology students at Lipa City Colleges.

Keywords: satisfaction, retention, and Criminology students

INTRODUCTION

Higher education institutions today must deal with a variety of challenging academic issues. Higher education faces several challenges, including satisfying students' educational demands while raising retention and throughput rates. Higher education institutions must pay close attention to student support and institution quality to meet these difficulties. University student happiness has become crucial to quality assurance as the higher education market becomes increasingly competitive. With the globalization of higher education, the relevance of student happiness has developed in higher education literature. Initially, industry-based satisfaction models were used to describe students' satisfaction, and then higher education-based models were constructed to explain it. Since the success of an institution is based on the pleasure of its students, higher education institutions must identify their strengths and areas for improvement (Kanwar & Sanjeeva, 2022). A study states that students are the most important stakeholders of any educational institution. Along with students' progression and placements, one of the main indicators of a college's progress is the student's level of satisfaction. In India, HEIs not only impart the required skills and improve the abilities of their graduates but also concentrate on gratifying students' feelings about their scholastic experiences in the institution. There is an emphasis on primary activities such as teaching-learning, evaluation, research, extension activities, and innovation, along with an emphasis on

infrastructure facilities, quality of services, welfare measures for students and staff, and overall satisfaction of overall educational experience, as it is efficient and relevant techniques for garnering, preserving, and enhancing connections with students (Al-Sheeb et al., 2018). However, students' satisfaction with the quality of the education services they receive is a crucial index of the performance of HE institutions in today's world (Santini et al., 2017). Because of its importance and consequences, many academics investigate service quality in educational institutions. The Philippines' higher education is not spared from current trends in service quality among HEIs. The Commission on Higher Education (CHED) produced circulars to improve service quality at HEIs in response to these concerns. Section 3 of CMO21seriesof 2006 and Section 10 of CMO 09 series of 2013 required the Philippines' Higher Education Institutions (HEIs) to provide student-oriented programs and services in order to maintain academic instruction envisioned for holistic human development and active participation in country-building (CHED,2006). The major student welfare activities and services required to support students' well-being are stipulated by the same CMOs. HEIs must also have a suitable number of student service workers to serve the student population. Numerous factors might affect a student's decision to enroll at a university as well as their decision to stay enrolled there. University students' satisfaction is one of them, and it is crucial to the institution's success. Despite the popular perception that there is, in fact, a favorable impact on the retentional connection between the two. To ascertain if student retention is influenced by satisfaction. The study assesses the relationship between student satisfaction and retention among criminology students at Lipa City Colleges. The research is deemed applicable nowadays when there is a need for knowledge regarding the subject matter. The study's findings are aimed to promote consciousness by giving information, which will boost those in charge's capacity to policies and make decisions that will assist improve retention and student happiness in the institution.

STATEMENT OF THE PROBLEM

This study aimed to know the relationship between student satisfaction and retention among criminology students at Lipa City Colleges. Moreover, the researchers attempted to seek answers to the following questions:

1. What is the demographic profile of the respondents in terms of:
   1.1 age,
   1.2 sex, and
   1.3 socio economic status?

2. What level is the satisfaction of the selected Criminology students in the Lipa City Colleges in terms of:
   2.1 school facilities,
   2.2 school services, and
   2.3 quality of teaching?

3. What is the extent of retention among Criminology students at Lipa City Colleges with regards to the following aspects:
   3.1 Psychological factors,
   3.2 Environmental factors,
   3.3 Interactional factors,
   3.4 Academic factors, and
   3.5 Financial factors?

4. Is there a significant relationship between the level of academic satisfaction and level of retention among selected Criminology students of Lipa City Colleges?
5. What program can be proposed to expand the satisfaction of the school service and retention?

METHODOLOGY

The design used in this study was descriptive research. It was used because it tried to explore and discuss the present state of a phenomenon. The respondents were the 227 criminology students of Lipa City Colleges who were currently enrolled in the school year 2021-2022. The list of students who were subjected to this study came from the Department Secretary. To achieve the total number of respondents, the researcher utilized stratified random sampling to find respondents in order to determine the study's goals. Moreover, to proceed with the data gathering, the research used self-made questionnaire validated by three research experts.

FINDINGS

Table 1. Profile of the Respondents

Profile	Frequency	Percentage	Rank
Age:			
18 - 19 years old	115	50.66	1
20 - 21 years old	86	37.89	2
22 - 23 years old	21	9.25	3
24 years and above	5	2.20	4
Total	**227**	**100**	**327**
Sex:			
Female	78	34.36	2
Male	149	65.64	1
Total	**227**	**100**	**327**
Year Level			
Second Year	98	43.17	1
Third Year	72	31.72	2
Fourth Year	57	23.35	3
Total	**227**	**100**	327

As given in Table 1, in terms of the respondents age, 18 - 19 years old gained the frequency count of 115 or 50.66% at rank 1 which are from first year criminology students. The finding suggests that the majority of the student- respondents in the research study were in the age range of 18-19 years old. This result implied that this age group is common among college and university students. On the other hand, 24 years old and above which are from the 4th year criminology students made the least frequency count of five or 2.20% at rank 4.

In terms of gender, 149 respondents, or 65.64%, were male at rank 1, while 78 respondents, or 34.36%, were female at position 2. With respect to the year level of the student- respondents, second year obtained the highest frequency count of 98 or 43.17% at rank 1. On the contrary, the fourth-year students got the least frequency count of 53 or 23.35% at rank 3.

Table 2. Level of Satisfaction of the Criminology Students in Lipa City Colleges in Terms of School Facilities

Items	Weighted Mean	Interpretation	Rank
1. Equipment used for subject programs are readily made available and well- maintained.	4.09	Very Satisfied	4
2. Proper waste disposal is strictly utilized.	4.11	Very Satisfied	3
3. Educational facilities are the topmost priority of the school.	4.32	Extremely Satisfied	1
4. The school maintains a desirable environment.	4.22	Extremely Satisfied	2
5. Buildings and grounds are kept-up.	4.02	Very Satisfied	5
Composite Mean	**4.15**	**Very Satisfied**	

As seen in the table 2, the respondents were extremely satisfied on the educational facilities which are the topmost priority of the school which got the weighted mean of 4.32 in which it is the highest rank. This finding suggests that the school facilities play an important role in ensuring the quality of teaching and learning and achieving high educational standards. Also, the respondents were very satisfied on the way buildings and grounds are kept-up based on the results of the data which obtained the least weighted mean of 4.02 and least rank of 5. The criminology students in Lipa City Colleges were highly satisfied with the school facilities, particularly with the maintenance of buildings and grounds.

The composite mean of 4.15 concluded that the respondents were very satisfied on the school facilities. This finding suggests that the criminology students in Lipa City Colleges are highly satisfied with the school's facilities.

Table 3. Level of Satisfaction of the Criminology Students in Lipa City Colleges in Terms of School Services

Items	Weighted Mean	Interpretation	Rank
Program's curriculum was generally acceptable for professional demands	4.26	Extremely Satisfied	1
Courses were presented in a logical order, with older content being built upon in future courses	4.11	Very Satisfied	3
The school provides a flexible learning service both in online and face to face class	4.15	Very Satisfied	2
The school use a variety of assessment	3.84	Very Satisfied	5
The professors are responsive to students' needs.	4.00	Very Satisfied	4
Composite Mean	**4.07**	**Very Satisfied**	

As seen in the table 3, the respondents were extremely satisfied on program's curriculum which was generally acceptable for professional demands which yielded the weighted mean of 4.26 and the highest rank of 1. This finding suggests that the criminology program in Lipa City Colleges provides a relevant and comprehensive curriculum that meets the expectations of the students in terms of professional demands.

On the other hand, the said group of respondents were very satisfied on the way the school use variety of assessments which made the least weighted mean of 3.84 and least rank of 5. The finding suggests that the criminology students in Lipa City Colleges are highly satisfied with the school's use of various assessment methods.

The composite mean of 4.07 signified that the respondents were very satisfied on school services. The high level of satisfaction of criminology students in Lipa City Colleges on school services may be attributed to the quality of education and support provided by the institution.

Table 4. Level of Satisfaction of the Criminology Students in Lipa City Colleges in Terms of Quality of Teaching

Items	Weighted Mean	Interpretation	Rank
1. Instructors routinely displayed an understanding of and enthusiasm for the program's fundamentals.	4.11	Very Satisfied	2
2. The course will benefit from the lecturers' use of the instructional resources.	4.05	Very Satisfied	4
3. Students are taught by highly competent professors.	4.08	Very Satisfied	3
4. Promotes student motivation and activeness in learning.	4.00	Very Satisfied	5
5. Explains to the students the skills that will be required of them.	4.13	Very Satisfied	1
Composite Mean	**4.07**	**Very Satisfied**	

As written in the table 4, the respondents were very satisfied on the way teachers explain to the students the skills that will be required of them which got the weighted mean of 4.13 and the highest rank of 1. This finding suggests that the quality of teaching in Lipa City Colleges is perceived to be of high quality, particularly in terms of imparting the necessary skills to criminology students.

Meanwhile, the said group of respondents were also very satisfied the way how teachers promote student's motivation and activeness in learning which gained the least weighted mean of 4.00 and least rank of 5. The high level of satisfaction among Criminology students in Lipa City Colleges regarding the

quality of teaching can be attributed to the teachers' ability to promote student motivation and active learning.

The composite mean of 4.07 implied that the respondents were very satisfied on the quality of teaching offered by the school.

Table 5. Level of Retention of the Criminology Students of Lipa City Colleges in Terms of Psychological

Items	Weighted Mean	Interpretation	Rank
1. The institution cares about its students as individuals.	4.22	Strongly Agree	1
2. The school provides students a sense of belonging.	4.15	Agree	4
3. The college has a strong dedication to academic success.	4.17	Agree	3
4. Academic success is influenced by student instructor relationship.	4.11	Agree	5
5. I have fear of being contaminated with virus.	4.18	Agree	2
Composite Mean	**4.17**	**Agree**	

As gleaned in the table 5, the respondents strongly agreed that the institution cares about its students as individuals which obtained the weighted mean of 4.22 and the highest rank of 1. This finding suggests that the perceived level of support and care from the institution may have contributed to the high level of retention among criminology students of Lipa City Colleges.

Furthermore, the said group of respondents only agreed that their academic success is influenced by student instructor relationship which got the least weighted mean of 4.11 and least rank of 5. The finding that student- instructor relationship has the least influence on academic success among criminology students of Lipa City Colleges suggests that other factors, such as academic motivation and study habits, may have a greater impact on retention in this field.

The composite means of 4.17 affirmed that the respondents agreed on their level of retention in terms of psychological aspect. The finding suggests that the criminology students of Lipa City Colleges have a high level of retention in terms of psychological factors, which may include motivation, memory, and learning strategies. This could be attributed to various factors such as effective teaching methods, student engagement, and a positive learning environment.

Table 6. Level of Retention of the Criminology Students of Lipa City Colleges in Terms of Environment

Items	Weighted Mean	Interpretation	Rank
1. My school ensures the safety and cleanliness of our facilities during the pandemic.	3.73	Agree	4
2. I felt shocked with the changes on my school environment due to pandemic.	3.75	Agree	3
3. Our facilities were still all accessible even during the pandemic.	3.96	Agree	1
4. I felt anxiety because of the unfavorable home learning environment that my school offered during the pandemic.	3.69	Agree	5
5. My educational environment during the pandemic helps me more to hone my skills and talent.	3.82	Agree	2
Composite Mean	**3.79**	**Agreed**	

As reflected in the table 6, the respondents agreed that the school facilities were still all accessible even during the pandemic which made the weighted mean of 3.96 and the highest rank of 1. This finding suggests that the environmental factors, particularly the accessibility of school facilities, may have contributed to the high level of retention among criminology students at Lipa City Colleges.

In addition, the said group of respondents also agreed that they felt anxiety because of the unfavorable home learning environment that their school offered during the pandemic which yielded the least weighted mean of 3.69 and least rank of 5. The finding suggests that the level of retention of criminology students in Lipa City Colleges is affected by their home learning environment during the pandemic, which causes anxiety.

The composite mean of 3.79 implied that the respondents agreed on their level of retention in terms of environmental aspect. The high level of retention of the criminology students in Lipa City Colleges can be attributed to the positive learning environment provided by the school.

Table 7. Level of Retention of the Criminology Students of Lipa City Colleges in Terms of Interactional

Items	Weighted Mean	Interpretation	Rank
1. Despite the pandemic, there were still a number of opportunities for peer connection.	4.02	Agree	5
2. During the pandemic, students had the impression that their professors were easily reachable.	4.17	Agree	3
3. Limited interactional classes helped me to study efficiently and further help my family during the pandemic by making them not worry about missing classes or my safety being endangered while having to travel.	4.19	Agree	1.5
4. I gained more knowledge during the limited interaction with professors and classmates because of the pandemic.	4.19	Agree	1.5
5. Even when the pandemic is at its worst, teaching and learning services are given with attention to each student.	4.06	Agree	4
Composite Mean	**4.13**	**Agree**	

As revealed in the table 7, the respondents agreed that limited interactional classes helped them to study efficiently and further help their family during the pandemic by making them not worry about missing classes or their safety being endangered while having to travel, and they gained more knowledge during the limited interaction with professors and classmates because of the pandemic which obtained the equal weighted means of 4.19 and the highest ranks of 1.5. This finding suggests that limited interactional classes, which were a result of the pandemic, had a positive impact on the level of retention of Criminology students at Lipa City Colleges.

On the contrary, the said group of respondents also agreed that despite the pandemic, there were still number of opportunities for peer connection which garnered the least weighted mean of 4.02 and least rank of 5. The finding suggests that the level of retention of criminology students in Lipa City Colleges is not significantly affected by the lack of peer connection opportunities during the pandemic.

The composite mean of 4.13 inferred that the respondents agreed on their level of retention in terms of interactional aspect. This finding suggests that the criminology students of Lipa City Colleges had a positive perception of their interaction with their teachers, classmates, and other school personnel, which could have contributed to their retention in the program.

Table 8. Level of Retention of the Criminology Students of Lipa City Colleges in Terms of Academic

Items	Weighted Mean	Interpretation	Rank
1. My instructors and other faculty members are able to provide me with necessary help.	4.26	Strongly Agree	2.5
2. I got adequate academic assistance to help me strengthen my critical and logical thinking abilities.	4.26	Strongly Agree	2.5
3. My school offers a variety of academic and extracurricular activities to help me build on my skills while also addressing my inadequacies.	4.20	Strongly Agree	4
4. The professors would not move on to the following topic until the majority of students had understood the lectures.	4.19	Agree	5
5. Demand that students be enthusiastic and willing to work to complete the learning task.	4.27	Strongly Agree	1
Composite Mean	**4.24**	**Strongly Agree**	

As stated in the table 8, the respondents strongly agreed that the demand that students should be enthusiastic and willing to work to complete the learning task was attained which made the weighted mean of 4.27 and the highest rank of 1. This finding suggests that the level of retention of criminology students at Lipa City Colleges is positively influenced by the students' enthusiasm and willingness to complete learning tasks. Contrary wise, the said group of respondents only agreed that the professors would not move on to the following topic until the majority of students had understood the lectures which got the least weighted mean of 4.19 and least rank of 5. The finding suggests that the academic support provided to the criminology students at Lipa City Colleges may not be sufficient in terms of ensuring their level of retention.

The composite mean of 4.24 concluded that the respondents agreed on their level of retention in terms of academic aspect.

Table 9. Level of Retention of the Criminology Students of Lipa City Colleges in Terms of Financial

Items	Weighted Mean	Interpretation	Rank
1. My family can afford all the school expenses.	4.15	Agree	5
2. My school provides a fair amount of school expenses.	4.22	Strongly Agree	2
3. Extracurricular activities that are unrelated to my degree are organized by my school and cost extra fees.	4.19	Agree	4
4. Both my parents are employed.	4.20	Strongly Agree	3
5. Our budget is sufficient for any expenses that are related to school.	4.25	Strongly Agree	1
Composite Mean	**4.20**	**Strongly Agree**	

As discussed in the table 9, the respondents strongly agreed that the budget is sufficient for any expenses that are related to the school which gained the weighted mean of 4.25 and the highest rank of 1. This finding suggests that financial support plays a crucial role in the level of retention of criminology students in Lipa City Colleges. Adequate funding and financial assistance can alleviate financial burdens and allow students to focus on their studies, which may contribute to higher retention rates.

Lastly, the said group of respondents only agreed that their family can afford all the school expenses which gained the least weighted mean of 4.15 and least rank of 5. The finding suggests that financial support is an important factor that affects the level of retention of criminology students. Students who receive adequate financial support are more likely to stay in school and complete their degree.

The composite means of 4.20 signified that the respondents agreed on their level of retention in terms of financial aspect. The finding suggests that the criminology students of Lipa City Colleges have a good level of retention in terms of financial support. This could be attributed to the financial assistance provided by the institution, as well as the students' ability to manage their finances.

Table 10. Relationship Between the Level of Academic Satisfaction and Level of Retention in Lipa City Colleges

Variables Compared	r- value	p-value	Decision	Interpretation
Level of Academic Satisfaction versus Level of Retention				
School Facilities:				
Psychological	0.75	0.0000	p<0.01, Reject Ho	Highly Significant
Environmental	0.61	0.0000	p<0.01, Reject Ho	Highly Significant
Interactional	0.64	0.0000	p<0.01, Reject Ho	Highly Significant
Academic	0.66	0.0000	p<0.01, Reject Ho	Highly Significant
Financial	0.62	0.0000	p<0.01, Reject Ho	Highly Significant
School Services:				
Psychological	0.83	0.0000	p<0.01, Reject Ho	Highly Significant
Environmental	0.72	0.0000	p<0.01, Reject Ho	Highly Significant
Interactional	0.67	0.0000	p<0.01, Reject Ho	Highly Significant
Academic	0.68	0.0000	p<0.01, Reject Ho	Highly Significant
Financial	0.60	0.0000	p<0.01, Reject Ho	Highly Significant

Quality of Teaching:				
Psychological	0.83	0.0000	p<0.01, Reject Ho	Highly Significant
Environmental	0.71	0.0000	p<0.01, Reject Ho	Highly Significant
Interactional	0.62	0.0000	p<0.01, Reject Ho	Highly Significant
Academic	0.63	0.0000	p<0.01, Reject Ho	Highly Significant
Financial	0.61	0.0000	p<0.01, Reject Ho	Highly Significant

As given in the table 10, when the responses of the respondents on the level of academic satisfaction in terms of school facilities were compared to their level of retention, the computed correlation coefficients of 0.75 for psychological, 0.61 for environmental, 0.64 for interactional, 0.66 for academic and 0.62 for financial aspects have corresponding p-values of less than 0.01, thus rejecting the hypothesis.

These implied that the responses of the respondents on the level of academic satisfaction in terms of school facilities have high significant relationships to their level of retention, in terms of psychological, environmental, interactional, academic, and financial aspects. This finding suggests that there is a strong relationship between the level of academic satisfaction and level of retention in Lipa City Colleges, specifically in terms of school facilities. This is consistent with previous studies that have shown a positive correlation between academic satisfaction and student retention When the responses of the respondents on the level of academic satisfaction were compared to their level of retention in terms of school services, the computed correlation coefficients of 0.83 for psychological, 0.72 for environmental, 0.67 for interactional, 0.68 for academic and 0.60 for financial aspects have corresponding p-values of less than 0.01, thus rejecting the hypothesis.

These inferred that the responses of the respondents on the level of academic satisfaction in terms of school services have high significant relationships to their level of retention, tin terms of psychological, environmental, interactional, academic and financial aspects. This finding suggests that there is a strong positive relationship between the level of academic satisfaction and level of retention in Lipa City Colleges, particularly in terms of psychological, environmental, interactional, academic, and financial aspects. Lastly, when the responses of the respondents on the level of academic satisfaction were were compared to their level of retention in terms of quality of teaching, the computed correlation coefficients of 0.83 for psychological, 0.71 for environmental, 0.62 for interactional, 0.63 for academic and 0.61 for financial aspects have corresponding p-values of less than 0.01, thus rejecting the hypothesis.

These concluded that the responses of the respondents on the level of academic satisfaction in terms of quality of teaching have high significant relationships to their level of retention, tin terms of psychological, environmental, interactional, academic and financial aspects. The study found a significant positive relationship between the level of academic satisfaction and level of retention in Lipa City Colleges. The computed correlation coefficients showed strong associations between psychological, environmental, interactional, academic, and financial aspects of academic satisfaction and retention.

PROPOSED PROGRAM

Based on the findings of the study, a comprehensive student support and retention program can be proposed for Lipa City Colleges. The program can include various initiatives such as regular surveys to monitor student satisfaction with school facilities, services, and quality of teaching, providing additional financial assistance and scholarships to students who are facing financial challenges, enhancing psychological support services, promoting student engagement and participation in extracurricular activities, clubs, and organizations, offering mentorship and tutoring programs to students who need additional academic support, and providing flexible and innovative learning options to ensure that students can continue their education and achieve their academic goals, even in the face of limited interaction due to the pandemic. The proposed program aims to enhance academic satisfaction, social integration, and student success, and thereby promote student retention in Lipa City Colleges.

Firstly, the program can start by conducting regular surveys and feedback mechanisms to monitor student satisfaction with school facilities, services, and quality of teaching. This will help identify areas that require improvement and take appropriate actions based on the feedback. The program can also include providing additional financial assistance and scholarships to students who are facing financial challenges, to ensure they can continue their education and achieve their academic goals. This initiative

can also be accompanied by providing career guidance and counseling to help students make informed decisions about their academic and professional goals.

Moreover, enhancing psychological support services can be a crucial part of the program. This can include providing individual and group counseling services, peer support groups, and mental health awareness programs. The goal is to help students cope with the academic and personal challenges they may face, promote their mental health and well-being, and ultimately, improve their academic performance.

In addition, promoting student engagement and participation in extracurricular activities, clubs, and organizations can be an effective strategy to foster social integration and a sense of belonging among students. This can include organizing cultural events, sports tournaments, and community service activities that bring students together and provide them with opportunities to develop social and leadership skills.

Furthermore, offering mentorship and tutoring programs can be another initiative to support students who need additional academic support. The program can include assigning faculty members or senior students to mentor and guide new students, and providing tutoring services to students who require additional academic assistance.

Lastly, providing flexible and innovative learning options can be crucial to ensure that students can continue their education and achieve their academic goals, even in the face of limited interaction due to the pandemic. This can include online learning platforms, hybrid learning models, and providing access to digital resources aid tools to support student learning.

In conclusion, the proposed student support and retention program for Lipa City Colleges aims to enhance academic satisfaction, social integration, and student success, and ultimately, promote student retention in the institution. By implementing these initiatives, Lipa City Colleges can provide a supportive and conducive environment for students to thrive academically and personally.

PROPOSED PROGRAM

Key Results	Activity	Specific Objectives	Persons Involved	Time Frame	Indicator of Success
Increased positive expectations among criminology students at Lipa City Colleges.	Criminology Program Orientation Sessions	Enhance students' expectations of their criminology education.	Academic staff, career counselors, and student orientation leaders.	Conduct orientation sessions before the start of each academic year.	Survey responses indicating a higher percentage of students with positive expectations compared to the previous years.
Increased perception of value among criminology students at Lipa City Colleges.	Industry Speaker Series	Promote the perceived value of the criminology education.	Alumni relations office, faculty members, industry experts.	Schedule guest lectures and workshops throughout the academic year.	Feedback from students indicating a greater understanding of the value and relevance of their criminology education.
Higher levels of student engagement and participation.	Criminology Student Organizations and Competitions	Foster student engagement and participation.	Student affairs office, faculty advisors, student club leaders.	Ongoing throughout the academic year.	Increased participation rates in extracurricular activities and higher attendance at academic events.
Improved academic and career guidance for criminology students.	Academic and Career Advising Program	Provide academic and career guidance.	Academic advisors, career counselors, faculty members.	Implement the advising program at the beginning of each academic year.	Higher satisfaction rates among students regarding the availability and effectiveness of academic and career guidance services.
Enhanced understanding of student satisfaction and retention patterns.	Student Feedback Surveys and Exit Interviews	Monitor and evaluate student satisfaction and retention.	Research team, faculty members, student affairs office.	Conduct surveys at the end of each semester and exit interviews with graduating students.	Identification of key factors influencing student satisfaction and retention, and implementation of targeted interventions based on the collected feedback.

CONCLUSIONS

Based on the findings of the study the following conclusions were drawn:

1. Based on the data gathered, the majority of the respondents were 18-19 years old which are second year Criminology students. This information is important for understanding the characteristics and needs of the student body at Lipa City Colleges.
2. Majority of the respondents assessed the level of satisfaction in terms of school facilities, school services, and quality of teaching. Based on the data gathered, the majority of respondents are extremely satisfied. The institution provides a favorable learning environment with well-equipped facilities and meets student demands with high-quality services. The caliber of instruction was identified as a significant factor affecting student retention and satisfaction. To increase student satisfaction, it is crucial to provide well-equipped facilities, quality services, and effective teaching techniques.
3. The majority of respondents strongly agreed that the academic and financial were influencing of retention among Criminology students, on the other hand the response agreed in psychological, environmental, and interactional. The majority of respondents had their retention assessed based on psychological, environmental, interactional, academic, and financial factors. The study examined retention rates among criminology students at Lipa City Colleges, taking into account multiple factors. The findings revealed that psychological, ambient, interactional, academic, and financial factors affected student retention. Students firmly agreed that the institution cares about them as individuals in response to psychological support and a supportive learning environment. Significant financial difficulties were identified as a factor affecting retention highlighting the need for increased financial support to enhance student competence and retention rates. These findings highlight the significance of providing comprehensive support services and resolving financial concerns to increase student retention.
4. The study revealed a significant relationship between the level of academic satisfaction and the level of retention among the selected criminology students at Lipa City Colleges. Factors such as school resources, services, and instructional quality were identified as key determinants of student satisfaction, which in turn influenced their likelihood of staying enrolled in the program. These findings support the notion that creating a positive and conducive academic environment, where students feel satisfied with their educational experience, can contribute to higher retention rates.

RECOMMENDATIONS

Based on these conclusions, the following recommendations can be made:

1. The findings of the study indicate that students pursuing criminology at Lipa City Colleges exhibit discontentment with the pedagogical approaches employed by their instructors to foster their participation in the learning process. In order to tackle this matter, it is recommended that the academic institution contemplate the adoption of compelling pedagogical methodologies such as active learning, group deliberations, and cooperative assignments. The inclusion of empirical case studies, tangible illustrations, and experiential learning activities can serve to evince the pragmatic applicability of the topic at hand. Consistently offering feedback, providing constructive guidance, and promoting engagement in school- related events can effectively augment the educational atmosphere. By giving priority to these recommendations, Lipa City Colleges can enhance the quality and efficacy of its criminology program.
2. Despite the limited influence of the student-teacher relationship on the academic advancement of criminology students at Lipa City Colleges, it is imperative to enhance this facet through concerted efforts. The establishment of a strong relationship between educators and learners is of paramount importance in cultivating a conducive academic atmosphere and enhancing student involvement. Administrators have the ability to promote transparent communication between educators and pupils, implement specialized training initiatives to provide assistance to specific students, and guarantee the accessibility of channels for constructive feedback. Furthermore, the utilization of dynamic pedagogical approaches and the cultivation of a favorable learning environment can augment the quality of interactions between educators and learners. Lipa City Colleges can enhance academic

achievement and student retention by giving priority to the enhancement of the student-teacher relationship and allocating resources accordingly.

3. The research found that students' dissatisfaction stems from instructors' inability to engage them. It is suggested that the Lipa City Colleges criminology students may take proactive steps to address this problem. Students must communicate with instructors to convey their needs, participate in class discussions, ask questions, and resolve any issues. Setting goals, managing time, and developing effective study habits is crucial to taking responsibility for learning. Academic help programs and tutoring improve academic understanding. Peer talks and project work may benefit. Finally, extracurricular, and practical criminology experiences might boost motivation and knowledge. Actively participating in school and asking for help will boost Lipa City Colleges criminology students' motivation.
4. In light of the relatively weaker association between academic satisfaction and satisfaction with teaching quality, as well as student retention, it is recommended that Lipa City Colleges should invest in teaching quality to improve student satisfaction and retention due to the weaker relationship between academic satisfaction and teaching quality. The school can promote effective teaching. This may include giving faculty professional development to improve their pedagogical skills and teaching methods. Interactive lectures, active learning activities, and practical application may boost student engagement and motivation. Supportive and inclusive learning environments help students feel comfortable asking questions and seeking help. Periodic evaluations and comments may improve education. Lipa City Colleges may increase student happiness and retention by emphasizing these ideas.

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REFERENCES

Al-Sheeb, B., Hamouda, A. M., & Abdella, G. M. (2018). Investigating Determinants of Student Satisfaction in the First Year of College in a Public University in the State of Qatar. Education Research International. https://doi.org/10.1155/2018/3616794

Commission on Higher Education (CHED). (2006). Guidelines on Student Affairs and Service Program, Pub. L. No. 21.

Kanwar, A., Sanjeeva, M. (2022). Student satisfaction survey: a key for quality improvement in the higher education institution. *Journal of Innovation and Entrepreneurship*, 11, 27. https://doi.org/10.1186/s13731-022-00196-6

Santini, F., Ladeira, W., Sampaio, C., & da Silva Costa, G. (2017). Student satisfaction in higher education: A meta-analytic study. *Journal of Marketing for Higher Education*, 27(1), 1–18. https://doi.org/10.1080/08841241.2017.13119

EFFECTIVENESS OF FLIPPED CLASSROOM UNDER POST PANDEMIC SELECTED PUBLIC ELEMENTARY SCHOOLS IN CAMARINES-NORTE: A DESCRIPTIVE ANALYSIS

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ABSTRACT

The COVID-19 disruptions cause a teaching and learning model that integrates in-person and online sessions jointly developed by researchers and teacher educators. One of the novel strategies that gained popularity during this period was the flipped classroom model, a redesigned iteration of blended learning that employed technology to increase student engagement and facilitate learning. The fundamental concept of the flipped classroom entails students observing instructional video materials in advance of class and subsequently engaging in interactive and participatory discussions in person during the class period. Many scholarly investigations have acknowledged the efficacy of the reversed classroom methodology in maximizing educational achievements. As an illustration, Monzonís et.al. (2020) examined the perspectives of educators and learners who adopted a flipped approach amidst the COVID-19 pandemic. Notwithstanding these encouraging results, there is an unwavering demand for additional investigation into the efficacy of this novel approach in the context following the pandemic. Hence, this paper aims to delineate and assess the efficacy of the flipped classroom approach within the educational environment in a post-pandemic setting. A sample size of 30 teachers was selected using the purposive sampling method. Data collection was done using questionnaires. The sampling frame included educators who implemented the flipped classroom model during this post-pandemic period. The result shows that teachers using flipped classrooms effectively use Flexible Environments and Intentional Content. On the other hand, a Flipped Classroom setup has a strong, effective impact on learning culture and professional educators. Flipped Classroom Setup has a a positive overall impact on the learners' academic performance, specifically on increasing student's confidence and engagement.

INTRODUCTION

The emergence of the COVID-19 pandemic necessitated significant changes in educational methodologies, driving institutions of education to promptly adjust their strategies to facilitate productive learning and teaching experiences for learners and teachers. During this period, blended learning opportunities increased significantly as online options proliferated, and a greater focus was on minimizing in-person instructional periods. As a result of the difficulties introduced by the COVID-19 disruptions, the researcher and teacher educators jointly developed a teaching and learning model that integrates in-person and online sessions. Reducing conventional teacher-student interaction time-constrained educational prospects and evolving pedagogical approaches resulted in predominantly unchanged assessments. This situation placed additional burdens on both instructors and learners. Although essential, the implementation of online learning also brought to light difficulties associated with inadequate technology infrastructure and restricted proficiency in digital tools. One of the novel strategies that gained popularity during this period was the flipped classroom model, a redesigned iteration of blended learning that employed technology to increase student engagement and facilitate learning.

The fundamental concept of the flipped classroom entails students observing instructional video materials in advance of class and subsequently engaging in interactive and participatory discussions in person during the class period. The flipped classroom model, a technologically facilitated transformative teaching methodology, provides students with audio-visual learning materials before in-class activities (He, 2020). By leveraging students' pre-existing knowledge, this pre-class learning facilitates more inter-

active discussions in person, ultimately enhancing the learning experience. By employing this methodology, instructors can facilitate students' engagement in collaborative and interactive exercises, wherein they can utilize the information gained in advance (Aidoo, 2022).

Many scholarly investigations have acknowledged the efficacy of the reversed classroom methodology in maximizing educational achievements. As an illustration, Monzonís et al. (2020) examined the perspectives of educators and learners who adopted a flipped approach amidst the COVID-19 pandemic. This research indicated that students exhibited enhanced learning abilities and increased motivation. Notwithstanding these encouraging results, there is an unwavering demand for additional investigation into the efficacy of this novel approach in the context following the pandemic. Hence, this study aims to delineate and assess the efficacy of the flipped classroom approach within the educational environment following the pandemic.

Related Literature

Despite the divergent opinions voiced by teachers and students, researchers have discovered that flipped classes are advantageous. According to Gough, DeJong, and Grundmeyer (2017), flipped classrooms have allowed students to acquire core knowledge at home while allocating in-class time for applying concepts and developing critical thinking abilities. Depending on the successful environment, the flipped classroom has been demonstrated to have both beneficial and negative effects. According to Flores, Del-Arco, and Silva (2016), the flipped classroom is a novel approach to teaching that expands 21st-century learning methods by fostering a different classroom culture with technology. According to some research, the flipped classroom approach will be the cornerstone of future successful teaching and learning (Bernard, 2015; Zainuddin & Halili, 2016). According to O'Flaherty and Phillips (2017), the flipped classroom model is a successful teaching strategy in which students participate in higher-order thinking exercises that promote teamwork in problem-solving, in-depth idea exploration, and the creation of real assessment tasks.

Like other emerging pedagogical approaches, the flipped classroom has garnered various responses from educational experts and educators. While some have expressed enthusiasm and support for this method, others have raised concerns and criticisms. The ongoing dispute between proponents and critics of this approach has sparked a vigorous discourse within the literature, consequently stimulating further research efforts. Various research studies have yielded mixed results regarding the effectiveness of the flipped classroom model. While certain findings have shown promising outcomes, other studies have demonstrated contrasting or negative results. Additionally, some research has indicated no significant difference between the flipped classroom approach and traditional teaching methods.

Learning is influenced by student motivation, and the degree to which students are motivated and how many extracurricular activities they participate in during class determines how well the flipped classroom model works (Abeysekera & Dawson, 2015). Students are encouraged to participate actively in class discussions, which supports their demand for competence and autonomy.

Statement of Objectives

This study aims to determine the effectiveness of integration of Flipped Classroom under the post-pandemic setting. However, specifically, it aims to:

1. Determine the demographic profile of the respondents in terms of:
   1.1 Age
   1.2 Gender
   1.3 Years in Teaching
   1.4 Level of Technological Capability.
   1.5 Determine the extent of effectiveness of flipped classroom in terms of:
2. Flexible Environment
   2.1 Learning Culture
   2.2 Intentional Content
   2.3 Professional Educator.
3. Determine the general impact of flipped classroom towards students’ academic performance.

4. Determine whether there is a significant relationship between the profile of the respondents and their perceived extent of effectiveness in using flipped learning.
5. Based on findings, recommend strategies or action program for further effectiveness of flipped classroom set-up under post-pandemic setting.

METHODOLOGY

Research Design

Given the nature of this research study, opting for a quantitative research strategy is suitable for the specific topic being studied. The study largely utilizes a survey approach with a close-ended questionnaire, showing a quantitative focus. The primary goal of this research is to provide numerical data and statistical insights through a quantitative research framework. The study adheres to a descriptive correlational research approach, aiming to investigate and create connections between variables. By utilizing this design, the research endeavors to delineate the attributes of educators' encounters with flipped classrooms. The descriptive part ensures a comprehensive representation of the observed educational approach, while the correlational element enables the analysis of relationships between different variables.

Participants and Sampling Techniques

The participants in this study are educators who have actively implemented the flipped classroom model during this post-pandemic period. The respondents are from different secondary school levels in the district and have used the flipped classroom approach as their recent instructional approach. The study will use purposive sampling to identify participants who fit the role. The teachers who participated in this study have been using the flipped classroom plan in their respective schools in the 2nd district of Camarines Sur. "purposeful sampling" will be used to choose individuals to participate in this study. Purposive sampling lets researchers choose participants who meet certain criteria and have meaningful experiences related to the studied variable. Initially, the researcher engaged with different schools and departments to identify the teachers who use the "flipped classroom" model in their lessons. The sample size is 30, which is based on educators' practical availability and willingness to participate. It is crucial to obtain a sufficiently representative sample that captures the nuances of flipped classroom implementation in the specified geographic area.

Research Instrument

Using a quantitative methodology, the main instrument is a self-administered questionnaire carefully designed to align with the study's goals. Items are constructed upon a comprehensive evaluation of pertinent literature and the well-established foundations of the Flipped Classroom model. These four elements—a flexible setting, a supportive learning culture, purposeful material delivery, and the presence of professional educators—are acknowledged as the cornerstones of FLIP learning. The questionnaire's design thoroughly comprehends the FLIP model by highlighting particular features essential for investigation. It includes questions about general academic achievement, self-efficacy, and student involvement.

Procedures

The methodology employed to collect data for this research entails the distribution of self-administered questionnaires during in-person surveys to educators residing in the 2nd district of Camarines Sur. The researcher partnered with multiple academic establishments and departments in the 2nd district of Camarines Sur to identify and approach teachers who have implemented the flipped classroom model. To start the survey, the researcher personally engages with the designated educators, furnishing them with comprehensive information about the study's aims, methodologies, and the acquisition of informed consent. Following this, each participant received a self-administered questionnaire designed to gather quantitative data on the effectiveness of the flip model. The face-to-face style of the gathering procedure guarantees a personalized approach to data collection and permits immediate clarification of any inquiries.

Data Analysis

The following statistical tools will be utilized in analyzing the data gathered.

Frequency distribution and percentage was applied to present and describe the data gathered in terms of the socio-demographic profile of the respondents.

Ranking and Likert Scale was used to show the ranking of the respondents' ratings. A 4-point Likert scale was utilized for high accuracy of description.

Weighted Mean was used to describe the data scale on the questionnaire. WM has an interpretation based on its corresponding legends.

The Pearson Correlation Coefficient was used to determine whether variables in this study have a significant relationship; the research will use Pearson r. Pearson's r is a bivariate statistical model that analyzes the relationship between two variables. Pearson's correlation may always be used to test an associative research hypothesis as long as the variables being analyzed are both quantitative.

RESULTS AND DISCUSSIONS

This chapter presents, analyzes, and interprets the data gathered using appropriate statistical tools. This presentation is sorted with the specific questions presented on the rationale of this study. The data were presented in tabular form.

Table 1: Profile of the Respondents

1.1 By Age

Age	Frequency	Percentage	Rank
21-30 years old	16	53.33 %	1
31-40 years old	9	30 %	2
41-50 years old	4	13.33 %	3
51 years old above	1	3.34	4
Total:	**30**	**100 %**	

Table 1.1 displays the age distribution of the respondents, with the age group between 21 and 30 years old having the largest frequency count (16 in 53.33%), ranking first.

1.2 By Sex

Sex	Frequency	Percentage	Rank
Male	11	36.67 %	2
Female	19	63.33 %	1
Total:	**30**	**100 %**	

In Table 1.2, the profile of respondents is presented according to their sex. It is observed that females have the highest frequency count, with a total of nineteen respondents, accounting for 63.33% of the total sample. This shows that female teachers tend to demonstrate exceptional abilities in communication and collaboration. These skills are crucial for effectively facilitating online discussions and interactions within a flipped classroom setting.

1.3 Years in Service

Years	Frequency	Percentage	Rank
Less than 1 year	1	3.33 %	5
1-3 years	12	40 %	1
4-6 years	9	30 %	2
7-10 years	6	20 %	3
10 years and above	2	6.67 %	4
Total:	**30**	**100 %**	

Table 1.3 shows the profile of respondents by years in service, where 1-3 years got the highest frequency count of twelve at 40%. This means that teachers in the nascent stages of their careers tend to possess a novel outlook and are more willing to experiment with innovative instructional methodologies.

Educators may exhibit a heightened inclination to adopt the flipped classroom model and investigate novel approaches to involve students within a learning environment following the pandemic actively. In a comprehensive investigation conducted by Strayer University, an in-depth analysis was carried out to explore the perceptions of graduate students who were actively engaged in preparing themselves for a career in the field of education.

1.4 Technological Capability

Level	Frequency	Percentage	Rank
Basic Innovative	3	10 %	4
Basic Operation	8	26.67 %	2
Intermediate Operation	12	40 %	1
Advanced Operation	7	23.33 %	3
Total:	**30**	**100 %**	

Table 1.4 shows the profile of respondents in terms of technological capability where intermediate operation got the highest frequency count of twelve in 40%. This means that educators who possess intermediate technological skills have the potential to efficiently generate and manage digital materials for their flipped learning environments. Educators have the ability to leverage various technological tools in order to create captivating and interactive learning materials that are in line with the desired learning outcomes. These tools include video recording software, presentation software, and online platforms. By utilizing these resources, educators can effectively enhance the learning experience and promote student engagement. The utilization of multimedia elements, incorporation of interactive features, and enhancement of content quality are made possible through intermediate technological capability in the field of education.

The utilization of digital technologies in education has revolutionized the teaching and learning process, enabling a more interactive and engaging experience for students. This shift from the traditional teaching model has empowered students to access a wide range of information sources, fostering a sense of autonomy and exploration in their educational journey.

Table 2: Effectiveness of Flipped Classroom
2.1 In terms of Flexible Environment

Items	Weighted Mean	Verbal Interpretation	Rank
Establish spaces and time frames that permit students to interact and reflect on their learning as needed.	3.45	Strongly Agree	2
Continually observe and monitor students to make adjustments as appropriate	2.66	Agree	3
Provide students with different ways to learn content and demonstrate mastery	3.72	Strongly Agree	1
Overall Mean:	**3.28**	**Agree**	

Legend: 1.00- 1.74 (Strongly Disagree) 1.75- 2.49 (Disagree) 2.50-3.24 (Agree) 3.25-4.00 (Strongly Agree)

In Table 2.1, the data is presented regarding the effectiveness of the flipped classroom approach in creating a flexible learning environment. The item "provide students with different ways to learn content and demonstrate mastery" received the highest weighted mean, indicating a strong agreement among participants. This suggests the flipped classroom model offers students various opportunities to engage with the content and showcase their understanding. The flipped classroom model involves allocating class time to engage in interactive activities, facilitate discussions, and participate in hands-on learning experiences.

2.2 In terms of Learning Culture

Items	Weighted Mean	Verbal Interpretation	Rank
Give students opportunities to engage in meaningful activities without the teacher being central	3.74	Strongly Agree	2
Scaffold these activities and make them accessible to all students through differentiation and feedback.	3.37	Strongly Agree	3
Provide various performance tasks and assessment real-time.	3.89	Strongly Agree	1
Overall Mean:	**3.67**	**Strongly Agree**	

Legend: 1.00- 1.74 (Strongly Disagree) 1.75- 2.49 (Disagree) 2.50-3.24 (Agree) 3.25-4.00 (Strongly Agree)

Table 2.2 shows the data on the effectiveness of flipped classrooms in terms of learning culture, where "providing various performance tasks and assessment real-time" got the highest weighted mean of 3.89 with verbal interpretation of strongly agree.

2.3 In terms of Intentional Content

Items	Weighted Mean	Verbal Interpretation	Rank
Provided materials before class is sufficient to meet each lesson's objectives	3.46	Strongly Agree	1
Create and/or curate relevant content (typically videos) based on needs	3.03	Agree	3
Differentiate to make content accessible and relevant to all students.	3.17	Agree	2
Overall Mean:	**3.22**	**Agree**	

Legend: 1.00- 1.74 (Strongly Disagree) 1.75- 2.49 (Disagree) 2.50-3.24 (Agree) 3.25-4.00 (Strongly Agree)

Table 2.3 presents the effectiveness of the flipped classroom approach to intentional content. The highest weighted mean score of 3.46 was obtained for "Provided materials before class is sufficient to meet each lesson's objectives," indicating a verbal interpretation of strongly agree. This means using pre-class materials is an effective strategy for differentiating instruction and addressing the unique needs of students. Educators can ensure that students come to class with a foundational understanding of the subject matter by providing students with materials to review prior to class.

2.4 In term of Professional Educator

Items	Weighted Mean	Verbal Interpretation	Rank
Educator is available to all students for individual, small group, and class feedback in real time as needed.	3.71	Strongly Agree	1
Conduct ongoing formative assessments during class time through observation and by recording data to inform future instruction.	3.24	Agree	2
Overall Mean:	**3.48**	**Strongly Agree**	

Legend: 1.00- 1.74 (Strongly Disagree) 1.75- 2.49 (Disagree) 2.50-3.24 (Agree) 3.25-4.00 (Strongly Agree)

In Table 2.4, the data is presented regarding the effectiveness of the flipped classroom approach among professional educators. The criterion for effectiveness is defined as the educator being accessible to all students for individual, small group, and class feedback in real-time, as required. The highest weighted mean of 3.71 was obtained for this criterion, indicating a strong agreement among the educators. This denotes that the flipped classroom model involves students independently engaging with pre-class materials, enabling educators to allocate their attention to delivering personalized support during class sessions.

Through the utilization of real-time feedback, educators have the opportunity to cater to the unique needs of students by offering individual, small group, and class support. This approach allows for ad-

dressing specific questions, rectifying misconceptions, and providing targeted guidance tailored to each student's requirements.

Table 3: General Impact of Flipped Classroom towards student's behavior and learning

Items	Weighted Mean	Verbal Interpretation	Rank
Learners were able to learn the course contents better focusing on hands-on learning	3.37	Strongly Agree	3
Learners are able to speak with my instructor during class and receive individual help when working on the assignment	3.81	Strongly Agree	2
Learners develop an effective learning strategy or study habits on their own.	3.07	Agree	4
Learners feel more prepared and confident in class because of provided materials before class.	3.92	Strongly Agree	1
Learners were offered more opportunities to collaborate with peers during class time	2.59	Agree	5

According to the findings presented in Table 3, the general impact of the flipped classroom approach on student behavior and learning was examined. The highest weighted mean of 3.92 was attributed to the statement, "Learners feel more prepared and confident in class because of provided materials before class." This result indicates a strong agreement among the participants regarding this aspect of the flipped classroom approach. This also means that students exposed to the flipped classroom model have consistently expressed a higher level of preparedness and confidence in their academic performance compared to those who have undergone traditional instructional approaches.

Table 4: Significant relationship between the profile of respondents and their perceived effectiveness of Flipped Classroom

Relationship of:	R-value	P- value	Decision
Age			
Flexible Environment	0.31	.95485	**Not Significant** at $p > 0.05$
Learning Culture	0.11	.562822	**Not Significant** at $p > 0.05$
Intentional Content	0.58	.000781	**Significant** at $p < 0.05$
Professional Educator	0.44	.014968	**Significant** at $p < 0.05$
Sex			
Flexible Environment	0.19	.314583	**Not Significant** at $p > 0.05$
Learning Culture	0.27	.149029	**Not Significant** at $p > 0.05$
Intentional Content	0.34	.66014	**Not Significant** at $p > 0.05$
Professional Educator	0.29	.12006	**Not Significant** at $p > 0.05$
Years in Service			
Flexible Environment	0.22	.242739	**Not Significant** at $p > 0.05$
Learning Culture	0.16	.398346	**Not Significant** at $p > 0.05$
Intentional Content	0.42	.020849	**Significant** at $p < 0.05$
Professional Educator	0.86	.00001	**Significant** at $p < 0.05$
Level of technological Skills			
Flexible Environment	0.77	.00001	**Significant** at $p < 0.05$
Learning Culture	0.55	.00164	**Significant** at $p < 0.05$
Intentional Content	0.92	.00001	**Significant** at $p < 0.05$
Professional Educator	0.82	.00001	**Significant** at $p < 0.05$

It was found that there is a significant relationship between the intentional content and professional educator in the effectiveness of flipped classrooms and the age of the respondents. This means the potential influence of intentional content on student learning outcomes and the professional educator could differ based on the teachers' age or experience. Recent studies suggest that younger teachers who exhibit a higher level of comfort with technology may possess enhanced skills in selecting and utilizing digital resources within the context of flipped classroom instruction. In contrast, educators who have been in the profession for longer may have cultivated a repertoire of successful teaching strategies that align with the deliberate curriculum.

It was also found that there is a significant relationship between intentional content and professional educators in the effectiveness of flipped classrooms and the years of service in teaching. This means that educators who have accumulated more years in service may exhibit an enhanced comprehension of instructional strategies and possess refined abilities in deliberately selecting and effectively utilizing educational content.

CONCLUSIONS

The following conclusions were drawn from the study:

1. Flipped Classroom Setup has an effective impact in terms of Flexible Environment and Intentional Content.
2. Flipped Classroom Setup has a strong, effective impact on learning culture and professional educators.
3. Flipped Classroom Setup has a positive overall impact on the learners' academic performance, specifically on increasing student's confidence and engagement.
4. There is a significant relationship between educators' technological skill level and their perceived effectiveness of the Flipped Classroom setup.

RECOMMENDATIONS

Based on the summary of findings and conclusion mentioned above, the researchers recommend the following:

1. Propose a strategic educational plan on improving the technological skills of educators as a step in maximizing its effect in integrating flipped classroom set-up.
2. Promote using a flipped classroom to improve learning components, focusing on four pillars: flexible environment, learning culture, intentional content, and professional educator.
3. Conduct an in-depth study on the inhibiting factors that directly affect flipped classroom effectiveness.

REFERENCES

Unpublished work

Al-Shamri, Kh. (2017). The effect of using a computer program in teaching course of Education techniques upon students' achievement, Mualimeen College, the city of Hail, (quasi-experimental study). Unpublished Master Thesis, Curriculum and Instruction Department, College of Education, Umm Al Qura University, Saudi Arabia.

Banas, J. (2010). Teachers' Attitudes toward Technology: Considerations for Designing Preservice and Practicing Teacher Instruction. Community & Junior College Libraries. 16. 114-127. 10.1080/02763911003707552

Bishop, J.L. & Verleger, Matthew. (2013). The flipped classroom: A survey of the research. ASEE Annual Conference and Exposition, Conference Proceedings.

Brandenburg, R. McDonough, S. Burke, J. White S. (Eds.), Teacher education: Innovation, intervention and impact, Springer (2016), 10.1007/978-981-10-0785-9

Cantabrana, J.L.L. Rodríguez, M.U. Cervera, M.G. (2019). Assessing teacher digital competence: The construction of an instrument for measuring the knowledge of pre-service teachers. Journal of New Approaches in Educational Research, 8 (1) pp. 73-78, 10.7821/naer.2019.1.370

Chingos, M.M. Peterson, P.E. (2011). It's easier to pick a good teacher than to train one: Familiar and new results on the correlates of teacher effectiveness Economics of Education Review, 30 (3) (2011), pp. 449-465, 10.1016/j.econedurev.2010.12.010

Cortina, K.S. Miller, K.F. McKenzie, R. Epstein, A. (2015). Where low and high inference data converge: Validation of CLASS assessment of mathematics instruction using mobile eye tracking with expert and novice teachers International Journal of Science and Mathematics Education, (2) (2015), pp. 389-403, 10.1007/s10763-014-9610-5

Gallant, A. & Riley, P. (2014).Early career teacher attrition: New thoughts on an intractable problem Teacher Development, 18 (4) (2014), pp. 562-580, 10.1080/13664530.2014.945129

Låg, T., & Sæle, R. G. (2019). Does the Flipped Classroom Improve Student Learning and Satisfaction? A Systematic Review and Meta-Analysis. AERA Open, 5(3). https://doi.org/10.1177/2332858419870489

Martin, K. J & Smith, L. R. (2019). Effects of teachers' age and gender on student perception. Educational Resources Information Centre (ERIC) U.S.A.

O'Mahony, Tom. (2017). The Flipped Classroom: A Design to Engage Students with Pre-Class Activities

Palmer, D.J. Stough, L.M. Burdenski Jr., T.K. Gonzales, M. (2005). Identifying teacher expertise: An examination of researchers' decision making Educational Psychologist, 40 (1) (2005), pp. 13-25

Portillo, J. Garay, U. Tejada, E Bilbao, N. (2020). Self-perception of the digital competence of educators during the COVID-19 pandemic: A cross-analysis of different educational stages. Sustainability, 12 pp. 1-13, 10.3390/su122310128

Ronzhina, N. Kondyurina, I. Voronina, A. Igishev, K. Loginova, N. (2021).Digitalization of modern education: Problems and solutions iJET, 16 (4) pp. 122 135, 10.3991/ijet.v16i04.18203

Silverstone, S. Phadungtin, J. Buchanan, J. (2009). Technologies to support effective learning and teaching in the 21st Century K. Jayanthakumaran (Ed.), Advanced technologies, IntechOpen 10.5772/8216 Available from: https://www.intechopen.com/chapters/8707

Sivasakthi Rajammal, T. & Muthumanickam, R. (2016). A study on the teacher effectiveness of school teachers. International Journal of Current Research, 4(2), 222-226.

Van Alten, D. C., Phielix, C., Janssen, J., & Kester, L. (2019). Effects of flipping the classroom on learning outcomes and satisfaction: A meta-analysis. Educational Research Review, 28, 100281. https://doi.org/10.1016/j.edurev.2019.05.003

Yildiz, E.P .Teacher (2022). education in the digital transformation process in north Cyprus: A situation analysis study International Education Studies, 15 (1) pp. 187-199

Journals

Alufohai, P.J. & Ibhafidon, H.E. (2018). Influence of teachers' age, marital status and gender on students' academic achievement. Asian Journal of Educational Research, 3(4), 60-66.


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