

EXAMINING TEACHER'S INNOVATIVE TEACHING STRATEGIES IN THE NEW NORMAL: EXPLORATORY DESIGN

**ARIANNE MAE C. NIODA
MARVIN LOFRANCO**

ABSTRACT

This study aimed to determine the factor structure of teacher's innovative teaching strategies in the normal through Exploratory Sequential Design. This exploratory sequential mixed methods approach was utilized that started with the qualitative phase then followed by the quantitative data collection and analysis. More specifically, it aimed to construct a scale in a sample of teachers. In the qualitative phase, there were ten (10) high school teachers who participated in the in-depth interview and seven (7) high school teachers participated in the focus group discussion. The findings revealed that there were five (5) themes that emerged from the lived experiences of teachers on the use of innovative teaching strategies in the new normal. These themes were motivational strategies, planning, communication, technology utilization, and upgrading of professional skills. Moreover, all 321 teachers from the Municipality of Makilala have been selected as respondents in the quantitative phase. Meanwhile, the data were analyzed using the thematic analysis and exploratory factor analysis (EFA). The results showed that a total of three themes have emerged in the qualitative findings that put emphasis on motivational strategies, planning, and communication. Factor 1 put emphasis on motivational strategies with 16 items retained. Factor 2 represented planning where 14 items were retained while factor 3 highlighted communication with 4 items retained. A total of 34 items made it to the final version of the instrument.

Keywords: Innovative, Teaching Strategies, New Normal, Exploratory Sequential Design, Municipality of Makilala, Philippines

INTRODUCTION

The Covid-19 pandemic made unique and challenging changes to the lives of people around the world. It has crippled the economy and education sector, most especially, of the less economically developed countries in the world (Ahmed et al., 2020; Alipio, 2020; Atkeson, 2020; Cao, et al., 2020; Fernandes, 2020; Ferrel & Ryan, n.d.; McKibbin, & Fernando, 2020; Sintema, 2020). Due to the COVID-19 pandemic, schools around the globe were closed in the hopes that public health protocols such as physical distancing, isolation, and staying at home would help flatten the curve and minimize deaths from the deadly disease.

The persistence of the COVID-19 pandemic disrupted the education system and has affected more than 200 countries whereby a total of 1.6 billion learners have struggled for education (United Nations, 2020). Despite this dreadful reality, education must continue. Online learning, distance, and continuing education have become a panacea for this global pandemic despite the challenges posed to both educators and learners.

In the Philippines, the Department of Education's response is to implement a Learning Continuity Plan (LCP). Additionally, numerous innovative programs have been proposed by the different learning sectors in the Philippines. DepEd emphasized that it would not necessarily mean that teachers and students will go to school to learn that is why it devised various modalities such as Online Learning, Modular Distance Learning (MDL), Radio-Based Instruction (RBI), TV-Based Instruction (TVBI), and Blended Learning for the new normal environment. However, the implementation of these modalities would pose serious problems since the Philippines is one of the countries which has the slowest internet speed among ASEAN countries sitting only in the 7th spot out of 10 ASEAN countries in terms of Mobile Internet Download Speed (Speedtest Global Index, 2021). Likewise, challenges such as equity gaps, students' security and safety, quality of learning, and poor assessment results have already been emerging (Tria, 2020).

In Makilala, Cotabato, teachers deal with a new challenging duty to deliver quality education remotely. The Department of Education gave the teachers this responsibility so that the Basic Education-Learning Continuity Plan will be realized despite the fact that teachers are not accustomed to this remote teaching-learning setting. Nevertheless, teachers have proven that they are flexible and adaptable and can cope with the demands of the changing world.

In recent years, there have been plenty of various published studies about teaching strategies. However, less has been done on teacher's innovative teaching strategies in the new normal yet, thus, making this study a novel one. Moreover, this study about teacher's teaching strategy uses different method or designs. With that, the researcher gained interest to study the teacher's innovative teaching strategies in the new normal.

FRAMEWORK

The researcher's worldview is much like that of a pragmatist. This is due to the reason that the reason aims to investigate what works with the teaching innovations employed by teachers in the new normal. More so, the researcher aims to provide possible solutions to existing problems in the field of teaching rather than simply providing assumptions. This being said, the researcher is action-oriented when it comes to choosing research procedures (Maarouf, 2019).

Since the researcher supports using whatever research method works to answer the research questions, pragmatism then means that it does not only justify the mixed method approach used in this research but also opens all methodological choices in front of the researcher (Biddle & Schafft, 2015).

Thus, this research is anchored in Moore's (1983) theory of distance learning program which examines learner's independence in learning and the distance between the learner and the teacher. This theory explains the relationship between the teacher and the learners.

In his theory, Moore summarized three nature of the transactions in a distance learning by explaining the three types of interaction which are learner-content interaction, learner-learner interaction, and learner-instructor interaction. In a learner-content interaction, learners get information of the course contents through short message service (SMS), virtual interaction, audio, video, and any other computer-aided programs. On the other hand, learner-learner interaction happens in the absence of the teacher. This is where the learners' exchange of ideas happen such as group discussion. This interaction encourages teamwork and relationship

between the learners which then promotes learning due to knowledge sharing. Meanwhile, learner-instructor interaction occurs when there is a communication between the learners and the instructor. This happens when the teacher provides inputs and feedback and the learners ask questions related to the subject matter.

Concurrently, Anderson (2003) expanded Moore's three types of interaction. Anderson (2003) added teacher-teacher interaction, teacher-content interaction, and content-content interaction. First, teacher-teacher interaction enables teachers to grow personally and professionally while also supporting others through networks. Teachers are encouraged to take advantage of their learning development and innovation in their particular subject area and within the academic community of teachers through this interaction. Second, teacher-content interaction centers on the content created by the instructor, including instructional goals, learning materials, and associated educational activities. Teachers can monitor, develop, and modify learning materials, resources, and activities via teacher-content interaction. Lastly, content-content interaction is a new part of an educational interaction wherein content is intended to continually update by interacting with other automated knowledge sources.

METHODS

Research Design

This study utilized exploratory sequential mixed methods approach. Following the direction of such design, the researcher first gathered the qualitative data as the basis for establishing the quantitative phase of this study. According to Stebbins (2001), exploratory research allows researchers to investigate when they have little or no scientific information about a group, process, activity, or scenario that they wish to investigate but have reason to suspect it includes aspects worth uncovering.

Moreover, the primary goal of exploratory research is to gain a better understanding of a situation and it is an appropriate way to provide the groundwork for later more rigorous studies at a later date (Kelly, 2008). Likewise, exploratory design begins with and prioritizes the collection and analysis of qualitative data in the first phase. Building from the exploratory results, the researcher then conducted the quantitative phase to test and generalize the initial findings. Then, the researcher interpreted how the quantitative results build on the initial qualitative results (Creswell & Clark, 2011).

Furthermore, the rationale for the exploratory sequential approach lies in first exploring a topic before deciding what variables need to be measured. The exploratory sequential design then can serve as a template that will be applied to a specific research situation, but some situations may use the design in a different way. With the application of the said design, qualitative analysis will be of help during the first phase as it helps to identify a larger range of topics and how individuals frame their understanding around a particular event or phenomenon. In moving from the qualitative phase to the development of the questionnaire, the codes become the variables, themes become scales, and the quotations become the survey items (Creswell & Clark, 2017).

Respondents

For the conduct of the qualitative phase of this study, the in-depth interview was conducted with 10 teachers from Bulakanon High School. Geography plays a critical role in the selection of the said informants. With the current reality experienced by teachers such as production, distribution, and retrieval of modules and learning activity sheets, as well as calculation of grades, it would be easier to gather the informants if they are near the current workplace of the researcher. Also, the FGD was done to 7 teachers in Bulakanon High School. Once more, the school had been chosen so that the participants would be easier to gather as a group since they share the same workplace.

Meanwhile, the pilot testing of the formulated questionnaire will be conducted on 30 teachers. After the pilot testing, the instrument will undergo the CFA and Cronbach's alpha for finalization. Then, the finalized questionnaire that has undergone the alpha test and validation will be conducted to the rest of the teachers under the different schools of the district of Makilala. Only 266 teachers from the anticipated 321 respondents answered the questionnaire during the implementation of the quantitative phase of this mixed methods research. 321 was the anticipated total number of respondents since the researcher and the informants during the IDI ($n=10$) and the FGD ($n=7$) would no longer be asked to take part in the survey.

Instruments

For the qualitative phase of this study, the researcher employed IDI and FGD. A semi-structured interview was chosen since it is considered the most appropriate for qualitative data collection. By employing semi-structured interviews, it would trigger reflection for both interviewer and interviewee (Brown, 2016). During the interview, the questions focused on the different strategies and techniques used by teachers of the district of Makilala which they consider as innovative relative to the new normal era.

Then, the data from the qualitative phase were used to develop a survey instrument or questionnaire necessary for the second phase which will be quantitative. Following the procedure of Creswell and Clark (2017), the codes were used as variables, themes became the scales, and the emblematic quotations became the items.

The questionnaire that was formulated was subjected to construct validity, content validity, face validity, and reliability test to determine whether the items fit under the given variables and scales. Construct, content, and face validity was achieved through the employment of expert in the field of mixed methods research. The expert was chosen based on the following criteria: (i) he has an established track record in the conduct of research in qualitative, quantitative, and mixed designs, and (ii) he, too, was able to conduct mixed methods research in the past. These criteria ensured that the validation of the instrument was correct and done with credibility.

Meanwhile, EFA was also performed along with the reliability test achieved through the process of pilot testing. A statistician was employed to perform the said tests to ensure that the items in the questionnaire were reliable and had the goodness of fit. After the EFA, came the administration of the instrument to the 321 teachers. After it was done, the results of the survey were subjected to the CFA.

Statistical Tools

For the testing of the validity of the questionnaire that has been founded from the results of the qualitative phase of this mixed methods research, the following statistical tools for the quantitative phase were deemed necessary to employ:

Cronbach's α . The Cronbach's alpha is one of the most important and pervasive statistics involving test construction and use as it usually deals with the development of scales intended to measure constructs (Taber, 2018). Moreover, this tool is used to measure the internal consistency of scales as well as to determine the inter-relatedness of the items within the test (Tavakol & Dennick, 2011).

Kaiser-Meyer-Okin Measure of Sampling Adequacy. The KMO will measure the adequacy of the sample (Hadi et al., 2016). This test will determine whether the sample size is large enough to assess the factor structure (Chan & Idris, 2017).

Exploratory Factor Analysis. The employment of the EFA is essential in order to make the best decisions to adapt to concrete measurement conditions; otherwise, a factorial study guided by the default options of the software employed may lead to incorrect decisions about the number and definitions of the factors (Izquierdo et al., 2014).

Confirmatory Factor Analysis. The CFA will seek to confirm if the number of factors or constructs and the loading of observed variables on them conform to what is expected. Thus, to reach the confirmation and to accurately perceive the representation of the constructs by the observed variables, it is necessary to evaluate the reliability and validity of the scale (Sarmiento & Costa, 2019).

RESULTS AND DISCUSSION

Emerging Themes of Teacher's Innovative Teaching Strategies in the New Normal

In this study, thematic analysis was utilized to create a theme based on the replies and fundamental concepts of respondents acquired via in-depth interviews and Focus Group Discussions. As a result, five primary themes emerged from teacher's innovative teaching strategies in the new normal, namely: motivational strategies, planning, communication, technology utilization, and upgrading of professional skills.

Motivational Strategies. During the teaching-learning process, the teachers employed motivational strategies that entice learners' attention and motivation to learn. The participants shared that:

"I encourage the learners to explore, research, and us technology to discover something new." (IDI_P2)

*“Innovative teaching strategies boost learners’ motivation to learn”
(IDI_P4)*

“The learners are motivated to learn, they are not ashamed to raise questions, and they ask or question the answers of their fellow learners specifically during online remediation.” (IDI_P5)

Considering the absence of in-school education, teachers use motivational strategies to help learners improve their scholastic performance. Motivation, according to Kleinginna & Kleinginna (1981), is an intrinsic factor or state that functions to stimulate or drive behavior and provide it with guidance. The optimal strategy for achieving successful learning has been shown to be the process of developing fundamental motivating circumstances, developing initial motivation, sustaining, and preserving motivation (Crookes & Schmidt, 1991; Dorney, 2001). Scholars who have conceptualized incentive tactics in teaching and learning have proven this (Crookes & Schmidt, 1991; Dorney, 2001).

Planning. With the change in the educational setting brought about by the pandemic, teachers have to look for various ways to deliver their lessons remotely. In order to execute this, teachers meticulously planned what various strategies to employ. The participants revealed that:

“Teaching strategies should adhere to DepEd’s specific targets and goals.” (IDI_P7)

“Teaching strategies, to be considered “innovative”, must be well-planned and organized.” (IDI_P2)

“I made simplified video lessons based from the topics from the given modules and I send these videos to the learners via Messenger. I also use phone call to reach learners with no internet connection especially if they have clarifications with the subject matter.” (FGD_P1)

The Department of Education's Basic Education - Learning Continuity Plan is the department's approach to the challenges posed by COVID 19 in the realm of basic education. This is consistent with Kaufman and Herman's (1991) definition of strategic planning as a management tool for assisting an organization in improving its performance by ensuring that its members are operating toward the same targets and by consistently adapting the organization's actions to the evolving landscape.

Furthermore, strategic planning ensures that instructors mobilize the necessary resources (Oyedele & Chikwature, 2016). Teachers developed their own methods of conducting lectures at the grassroots level based on available resources and the needs, demands, and interest of individual learners, such as developing streamlined video lectures, messaging, and making phone calls.

Communication. Communication is emphasized in a distant learning environment. The participants used a range of communication approaches that were suited to meet the needs of

each learner rather than relying on a single strategy. For those who have access to the internet, communication is via Facebook Messenger and Google Meet; for those who do not, communication is through SMS and/or phone call. Learning, feedback, and collaboration are all possible with these many communication channels. To ensure that parent-teacher and learner-teacher linkages continue, the participants disclosed that:

*"I text and call them constantly if they don't have any access to the internet."
(FGD_P5)*

"I usually use Messenger Group Chat, sending messages and videos for the former and Google Meet for the latter." (IDI_P1)

"I do 'text brigades' and call them individually if they have problems about the subject." (FGD_P7)

According to research, communication between parents, teachers, and the community has been recognized to exhibit a vital influence in children's academic achievement and socialization in both elementary and secondary education (Christenson & Sheridan 2001; Jennings & Wartella 2004; Telem & Pinto 2006). Brief phone conversations, according to Ramirez (2002), can set the stage for further collaboration by giving parents a favorable experience of dealing with the instructor. Furthermore, Williams and Cartledge (1997) advocated for the use of auditory communication when communicating with parents who have limited writing abilities.

Aside from calls and text messages, Dangle and Sumaoang (2020) revealed that social media network, such as Facebook Messenger, was by far the most feasible means of information exchange among instructors, learners, and parents. Most learners use popular social networking sites such as Facebook and Messenger on a regular basis (Kirschner & Karpinski, 2010; O'Brien, 2011; Ophus & Abbitt, 2009). These social networking sites promote collaborative learning, resource sharing, writing skills development, active engagement, and a positive attitude toward learning (Ajjan & Harsthone, 2008; Bosch, 2009; Ozmen et al., 2011; Ractham & Firpo, 2011; Yuen & Yuen, 2008).

Technology Utilization. In this digital age, the participants shared the great use of technology and the importance of being technologically adept. They mentioned that:

"These strategies on teaching-learning helped me more to be technology-engaged in my lesson delivery and connectivity to my colleagues, parents, and learners." (IDI_P2)

*"I integrate technology in teaching to make my lesson simpler yet creates an impact to learners and it encourages deeper learning of the learners."
(IDI_P4)*

"Aside from modular modality, I also use technology." (FGD_P7)

Majority of the participants shared that they integrate technology in the teaching-learning process. Ghavifekr, Afshari, and Amla Salleh (2012) agree that academic institutions should integrate ICT

into their curriculum. Additionally, information and communication technology create a dynamic and proactive teaching and learning environment (Arnseth & Hatlevik, 2012).

Upgrading of Professional Skills. “Education is a continuous process” has been the mantra of every teacher. In order to thrive in a dynamic and competitive world, the teachers have to continually upgrade their professional skills. They disclosed that:

“DepEd should help improve the professional skills of the teachers by providing them with all kinds of assistance. (IDI_P3)

Although many variables contribute to learners' success, teachers play a crucial role in the teaching and learning process to optimize students' progress (Boyd, et al 2006; Rivkin, Hanushek, & Kain, 2000). Students' learning success is determined by instructors' willingness to engage in learning activities, which is aided by their knowledge, abilities, attitude, and practice. As a result, most literatures demand that a teacher participate actively in professional development (Tanang & Abu, 2014)

Construction of Teacher’s Innovative Teaching Strategies in the New Normal Scale

Table 1 exhibits the suggested Checklist Survey Questionnaire to be subjected for EFA which reflected the teacher’s innovative teaching strategies in the new normal scale components which are included in the checklist. The items reflect the fundamental topics, fundamental ideas/ assertions, issues demonstrated, and implications. There are 40 items on the survey questionnaires.

Table 1
Teacher’s Innovative Teaching Strategies in the New Normal Scale Items

ITEM	
1	I use contextually relevant activities.
2	I utilize creative tools.
3	I employ the blended-learning modality.
4	I ensure that the spread of the disease is contained during the teaching-learning process.
5	I encourage the learners to explore, research, and use technology to discover something new.
6	I employ strategies that improve my digital skills.
7	I utilize strategies that help the learners develop their digital skills.
8	I need access to a stable and strong internet connection during the teaching-learning process.
9	I encourage my fellow teachers to employ exploratory approach in the teaching-learning process to cope with the demands of time.
10	I encourage the learners to employ exploratory approach in the teaching-learning process to cope with the demands of time.
11	I probe learners with HOTS questions.
12	I constantly look for new effective ways in teaching and learning by researching, exploring, and using all possible means to uphold quality education.
13	I utilize tools that boost learners’ motivation to learn.
14	I think of other strategies that suit best to the abilities, capabilities, and needs of the learners.
15	I always try novel strategies.

- 16 I entice learners' attention, retention, comprehension, and learning.
- 17 I employ strategies that are interactive.
- 18 I make use of tools that drive the creativity and critical thinking skills of the learners.
- 19 I employ the learner-centered approach.
- 20 I make simplified video lessons based from the topics from the given modules and send these videos to the learners.
- 21 I spend most of my time and resources in planning and preparing my strategies.
- 22 I need extra budget to carry out my innovative teaching strategies.
- 23 I use strategies that adhere to DepEd's specific targets and goals.
- 24 I use strategies that seek to address learning gaps.
- 25 I use teacher-initiated strategies.
- 26 I intensively plan and organize my strategies.
- 27 I use strategies that help in the achievement of DepEd's Learning Continuity Plan.
- 28 I use strategies that help the learners learn independently.
- 29 I make sure that the strategies I employ are realistic.
- 30 I employ technology, especially the social media, in the teaching-learning process.
- 31 I use strategies that foster exchanging of ideas and facilitating questions and answers despite the absence of physical interaction.
- 32 I have problems with unstable internet connection.
- 33 I feel comfortable employing technology in the teaching-learning process.
- 34 I become virtually connected to my learners, their parents, and to my fellow workers.
- 35 I simplify the lessons to allow the learners to grasp the lesson easily.
- 36 I do home visitations.
- 37 I omit activities from the modules that are not realistic to the environment and setting of the learners.
- 38 I do text brigades to learners with no access to internet.
- 39 I converse to learners with no access to internet via phone calls.
- 40 I use strategies that help improve the performance of the learners.

Dimensions of Teacher's Innovative Teaching Strategies in the New Normal

Testing of the Proposed Questionnaire consisting of 40- item scale on Teacher's Innovative Teaching Strategies in the New Normal. Prior to when the proposed 40-item scale for teacher's innovative teaching strategies in the new normal underwent factor analysis, the Kaiser Meyer-Okin Measure (KMO) of Sampling Adequacy and Bartlett's test of sphericity was performed. Table 2 highlighted the results.

Table 2
KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.947
	Approx. Chi-Square	6723.819
Bartlett's Test of Sphericity	df	780
	Sig.	.000

The results displayed that the KMO test generated the value of .947 which is above the .5. This means the sample can be treated with EFA. Also, Bartlett's Test of Sphericity result yields

a .000 significant value which tells that the data have patterned relationships, and factorability was assumed. Hence, there was empirical evidence to proceed with the factor analysis.

Derivation of Factors for Teacher’s Innovative Teaching Strategies in the New Normal. To determine the number of factors, the 40-item scale was tested using an unrotated factor matrix with estimates of eigenvalues, percent of the variance, and cumulative variance. Eigenvalues represent the total amount of variance that can be explained by a given principal component. Under the Kaiser criterion, all components are dropped with eigenvalues under 1.0, this being the eigenvalue equal to the information accounted for by an average single item (Costello & Osborne, 2005).

Meanwhile, 3 factors were identified in the model with eigenvalues above 1. The loading factor for each item corresponds to a factor score which was above .40. This means, there was a sufficient correlation between factors and variables; hence, the item can be considered as part of the particular factor.

The Table 3 shows the pattern matrix using Principal Axis Factoring with a Promax rotation method of Promax with Kaiser Normalization. It can be observed in the results the loadings of items in the three factors are above .4. It can be supported by Field (2005) that .4 is recommended and necessary to obtain the desired factors. Furthermore, it can be observed that there is no item cross-loading or not loading at all which means that the items best represent their factors. It is emphasized by Hair et al. (1998) that loadings indicate the degree of correspondence between the variable and the factor, with higher loadings making the variable representative of the factor.

Table 3
Pattern Matrix Four-Factor Model

	Factor		
	1	2	3
1. I encourage the learners to explore, research, and use technology to discover something new.	.878		
2. I entice learners’ attention, retention, comprehension, and learning.	.767		
3. I think of other strategies that suit best to the abilities, capabilities, and needs of the learners.	.760		
4. I constantly look for new effective ways in teaching and learning by researching, exploring, and using all possible means to uphold quality education.	.749		
5. I utilize tools that boost learners’ motivation to learn.	.699		
6. I employ strategies that improve my digital skills.	.683		
7. I probe learners with HOTS questions.	.656		
8. I encourage the learners to employ exploratory approach in the teaching-learning process to cope with the demands of time.	.618		
9. I utilize strategies that help the learners develop their digital skills.	.618		
10. I employ strategies that are interactive.	.526		
11. I use contextually relevant activities.	.526		

12. I make use of tools that drive the creativity and critical thinking skills of the learners.	.508
13. I employ the blended-learning modality.	.452
14. I encourage my fellow teachers to employ exploratory approach in the teaching-learning process to cope with the demands of time.	.426
15. I utilize creative tools.	.419
16. I always try novel strategies.	.400
17. I spend most of my time and resources in planning and preparing my strategies.	.805
18. I intensively plan and organize my strategies.	.786
19. I use strategies that help in the achievement of DepEd's Learning Continuity Plan.	.717
20. I use teacher-initiated strategies.	.588
21. I use strategies that help the learners learn independently.	.583
22. I make simplified video lessons based from the topics from the given modules and send these videos to the learners.	.582
23. I use strategies that seek to address learning gaps.	.556
24. I make sure that the strategies I employ are realistic.	.500
25. I use strategies that adhere to DepEd's specific targets and goals.	.499
26. I feel comfortable employing technology in the teaching-learning process.	.478
27. I use strategies that foster exchanging of ideas and facilitating questions and answers despite the absence of physical interaction.	.471
28. I simplify the lessons to allow the learners to grasp the lesson easily.	.463
29. I employ technology, especially the social media, in the teaching-learning process.	.444
30. I need extra budget to carry out my innovative teaching strategies.	.410
31. I do text brigades to learners with no access to internet.	.780
32. I converse to learners with no access to internet via phone calls.	.684
33. I become virtually connected to my learners, their parents, and to my fellow workers.	.414
34. I omit activities from the modules that are not realistic to the environment and setting of the learners.	.413

Extraction Method: Principal Axis Factoring.

Rotation Method: Promax with Kaiser Normalization.

a. Rotation converged in 13 iterations.

The item loadings of each item to their factor indicate sufficient correlation between factors and variables, and thus can be considered as component of the factor. By using the EFA, the three-factor model of teacher's innovative teaching strategies in the new normal with 34 items was developed as shown in table 5, namely: motivational strategies, planning, communication.

Reliability Test of the Scale

The instrument was evaluated for reliability to determine the internal consistency of items. It can be observed in the Table 4 that the overall reliability is high with a Cronbach's alpha value of .943. The subscale or dimension also is above the criteria of reliability above .70 alpha, namely, motivational strategies ($\alpha=.894$), planning ($\alpha=.910$), and communication ($\alpha=.779$). This indicates that the tool has good internal consistency. This is supported by Nunnally (1978) that instruments used in basic research should have reliability of .70 or better.

Table 4
Reliability Analysis Teacher's Innovative Teaching Strategies in the New Normal Scale

Scale	Cronbach's alpha
Motivational Strategies	.894
Planning	.910
Communication	.779
Overall Reliability	.943

Final Version of Teacher's Innovative Teaching Strategies in the New Normal Model

The final version of the instrument, which is the output of this study, is presented in the form provided in Table 5. From 40 items, the analysis suggests several issues on face validity based on the factor loadings on the items. Items that have small coefficient less than .40 are removed. This is supported by Hair et al. (2010) that those items having no sense and not reflective with the factor can be removed in the model. Also, Hair et al. (2010) loading coefficient can be set by the researcher to select only those items that best represents the factor, and those low coefficients may not be included in the factor structure.

By using the EFA, Teacher's Innovative Teaching Strategies in the New Normal Questionnaire was developed. This scale consists of 34 items. Specifically, a total of sixteen (16) items for motivational strategies, fourteen (14) items for planning, and four (4) items for communication. The five-point Likert scale from 5-strongly agree to 1- strongly disagree is shown.

Table 5
Teacher's Innovative Teaching Strategies in the New Normal Questionnaire

	5	4	3	2	1
FACTOR 1. MOTIVATIONAL STRATEGIES					
1. I encourage the learners to explore, research, and use technology to discover something new.					
2. I entice learners' attention, retention, comprehension, and learning.					

3. I think of other strategies that suit best to the abilities, capabilities, and needs of the learners.					
4. I constantly look for new effective ways in teaching and learning by researching, exploring, and using all possible means to uphold quality education.					
5. I utilize tools that boost learners' motivation to learn.					
6. I employ strategies that improve my digital skills.					
7. I probe learners with HOTS questions.					
8. I encourage the learners to employ exploratory approach in the teaching-learning process to cope with the demands of time.					
9. I utilize strategies that help the learners develop their digital skills.					
10. I employ strategies that are interactive.					
11. I use contextually relevant activities.					
12. I make use of tools that drive the creativity and critical thinking skills of the learners.					
13. I employ the blended-learning modality.					
14. I encourage my fellow teachers to employ exploratory approach in the teaching-learning process to cope with the demands of time.					
15. I utilize creative tools.					
16. I always try novel strategies.					
FACTOR 2. PLANNING					
17. I spend most of my time and resources in planning and preparing my strategies.					
18. I intensively plan and organize my strategies.					
19. I use strategies that help in the achievement of DepEd's Learning Continuity Plan.					
20. I use teacher-initiated strategies.					
21. I use strategies that help the learners learn independently.					
22. I make simplified video lessons based from the topics from the given modules and send these videos to the learners.					
23. I use strategies that seek to address learning gaps.					

24. I make sure that the strategies I employ are realistic.					
25. I use strategies that adhere to DepEd's specific targets and goals.					
26. I feel comfortable employing technology in the teaching-learning process.					
27. I use strategies that foster exchanging of ideas and facilitating questions and answers despite the absence of physical interaction.					
28. I simplify the lessons to allow the learners to grasp the lesson easily.					
29. I employ technology, especially the social media, in the teaching-learning process.					
30. I need extra budget to carry out my innovative teaching strategies.					
FACTOR 3. COMMUNICATION					
31. I do text brigades to learners with no access to internet.					
32. I converse to learners with no access to internet via phone calls.					
33. I become virtually connected to my learners, their parents, and to my fellow workers.					
34. I omit activities from the modules that are not realistic to the environment and setting of the learners.					

Legend:

- 5 = Strongly agree
- 4 = Agree
- 3 = Moderately agree
- 2 = Disagree
- 1 = Strogly Disagree

CONCLUSIONS

Based on the thematic analysis, five (5) essential themes emerged from the interview with the teachers regarding the innovative teaching strategies that they employ. These were motivational strategies, planning, communication, technology utilization, and upgrading of professional skills. Results from the Exploratory Factor Analysis (EFA) revealed three underlying dimensions occur from teacher's innovative teaching strategies in the new normal such as motivational strategies, planning, and communication. Reliability test revealed the results on mentoring skills of parents in the new normal that the overall Cronbach's Alpha was .943 which interpreted as high. It means

that the validity of the instrument was very high and suitable for using the instrument as a tool. Results from the Exploratory Factor Analysis revealed that there are 34 items of sets of questionnaire that are suitable for factor loadings. This means that these items are appropriate and pass the face validity for measuring tools in the study.

REFERENCES

- Alipio, M. (2020). Education during COVID-19 era: Are learners in a less- economically developed country ready for e-learning?. *Available at SSRN* 3586311.
- Ajjan, H., & Hartshorne, R. (2008). Investigating faculty decisions to adopt Web 2.0 technologies: Theory & empirical tests. *Internet & Higher Education*, 11, 71–80.
- Anderson, T. (2004). Towards a theory of online learning. *Theory and practice of online learning*, 2, 109-119.
- Arnseth, H.C., & Hatlevik, O.E. (2010). Challenges in aligning pedagogical practices and pupils' competencies with the Information Society's demands: The case of Norway. In S. Mukerji & P. Triphati (Eds.), *Cases on technological adaptability and transnational learning: Issues and challenges*. Hershey: IGI global.
- Biddle, C., & Schafft, K. A. (2015). Axiology and anomaly in the practice of mixed methods work: Pragmatism, valuation, and the transformative paradigm. *Journal of Mixed Methods Research*, 9(4), 320-334.
- Bosch, T. E. (2009). Using online social networking for teaching & learning: Facebook use at the University of Cape Town. *Communication: South African Journal for Communication Theory and Research*, 35(2), 185-200.
- Boyd, D., Grossman, P., Lankford, H., Loeb, S., & Wyckoff, J. (2005). *How changes in entry requirements alter the teacher workforce and affect student achievement*. Albany, NY: Teacher Policy Research.
- Chan, L. L., & Idris, N. (2017). Validity and reliability of the instrument using exploratory factor analysis and Cronbach's alpha. *International Journal of Academic Research in Business and Social Sciences*, 7(10), 400-410.
- Christenson, S., & Sheridan, S. M. (Eds.). (2001). *Schools and families: Creating essential connections for learning*. Guilford Press.
- Costello, A. B., & Osborne, J. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical assessment, research, and evaluation*, 10(1), 7.

- Creswell, J. W., & Clark, V. L. P. (2017). *Designing and conducting mixed methods research*. Sage publications.
- Creswell, J. W., & Plano Clark, V. L. (2011). *Choosing a mixed methods design*. *Designing and conducting mixed methods research*, 2, 53-106.
- Crookes, G and Schmidt, R. 1991. *Motivation: 'Reopening the Research Agenda'*. Language Michigan University America.
- Dangle, Y. R. P., & Sumaoang, J. D. (2020). The Implementation of Modular Distance Learning in the Philippine Secondary Public Schools. *3rd International Conference on Advanced Research in Teaching and Education*.
- Dorney, Z. (2001). Motivation Teaching and Research. *England: Pearson Education Limited*, 99-112.
- Field, A. P. (2005). Is the meta-analysis of correlation coefficients accurate when population correlations vary?. *Psychological methods*, 10(4), 444.
- Ghavifekr, S., Afshari, M., & Amla S. (2012). Management strategies for E-Learning system as the core component of systemic change: A qualitative analysis. *Life Science Journal*, 9(3), 2190-2196.
- Hadi, M. A., & Closs, S. J. (2016). Ensuring rigour and trustworthiness of qualitative research in clinical pharmacy. *International journal of clinical pharmacy*, 38(3), 641-646.
- Hair, J.F.J., Anderson, R.E., Tatham, R.L., Black, W.C., 1998. *Multivariate Data Analysis*, 5th edn, Prentice Hall, Upper Saddle River, New Jersey.
- Hair, J.F., Black, W. C., Babin, B. J., Anderson, R. E. (2010). *Multivariate data analysis* (7th ed.). Upper Saddle River, NJ: Pearson Prentice Hal.
- Internet Speed around the world. (2021). Speedtest Global Index. <https://www.speedtest.net/global-index>.
- Izquierdo Alfaro, I., Olea Díaz, J., & Abad García, F. J. (2014). *Exploratory factor analysis in validation studies: Uses and recommendations*. *Psicothema*.
- Jennings, N. A., & Wartella, E. A. (2012). Digital technology and families. *In The Routledge handbook of family communication* (pp. 460-474). Routledge.
- Kaufman, R., & Herman, J. (1991). Strategic planning for a better society. *Educational Leadership*, 48(7), 4-8.
- Kelly, L. (2008). *Teenagers' perceptions of advertising in the online social networking environment: an exploratory study* (Doctoral dissertation, Queensland University of Technology).

- Kirschner, P. & Karpinski, A. (2010). *Facebook (R) and academic performance. Computers in Human Behavior*. 26. 1237-1245.10.1016/j.chb.2010.03.024.
- Kleinginna, P. R., & Kleinginna, A. M. (1981). A categorized list of motivation definitions, with a suggestion for a consensual definition. *Motivation and emotion*, 5(3), 263-291.
- Maarouf, H. (2019). Pragmatism as a supportive paradigm for the mixed research approach: Conceptualizing the ontological, epistemological, and axiological stances of pragmatism. *International Business Research*, 12(9), 1-12.
- Nunnally, J.C. (1978). *Psychometric theory*. 2nd Edition, McGraw-Hill, New York.
- O'Brien, S. J. (2011). *Facebook & other internet use & the academic performance of college students* (Doctor of philosophy), Temple University.
- Ophus, J. D., & Abbitt, J. T. (2009). Exploring the potential perceptions of social networking systems in university courses. *Journal of Online Learning & Teaching*, 5(4), 639-648.
- Oyedele, V., & Chikwature, W. (2016). Teachers' Perception of the Role of Strategic Planning in Educational Development at Three Mission Secondary Boarding Schools in Manicaland Province. *International journal of humanities social sciences and education*, 3(5), 57-66.
- Ractham, P., & Firpo, D. (2011). Using social networking technology to enhance learning in higher education: A case study using Facebook. *In Proceedings of the 44th Hawaii international conference on system sciences*.
- Ramirez, A. Y. (2002). How parents are portrayed among educators. *The School Community Journal*, 12(2), 51-61.
- Rivkin, S. G., Hanushek, E. A., & Kain, J. F. (2004). Teachers, schools, and academic achievement. *Econometrica*, 73(2), 417-458.
- Sarmiento, R. P., & Costa, V. (2019). *Confirmatory Factor Analysis-A Case study*. arXiv preprint arXiv:1905.05598.
- Stebbins, R. A. (2001). What is exploration?. *Exploratory research in the social sciences*, 2-17.
- Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in Science Education*, 48(6), 1273-1296.
- Tanang, H., & Abu, B. (2014). Teacher Professionalism and Professional Development Practices in South Sulawesi, Indonesia. *Journal of curriculum and teaching*, 3(2), 25-42.

- Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International journal of medical education*, 2, 53.
- Telem, M., & Pinto, S. (2006). Information technology's impact on school–parents and parents–student interrelations: a case study. *Computers & Education*, 47(3), 260-279.
- Tria, J. Z. (2020). The COVID-19 pandemic through the lens of education in the Philippines: The new normal. *International Journal of Pedagogical Development and Lifelong Learning*, 1(1), 2-4.
- United Nations. (2020). *Policy brief: Education during COVID-19 and beyond*.<https://libguidesen.ub.uu.se/c.php?g=653353&p=4723406#:~:text=List%20the%20title%20of%20the,publication%20is%20October%2024%2C%201945>.
- Williams, V. I., & Cartledge, G. (1997). Passing notes—to parents. *Teaching Exceptional Children*, 30(1), 30-34.
- Yuen, S., & Yuen, P. (2008). Social networks in education. In G. Richards (Eds.), *In Proceedings of world conference on e-learning in corporate, government, healthcare, and higher education* (pp. 1408-1412), Chesapeake, VA: AACE.