Attitude, Readiness, And Challenges Of Teachers In Implementing Remote Teaching And Learning In The Elementary Schools In The Philippines

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Abstract

The objective of the study is to identify the attitude, readiness, and challenges of teachers in implementing remote teaching. The result showed that in preparation of modules and other instructional materials in the modular approach it requires teachers for technological development to consider new ways to prepare, organize, deliver and assess materials for teaching and learning. A significant relationship was found in respondents' number of years in teaching to materials for teaching and learning (r = 0.179). While findings revealed a significant relationship was found between teachers' attitudes and knowledge and skills (r = 0.174). On the other hand, a Significant relationship was found between learners' characteristics and learning styles and learners' support system (r = 0.137). While a highly significant relationship was found between learners' characteristics and learning style with materials for teaching and learning (r = 0.742). Learners' characteristics and learning styles were found to be highly significant with knowledge and skills (r = 0.366). Finally, challenges in time management were found to be highly significantly related to knowledge and skills (r = 0.426), materials for teaching and learning (r = 0.398), and learners' support systems (r = 0.323). A highly significant relationship was also found between parents' participation with knowledge and skills (r = 0.437) and learners' support system (r = 0.506). Challenges in instructional materials in the implementation of the modular approach were found highly significantly related to knowledge and skills (r = .335), materials for teaching and learning (r = 0.527), and learners' support system (r = 0.205).

Keywords; Attitude, Readiness, Challenges, Teachers, Implementing, Remote Teaching, Learning, Elementary Schools.

Introduction

The Department of Education (DepEd) is determined to pursue its mandate to deliver basic quality education to our learners. Deped prepares teachers and students in the "new normal" of teaching and learning using online classes, modular approach, or the combination of two, blended learning.

If last year's enrolment figures are to be a basis, the Philippine education system will be expecting around 27 million students to enroll in the Basic Education System in the coming school year. With the early closure of the school year in March, the enhanced community quarantine in

effect, and the still unclear future that the COVID-19 pandemic will bring, the Department of Education and our millions of learners are facing enormous challenges (Jorge, 2020).

a recent evaluation of ALS (Alternative Learning System) interventions done in the Mindanao region during the quarantine period, platforms such as ICT4ALS, FB Chat, Google Classroom, the Aral Muna app, and DepEd Commons emerged as the most common technological interventions used. Also popular are the use of radio-based intervention partnerships with local radio stations to announce questions or lessons that can be replied to by phone. There is also the door-to-door delivery of worksheets, take-home learning activity sheets, and take-home portfolio completions. These modalities are being used and explored during the quarantine period and will serve as key learning points for implementation in the bigger education system.

A modular approach in teaching and learning, based on the survey conducted by DepEd on school opening, is the most preferred learning delivery of parents for their children this school year. Under the modular approach, materials can be printed and the parents or guardians take the modules to school and they are the ones who take the role of a teacher to their children. Parents' active participation in this teaching-learning process is very important.

Education's new normal will not just be about operating in an environment that secures the health of students; nor will it be about completely transitioning to online modalities. Instead, it should be about using technology to increase efficiency in areas with the capacity to do so, while empowering learners and communities to create positive learning environments in which the student can grow. It should not sacrifice quality but continue to provide equal opportunities, most especially to the marginalized and vulnerable sectors. It is not a one-size-fits-all solution, but one that is

dependent on the needs of each learning community.

Objectives of the study

- 1. Describe the socio-demographic characteristics of the respondents in terms of age, sex, position, highest educational attainment, number of years in teaching, and training attended,
- 2. Describe the respondents' attitude towards the implementation of remote teaching and learning specifically the modular approach,
- 3. Describe the teachers' readiness in the implementation of remote teaching and learning specifically the modular approach,
- 4. Identify the perceived challenges encountered by the respondents in the implementation of remote teaching and learning specifically the modular approach,
- 5. Determine if there is a significant relationship between the respondents' socio-demographic characteristics and their readiness for the implementation of remote teaching and learning specifically the modular approach,
- 6. Determine if there is a significant relationship between the teachers' attitude and their readiness in the implementation of remote teaching and learning specifically modular approach and
- 7. Determine if there is a significant relationship between the challenges and teachers' readiness in the implementation of remote teaching and learning specifically the modular approach,

Review of Related Literature and Studies

This part presents relevant literature and studies, both foreign and local that had given direction to the present study.

Teachers' Attitude

A teacher, in the most general terms, is a person working in educational institutes who enables students to reach the cognitive, sensory, and behavioral aim and gains within the range determined by the educational system (Gundogdu, Silman, 2007).

Teachers' Readiness

Knowledge and Skills

Human resource training and development are career advancement procedures that help employees become more effective in fulfilling the organization's goals and cultivate the individual's capacity to become a productive and committed organization. (Mondy, n.d). Training for specific skills and for building a stable working force designed to achieve the objectives of productivity, effectiveness, qualification of a better job, and a morale booster because training improves the employee's attitude toward his job, fellow workers, supervisors, and the organization as a whole.

Holmes and Nielson (2010) supported the idea that school administrators and teachers need the training to receive some form of the planned learning experience because they are responsible for their staff and their pupils, the learning process within their schools, and the premises in which this process takes place. Relevant training for teachers or employees should be part of professional development. These should include knowledge, skills, and competencies. Attendance to such relevant training enables them to adapt to changes and become more creative members of an educational institution. This training is necessary because they lead their clientele who also possesses talents, values, and attitudes like them.

Materials for Teaching and Learning

A module is a form of individualized instruction that allows students to use a self-contained package of learning activities. These activities guide learners to know or to be able to do something. Further, a learning module contains activities intended to help students understand a certain lesson. (Cruickshank, 2003)

Learners' Support System

Willems and Gonzalez-DeHass (2012) described school–community partnerships as meaningful relationships with community members, organizations, and businesses that are committed to working cooperatively with a shared responsibility to advance the development of students'" intellectual, social, and emotional wellbeing. School–community partnerships can impact student success and post-school outcomes as well as positively influence and benefit the community in return.

Teachers' Challenges in the Implementation of the Modular Approach

Learners' Characteristics and Learning Styles

The issue of learner characteristics has received wide attention in distance education research. Learners' characteristics include their cognitive and affective attributes, such as ability, content delivery preference, experience, and motivation. Previous research has investigated characteristics as learning styles, attitudes, personality, locus of control, and motivation (Gunawardena & McIsaac, 2004). Academic success in distance education is impacted by a combination of personal, environmental, and social factors age and gender are some characteristics that predict the performance of distance learners (Koch, 2006). In addition to success and performance, learner characteristics might be significant in predicting students' satisfaction with distance education. In turn,

understanding of characteristics of distance learners may help improve their success and satisfaction of distance learners (Yukselturk& Bulut, 2007).

Time Management

More human-centered approaches to the issue arose from psychology (and related fields) that sought to support and motivate the worker to complete his/her expected tasks on time and within budget Chang (2011).

In the field of education, researchers have recognized the importance of relationships between students' ability to manage their time effectively and their academic success, and so research has been conducted in this arena as well Barnard (2008). Each body of research viewed issues of time management from different perspectives.

Parents' Participation

Parental involvement is associated with a wide range of positive child outcomes in primary and high schools, such as good academic skills, positive attitudes, and social competence (Lau, Li & Rao, 2011). Parental involvement in learning acts as a gel that helps to make learning for children pleasant and encourages them to work even more as they seek to make those closest to them proud

According to Garcia and Thornton (2014), current research shows that the involvement of family in learning helps to improve performance, student absenteeism and restore parents' confidence in their children's education. Learners with parents or caregivers who are involved in learners' education, earn higher grades and test scores, have better social skills, and show improved behavior. This is something that we as a community and the world at large need, as it would highly contribute to reducing crime and poverty. Ideally, it would help to have a greater percentage of parental involvement in their children's education.

Instructional Materials

The principles and purpose of modular instruction, its advantages for both students and instructors, and a comparison between the conventional and modular approaches are presented. Present evidence suggests that modular instruction meets the needs of today's students with more learning and content. Instructional materials can serve as learning materials for both students and teachers. They can serve as a primary source of science content, and present specific views about the nature of scientific practices, and how scientific knowledge is developed. Materials can also serve as a primary influence on how teachers should teach science (Reiser 2003).

For the proper implementation of any school curriculum, textbooks become part and parcel of the education system. Especially, in developing countries, it has been a regular practice to consider textbooks as the major source of the teaching-learning process to be undertaken in schools (Mahmood 2010).

Research Methodology

The descriptive-correlational method was used in this study.

To gather pertinent data, the following instruments were used. The questionnaire was used in data collection. There are 91 Grade 6 public elementary school teachers in the Division of San Jose City, Nueva Ecija during School Year 2020 – 2021 served as the respondents of the study. The study utilized purposive sampling. The collected data were analyzed and interpreted, and the implications were determined through the use of descriptive, inferential statistics.

Results and Discussion

Socio-Demographic Characteristics

Table 1 shows the results on socio-demographic characteristics of the respondents in terms of age, sex, position, highest educational attainment, number of years in teaching, and performance rating.

Age

The mean age was 37.37 with a standard deviation of 8.02. 34.10 percent of the respondents belong to the age group of 38 - 45, followed by 33.00 percent (30 - 37), 18.70 percent (22 - 29), 12.10 percent (46 - 53), and 2.20 percent (54 - 61).

The result indicates that the respondents belong to the middle-aged group and that they are in the prime years of their professional life. According to Naguit (2012), being middle-aged implies that the respondents are mature, self-directed, and fully aware of the challenging roles inherent in their duties and functions.

Sex

The result shows that out of 91 Grade 6 teacherrespondents, 65.90 percent of them were females and the remaining 34.10 percent were males. The result revealed that the academe has always been dominated by females. These results conform with Hussain et al. (2011) stated that stereotyping belief that teaching is a feminine job and female teachers might feel the job is more appropriate for them.

Position

Table 2 further shows that more than half (63.70%) of the respondents were Teacher III, Teacher I (20.90%), Master Teacher I (13.20%), and Teacher II (2.20%). The result implies that most of the respondents were promoted which means that they are more competitive in teaching. According to Llego (2016), a teacher can enjoy

the promotion of ranks in the Department of Education based on the set qualification standards

Highest Educational Attainment

As regards the educational attainment of the respondents, 73.60 percent of respondents hold a bachelor's degree with MA units; 14.30 percent were master's degree holders; 7.70 percent were BS degree holders and the remaining 4.40 percent were master's degree holders with units in Ph.D. This result implies that a good number of teachers have the initiative to improve themselves professionally by pursuing graduate studies.

The result conforms with the study of Aquino (2012) deduced that teachers and administrators pursue higher education because of their motivation or desire to establish a competitive edge for the very close and crucial battle for promotion.

Years in Teaching

Respondents' number of years in teaching ranged from 2 to 26 years with a mean of 10.13 and a standard deviation of 6.64. 41.80 percent of the respondents were in the teaching profession for 2 – years, followed by 22.00 percent (7 – 11), 19.80 percent (12 – 16), 9.90 percent (17 – 21) and the remaining 6.60 percent had been teaching for 22 – 26 years already. The result conforms to the study of Clotfelter, Ladd, and Vigdor; Harris and Sass 2007; Kane, Rockoff, and Staiger 2006; Ladd 2008; Sass 2007) that, on average, brand new teachers are less effective than those with some experience under their belts.

Training Attended

As regards the training attended by the respondents in the teaching of remote teaching and learning, 64.80 percent had training attended while the remaining 35.20 percent did not attend training related to remote teaching and learning.

Table 1. Socio-Demographic Characteristics

Characteristics	Frequency	Percentage
	(n=91)	
Age		
54 - 61	2	2.20
46 - 53	11	12.10
38 - 45	31	34.10
30 - 37	30	33.00
22 - 29	17	18.70
Mean = 37.37		
SD = 8.02		
Sex		
Male	31	34.10
Female	60	65.90
Position		
Teacher I	19	20.90
Teacher II	2	2.20
Teacher III	58	63.70
Master Teacher I	12	13.20
Highest Educational Attainment		
Bachelor's Degree	7	7.70
With MA units	67	73.60
MA Graduate	13	14.30
With Ph.D. units	4	4.40
Years in Teaching		
22 - 26	6	6.60
17 - 21	9	9.90
12 - 16	18	19.80
7 – 11	20	22.00
2 - 6	38	41.80
Mean = 10.13		
SD = 6.64		
Training Attended		
With Training	59	64.80
Without Training	32	35.20

Teachers' Attitude

As shown in Table 2, the teachers' attitude had an overall mean score of 2.90 described as an agreement in using a modular approach in implementing remote teaching and learning. This finding implies that teachers' attitudes can be

well-defined by his/her efficiency and effectiveness. The result confirms the study of Gecer (2002) that positive attitudes lead to success while negative attitudes lead to failure and as a result success can lead to positive ego attitudes while failure leads to negative ego attitudes. For example, if the teacher engages in

belittling comments towards a student due to his/her failure, the negative effects of this will be inevitable.

The finding's also revealed that the respondents highly agree (Mean= 3.53) with the statement "Modular approach cannot be used to

get students more actively involved with the highest mean score". Followed by the statement "Modular approach cannot accomplish a wide variety of instructional purposes like in the classroom". (Mean=3.25)

Table 2. Teachers' Attitude

STATEMENT	MEAN	VERBAL
		DESCRIPTION
A modular approach to teaching is economical for educational	2.95	Agree
institutions to adopt.		
The modular approach improves the quality of my teaching.	2.55	Agree
A modular approach can encourage students to think.	2.65	Agree
Many lessons can't be offered through the Modular approach.	2.90	Agree
The modular approach facilitates teaching-learning.	2.76	Agree
A modular approach cannot accomplish a wide variety of	3.25	Strongly Agree
instructional purposes like in the classroom.		
A modular approach cannot be used to get students more actively	3.53	Strongly Agree
involved.		
A modular approach cannot ensure student learning.	2.95	Agree
Different approaches to assessing students are limited.	3.12	Agree
The modular approach is tiresome.	2.59	Agree
Teaching through a modular approach is difficult.	2.80	Agree
The modular approach promotes independent practice in the students.	2.94	Agree
The modular approach does not ensure student achievement.	2.90	Agree
Supporting learners in a modular approach is difficult.	3.10	Agree
The modular approach reduces the students' achievement.	2.95	Agree
A modular approach would positively affect my creativity.	2.91	Agree
The modular approach is time-consuming.	2.72	Agree
The modular approach makes students lazier.	2.75	Agree
A modular approach can't meet the different learning needs of	2.92	Agree
learners.		
It will be difficult for me to become skilled in the modular approach.	2.80	Agree
Over-all Mean	2.90	Agree

Legend: 3.25-4.00 Strongly Agree 2.50-3.24 Agree 1.75-2.49 Disagree 1.00-1.74 Strongly Disagree

Teachers' Readiness

Table 3 presents the teachers' readiness in the implementation of a modular approach to

teaching and learning which includes knowledge and skills, materials for teaching and learning, and learners' support system.

In general, the respondents agree that they are ready in terms of knowledge and skills to implement remote teaching and learning with an overall mean score of 3.16. The respondents said they strongly agree in terms of training needs relevant to distance learning (Mean=3.55) as the highest mean score. The result conforms to the study of Holmes and Nielson (2010) supported the idea that school administrators and teachers need the training to receive some form of planned learning experiences because they are responsible for their staff and their pupils, the learning process within their schools and the premises in which this process takes place. Relevant training for teachers or employees should be part of professional development. These should include knowledge, skills, and competencies. Attendance to such relevant training enables them to adapt to changes and become more creative members of an educational institution. This training is necessary because they lead their clientele who also possesses talents, values, and attitudes like them.

Materials for Teaching and Learning

The respondents all agree that the materials for teaching and learning in the implementation of remote teaching and learning are ready with a pooled mean of 2.91. The statement "well prepared/designed learning packages instructional materials as reference for the modules are available" obtained the highest mean of 3.18 which interpret agree. The result showed conformity with the study of Gonzales (2006) that modules focus on a few well-defined objectives and are systematically organized around a welldefined topic that contains the elements of instruction. It was followed by the "Modules are easy to reproduce and user-friendly" (2.93) described as "agree".

The statement, "tools and equipment which are used in distance learning are adequate" and "modules can address individual differences among learners" got the lowest mean of 2.83 and 2.71 respectively. The results indicate that in the modular approach of teaching and learning, every learner needs a 1:1 ratio of modules that fit learners' differences. This result conforms with the study of Sejpal (2003) that individual differences are given priority in modular teaching and the adoption of teaching techniques is accepted as necessary for the growth and improvement of individuals at their paces.

Learners' Support System

The learner support system had a pooled mean of 3.44, described as "Strongly agree" which showed that the learners and teachers need a support system for the different stakeholders in the implementation of a modular approach to teaching and learning. The result showed that school-community partnerships as meaningful with relationships community members, organizations, and businesses that are committed to working cooperatively with a shared responsibility to advance the development of students" intellectual, social, and emotional wellbeing. School-community partnerships impact student success and post-school outcomes as well as positively influence and benefit the community in return (Willems and Gonzalez-DeHass, 2012).

The item with the highest mean (3.48) is "I can help facilitate the distribution of modules to the learners", followed by "I work with DepEd in looking into a partnership with local governments unit to ensure that education of learners will continue" (3.47), while the lowest mean (3.38) "I can encourage household members to assist learners in working on their children's modules". All items were described as "Strongly agree".

This result implies that learners' support systems are very important in today's new normal

of education, to facilitate the teaching-learning process. The result shows conformity to the study of Epstein (2010b) that the goals for student academic success are best achieved through the

cooperation and support of schools, families, and communities. In addition, there is a consideration for the various types of involvement for schools, families, and communities to work together.

Table 3. Teachers' Readiness

STATEMENT	MEAN	DESCRIPTION
Knowledge and Skills		
I need training relevant to distance learning.	3.55	Strongly Agree
I can develop and adapt teaching activities to provide quality	3.24	Agree
learning.		
I can organize instructional materials into modules.	3.01	Agree
I can evaluate the instructional effectiveness and value of learning materials for a cause, as well as ensure those selected align with the given context, curriculum, and outcomes.	2.91	Agree
I can create an organized course where objectives, structure, content, activities, assessment, materials, and interaction components of the course are made explicit	2.88	Agree
Pooled Mean	3.12	Agree
Materials for Teaching and Learning		
Well-prepared/designed learning packages or instructional materials as references for the modules are available.	3.18	Agree
Written materials that are used in modules are of good quality in terms of content.	2.90	Agree
Tools and equipment which are used in distance learning are adequate.	2.83	Agree
Modules can address individual differences among learners.	2.71	Agree
Modules are easy to reproduce and user-friendly.	2.93	Agree
Pooled Mean	2.91	Agree
Learners' Support System		
I work with DepEd in looking into a partnership with local government units to ensure that the education of learners will continue.	3.47	Strongly Agree
I can help learners adapt to a modular set-up through constant motivation.	3.41	Strongly Agree
I can encourage household members to assist learners in working on their children's modules.	3.38	Strongly Agree
I can help facilitate the distribution of modules to the learners.	3.48	Strongly Agree
I can give orientation to parents to better help their children.	3.44	Strongly Agree
Pooled Mean	3.44	Strongly Agree
Overall Mean	3.16	Agree
Legend: 3.25 – 4.00 Strongly Agree 1.75 – 2.4	9 Disagr	ee
2.50 - 3.24 Agree $1.00 - 1.74$	4 Strong	ly Disagree

Teachers' Challenges in the Implementation of the Modular Approach

Table 4 shows that teachers' challenges in the implementation of the modular approach such as learners' characteristics and learning style, time management, parents' participation, and instructional materials got an overall mean of 3.18 described as "Agree" by the respondents.

Learners' Characteristics and Learning Styles

As shown in Table 4, learners' characteristics got a pooled mean of 2.97. All of the statements were described as "Agree".

The statement "student discipline and behavior problems can be easier to deal with" got the highest mean of 3.24 and was described as agreeing. The result implies that it is easier to handle the behavior of students especially in disciplining them while doing their tasks in modules. Meanwhile, the statements "module is designed based on the learner's characteristics and learning style" (3.05) and "individualized instruction is possible" (3.02) were described as agreeing. Learning style is a significant issue in the modular approach to teaching and learning; recognizing the differences in learning styles may be helpful to adjust instructional materials suited to the learners. This shows conformity to the study of Nardo (2017) "Modular Instruction Enhances Learner Autonomy", which describes modular teaching as "an instructional material which possesses the qualities that will make the individual an independent learner, self-pacing and progressing at his rate, finally giving him the feeling of self-satisfaction".

Furthermore, the statement "learners are challenged to be honest and sincere in answering the module" got a mean of 2.89, and "learners can take charge/responsibility of their own learning" obtained a mean of 2.65. Both statements are described as "Agree".

Time Management

The time management had pooled mean of 3.17 where most statements under the management were described by the respondents as "Agree". The statement "can spend additional time to give attention to details of learner's performance" obtained the highest mean of 3.25 which is described as "Strongly agree. This might be because, during the modular approach, there's the monitoring of the development of the learners. The result showed conformity with the study of Eilam and Aharon (2003) that time management is a way to monitor and control time. It was followed by the statement "Module is given on time". Distribution of instructional modules on time is very important for the learners to ensure the continuity of their learning.

The statement "can conduct re-teaching to help struggling learners in their difficulties" (3.16) and "schedule time to design the course before delivery" (3.13) are both interpreted as agreement.

However, the statement "modular approach is time flexible" got the lowest mean of 3.10 described as "Agree.

Parents' Participation

Parents' participation had a pooled mean of 3.52, described as "Strongly Agree" which showed that in the implementation of a modular approach to teaching and learning, the part of parents in learning is very important.

The statement "parents/guardians need to guide their children to monitor their needs and to provide assistance" got the highest mean of 3.59 and was described as "Strongly agree". The result conforms to the study of Kwatubana & Makhalemele, (2015) that seeing parents involved in the education of their children is a good thing because it improves academic performance. Learners become more focused on their schoolwork. It was followed by "have patience and encourage their children to be actively involved in the learning" with a mean of 3.56 and described as "Strongly agree". The

finding implies that when parents involve themselves in the education process of their children, usually the outcome can be qualified as a positive and encouraging one.

It is followed by the statement "the school helps parents by providing them a comprehensive orientation/information on the demands of the modular approach in learning" which got the mean of 3.53 and was interpreted as "Strongly agree. The result implies that parents need to be well informed on the new normal setting of education specifically the modular approach that the school is going to adopt during this time of the pandemic.

Furthermore, the statement "encourage positive behavior/attitude of their children by giving rewards, affirmations and praises" 3.46) and "parents give feedback from time to time about their children's activities at home" (3.45) got the lowest mean and both were described as strongly agree. According to Khajehpour & Ghazini, (2011) parents should have the skills to foster both cognitive growth and achievement motivation so that their child tends to achieve more.

Instructional Materials

As presented in table 4, the instructional materials had a pooled mean of 3.07 and were described as "Agree" by the respondents.

The statement "there are sufficient supplies for making modules" got the highest mean (3.16). This implies that in a modular approach, materials in printing modules are adequate. Followed by the statement "modified curriculum guides and teaching guides are available" with a mean of 3.11 and described as "Agree'.

However, the statement "developed module and learning activities fit learner's needs" (3.07) and "module passed quality assurance" (3.03) both were described as "Agree". The finding reveals that the teacher respondents expected the modules to be from reliable authors that passed quality assurance and are suitable for the learning capacity of learners. The result shows conformity to the study by Macarandang, (2009) that the preparation of self-instructional modules includes careful analysis of the course plan or syllabus, preparing preliminaries, and designing the learning activities. The design of the learning activities includes the objectives, directions, pretest and key, activity proper, selfevaluation exercises, and posttests.

Meanwhile, the statement "adequate and relevant modules, teaching aids/devices are available" got the lowest mean of 2.95 and was described as "Agree"

Table 4. Teachers' Challenges in the Implementation of the Modular Approach

STATEMENT	MEAN	DESCRIPTION
Learners' Characteristics and Learning Styles		
Student discipline and behavior problems can be easier to deal with.	3.24	Agree
Learners can take charge/responsibility for their learning.	2.65	Agree
Learners are challenged to be honest and sincere in answering the module.	2.89	Agree
Individualized instruction is possible.	3.02	Agree
The module is designed based on the learner's characteristics and learning	3.05	Agree
style.		
Pooled Mean	2.97	Agree
Time Management		

Schedule time to design the course before delivery. (e.g., a semester before	3.13	Agree
delivery)		
The module is given on time.	3.21	Agree
Can spend additional time to give attention to details of learner's	3.25	Strongly Agree
performance.		
Can conduct re-teaching to help struggling learners in their difficulties.	3.16	Agree
The modular approach is time flexible.	3.10	Agree
Pooled Mean	3.17	Agree
Parents' Participation		
Parents/guardians need to guide their children to monitor their needs and	3.59	Strongly Agree
provide assistance.		
The school helps parents by providing them with a comprehensive	3.53	Strongly Agree
orientation/information on the demands of the modular approach to		
learning.		
Have patience and encourage their children to be actively involved in	3.56	Strongly Agree
learning.		
Encourage positive behavior/attitude of their children by giving rewards,	3.46	Strongly Agree
affirmations, and praises.		
Parents give feedback from time to time about their children's activities at	3.45	Strongly Agree
home.		
Pooled Mean	3.52	Strongly Agree
Instructional Materials		
There are sufficient supplies for making modules.	3.16	Agree
Modified curriculum guides and teaching guides are available.	3.11	Agree
Developed modules and learning activities that fit learners' needs.	3.07	Agree
Adequate and relevant modules and teaching aids/devices are available.	2.95	Agree
Module passed quality assurance.	3.03	Agree
Pooled Mean	3.07	Agree
Overall Mean	3.18	Agree

Legend: 3.25 - 4.00 Strongly Agree

2.50 - 3.24 Agree

1.75 – 2.49 Disagree

1.00 – 1.74 Strongly Disagree

Relationship between the Respondent's Socio-Demographic Characteristics and Teachers' Readiness

Figures in Table 5, show the relationship between the socio-demographic characteristics such as age, sex, position, highest educational attainment, number of years in teaching and training attended to the teachers' readiness such as knowledge and skills, materials for teaching and learning, and learners' support system.

A significant relationship was found between the age of the teacher respondents and materials for teaching and learning (r = 0.205). The result implies that in preparation of modules and other instructional materials in a modular approach, also requires teachers for technological development to consider new ways to prepare,

organize, deliver and assess materials for teaching and learning. As age gets older, it is hard for teachers to adopt the new normal of education.

A significant relationship was also found in respondents' number of years in teaching materials for teaching and learning (r = 0.179). This means that number of years in teaching relates to the materials for teaching and learning. The more years of teachers in teaching, the more

knowledge they had in preparing materials suitable for the learners.

Thus, the hypotheses stating that there is no significant relationship between the sociodemographic characteristics of the respondents (age and number of years in teaching) and the teachers' readiness in the implementation of the modular approach in teaching and learning (materials for teaching and learning) was rejected.

Table 5. Relationship between the respondent's Socio-Demographic Characteristics and Teachers' Readiness

TEACHERS' READINESS			
SDC	Knowledge and Skills	Materials for Teaching	Learners' Support
		and Learning	System
Age	0.066	0.205*	-0.070
Sex	-0.055	-0.194*	0.057
Position	0.060	0.072	-0.124
Highest Educational Attainment	0.080	0.016	0.031
Number of Years in teaching	0.062	0.179*	-0.111
Training Attended	0.013	0.144	0.054

^{*}significant at 0.05 level (2 – tailed)

Relationship between the Teachers' Attitude and Teachers' Readiness

Findings revealed in Table 6 shows the relationship between the teachers' attitude to teachers' readiness (knowledge and skills, materials for teaching and learning, and learners' support system).

A significant relationship was found between teachers' attitudes and knowledge and skills (r=0.174). This implies that teachers'

attitudes had a significant relationship with knowledge and skills. Since teaching in the modular approach is different from teaching in the classroom, teachers require in adjusting their attitudes to adopt the knowledge and skills in the modular approach of teaching.

The hypothesis which states that there is no significant relationship between teachers' attitude and their readiness in the implementation of the modular approach in teaching and learning (knowledge and skills) was rejected.

Table 6. Relationship between the Teachers' Attitude and Teachers' Readiness

	Teachers' Readiness			
	Knowledge and Skills	Materials for Teaching	Learners' Support	
		and Learning	System	
Attitude	0.174*	0.069	0.039	

*significant at 0.05 level (2 – tailed)

Relationship between the Teachers' Challenges in the Implementation of Modular Approach and Teachers' Readiness

Table 7 shows the relationship between the challenges in the implementation of the such modular approach as learners' characteristics style, and learning time management, parents' participation, and instructional materials to the teachers' readiness such as knowledge and skills, materials for teaching and learning and learners' support system.

A significant relationship was found between learners' characteristics and learning style and learners' support system (r = 0.137). This implies that learners' characteristics and learning styles had a significant relationship with learners' support systems. This might be because parents and other stakeholders are in demand in performing their duties and responsibilities in a modular approach to teaching and learning.

A highly significant relationship was found between learners' characteristics and learning style with materials for teaching and learning (r=0.742). This result implies that in preparing modules, it is important to consider the learners' characteristics and learning styles that fit their learning needs

Learners' characteristics and learning styles were found to be highly significant with knowledge and skills (r=0.366). This finding implies that teachers need to be more knowledgeable and skillful in preparing modules for the individual differences of learners.

Challenges in time management were found to be highly significantly related to

knowledge and skills (r = 0.426), materials for teaching and learning (r = 0.398), and learners' support systems (r = 0.323). These findings imply that the time management of teachers is important in knowledge and skills, materials for teaching and learning, and learners' support system.

A highly significant relationship was also found between parents' participation with knowledge and skills (r=0.437) and learners' support system (r=0.506). These findings imply that parents' participation had a highly significant relationship with knowledge and skills and learners' support system. This might be because parents' involvement is high in demandingness in the modular approach of teaching and learning.

Challenges in instructional materials in the implementation of the modular approach were found highly significantly related to knowledge and skills (r = .335), materials for teaching and learning (r = 0.527), and learners' support system (r = 0.205). These findings imply that instructional materials in the implementation of the modular approach had a highly significant relationship with knowledge and skills, materials for teaching and learning, and learners' support system. This might be because instructional materials are high in demandingness in the modular approach of teaching and learning.

The hypothesis states that there is no significant relationship between the challenges (learners' characteristics and learning style, time management, parents' participation, and instructional materials) and teachers' readiness in the implementation of a modular approach in teaching and learning (knowledge and skills, materials for teaching and learning, and learner' support system) was rejected.

Table 7. Relationship between the Teachers' Challenges in the Implementation of Modular Approach and Teachers' Readiness

Challenges	Knowledge and Skills	Materials for Teaching and Learning	Learners' Support System
Learners' Characteristics and	0.366**	0.742**	0.137*
Learning Styles			
Time Management	0.426**	0.398**	0.323**
Parents' Participation	0.437**	0.096	0.506**
Instructional Materials	0.335**	0.527**	0.205**

^{*}significant at 0.05 level (2 – tailed)

Conclusions

Based on the foregoing findings, the following conclusions are drawn:

The majority of the respondents were females, aged 37.37 years old, Teacher III, Bachelor's Degree holders with MA units, 10.13 years in teaching, and attended training related to remote teaching and learning.

The average of teachers' attitudes toward the implementation of the modular approach in teaching and learning was 2.90 described as "agree".

The challenges in the implementation of the modular approach in teaching and learning were parents' participation, and it was followed by time management, instructional materials, and learners' characteristics and learning style.

The factors that affect the teachers' readiness in the implementation of a modular approach to teaching and learning were the learners' support system followed by knowledge and skills and materials for teaching and learning.

Age and sex were found to be correlated with the teachers' readiness (materials for teaching and learning) in the implementation of a modular approach to teaching and learning.

Teachers' attitude was correlated with the teachers' readiness (knowledge and skills) in the

implementation of a modular approach to teaching and learning.

Teachers' challenges in the implementation of the modular approach were found to be significantly correlated with their readiness.

Recommendations

Based on the foregoing conclusions, the following are hereto recommended.

- The module may be validated by more evaluators and may be utilized for a large group of learners to be able to apprehend a more valid expression of evaluators through the authors' validation process.
- Teachers should be provided enough training about how to design and implement a modular approach to teaching and learning.
- 3. Examine the readiness and choose the most relevant tools for the learners.
- 4. Strengthen relationships with stakeholders.
- Conduct regular orientation to the parents regarding their problems/issues with the modular approach.

References

 Acelejado, M. The Modular Teaching Approach in College Algebra: An Alternative to Improving the Learner's Achievement, Persistence, and

- Confidence in Mathematics. 2006. DLSU, Philippines.
- Adamson, B.J., T. Covic, and M. Lincoln, Teaching time and organizational management skills to first-year health science students: does training make a difference? Journal of Further & Higher Education, 2004. 28(3): p. 261-276
- Aggabao, Ambrose Hans. Development and Evaluation of Individualized Self-Instructional Modules on Selected Topics in Basic Mathematics. (Journal of Research, Isabela StateUniversity, Vol. XI, No. 1, January – December 2002). [
- 4. Ajzen, I., & Fishbein, M. (2005). The influence of attitudes on behavior. In D. Albarracin, B. T. Johnson, & M. P. Zanna (Eds.), The handbook of attitudes (pp. 173-221). Mahwah, NJ: Erlbaum.
- 5. Alesandrini, K., & Larson, L. (2002). Teachers bridge to constructivism. The Clearing House, 75(3), 118–121.
- Ancheta, (2011).6. R. **Emotional** intelligence level among elementary school administrators in Nueva Vizcaya: Its relationship with their conflict decision-making management and Unpublished practices. dissertation. Nueva Vizcaya State University, Bambang, Nueva Vizcaya.
- 7. Aquino, N. (2012). Empowerment among elementary-based managers in Nueva Vizcaya: Correlates, factors and predictors, Unpublished dissertation, Nueva Vizcaya State University, Bambang, Nueva Vizcaya.Ari, R. (2008). Egitim psikolojisi (Educational psychology) (4th Ed.). Ankara: Nobel
- 8. Armstrong, Michael. 2000. "Performance Management." In Human Resource Management, edited by Rob Dransfield, 69-84. Oxford, UK: Heineman Educational Publishers.

- Boyd, Donald J., Hamilton Lankford, 9. Susanna Loeb, Jonah E. Rockoff, and Wyckoff. James Η. 2007. "The Narrowing Gap in New York City Teacher **Oualifications** and Its Implications for Student Achievement in Schools." High-Poverty **CALDER** Working Paper 10. Washington, DC: The Urban Institute.
- 10. Caracalla, R. (2012). Factors affecting the leading powers among elementary school administrators in the Division of Nueva Vizcaya as perceived themselves and their teachers. Unpublished dissertation. Nueva Vizcaya State University, Bambang, Nueva Vizcaya.
- 11. Can. G. (2011). Kişilik gelişimi (Development of personality). В. Yesilyaprak (2011).(Ed.) **Egitim** psikolojisi: Gelisim-ogrenme-ogretim (Educational psychology: Developmentlearning-teaching)(7th Ed.) (119-151). Ankara: Pegem Akademi.
- 12. Chang, A. and L.T. Nguyen, The mediating effects of time structure on the relationships between time management behavior, job satisfaction, and psychological well-being.

 Australian Journal of Psychology, 2011. 63(4): p. 187-197.
- 13. Claessens, B.J.C., et al., A review of the time management literature. Personnel Review, 2007. 36(2): p. 255276
- Clotfelter, Charles T., Helen F. Ladd,
 Jacob L. Vigdor, and Justin Wheeler.
 2007. "High-Poverty Schools and the
 Distribution of Teachers and Principals."
 CALDER Working Paper 1.
 Washington, DC: The Urban Institute.
- 15. Cortes, N. (2006). Competencies of presidents of state universities and

- colleges: Factors and predictors. Centro Escolar University, Manila.
- Cruickshank, D. et al. 2003. The Act of Teaching. Third Edition. 1221 Avenue of the Americas, New York, NY. McGraw Hill Companies.
- 17. De Vera, M. (2009). Instructional supervisory skills of public elementary school administrators in Nueva Vizcaya as perceived by themselves and their teachers. Unpublished dissertation. Nueva Vizcaya State University, Bambang, Nueva Vizcaya.Distance Education, 11(3), 8-25.
- 18. Dixit, Avinash. 2002. "Incentives and Organizations in the Public Sector: An Interpretative Review." Journal of Human Resources 37 (4): 696-727.
- Donaldson-Feilder, E., J. Yarker, and R. Lewis, Preventing Stress in Organizations: How to Develop Positive Managers. 2011, Chichester, West Sussex: John Wiley & Sons Ltd. 270
- 20. Dulawan, A. (2009). Level of stress among secondary school administrators in the Division of Nueva Vizcaya and its relationship to their professionalism and empowerment, Unpublished dissertation. Nueva Vizcaya State University, Bambang, Nueva Vizcaya.
- 21. Durisic, M., & Bunijevac, M. (2017).
 Parental Involvement is an important factor for successful education. CEPS JOURNAL, 7(3). Retrieved from https://files.eric.edu.gov/fulltext/EJ1156
 936.pdf&ved
- 22. Educational Technology&Society, 10(2), 71-83.
- 23. Eilam, B. and I. Aharon, Students' planning in the process of self-regulated learning. Contemporary Educational Psychology, 2003. 28(3): p. 304-334.
- 24. Epstein, J. L. (2010b). School/family/community partnerships:

- Caring for the children we share. Phi Delta Kappan, 92(3), 81–96.
- 25. Epstein, J. L. (2011). School, family, and community partnerships: Preparing educators and improving schools. Boulder, CO: Westview Press.
- 26. Estrada, C. (2014). Resiliency quotient of employees in the municipal local government unit of Bambang, Nueva Vizcaya: Its influence on their work commitment and work ethics. Thesis. Nueva Vizcaya State University, Bambang, Nueva Vizcaya.
- Fernandez-Alonso, R., Alvarez-Diaz., M., Waitschach, P., Suarez-Alvarez, J., & Cuesta, M. (2017). Parental involvement and academic performance: Less control and more communication. Psicothema, 29(4), 453–461.
- 28. Friedman, H. H., & Friedman, L. W. (2011). Crises in Education: Online Learning as a Solution. Creative Education, 2(3), 156-163.
- 29. Garcia, L.E. & Thornton, O. 2014. The enduring Importance of parental involvement. http://Neatoday.org/20
 14/11/18/the- enduring-importance of parental- involvement-2/. Date of access: 13 March 2018.
- 30. Gorillas, M. N. T. Development and Validation of Instructional Module in Biology for Second Year High School. TVC-Sta. Teresa National High School. 2012.
- 31. Garland, M. (2007).Ethnography penetrates the "I didn't have time" rationale to elucidate higher-order reasons distance education for withdrawal. Research in distance education, 8(2), 181-198
- 32. Gecer, A.K. (2002). Ogretmen yakinliginin ogrencilerin basarilari, tutumlari ve gudulenme duzeyleri uzerindeki etkisi (The effect of teacher

- immediacy on students' performance, attitude and motivation). Unpublished doctoral dissertation, University of Ankara,

 Ankara.
- 33. Glazerman, Steven, Susanna Loeb, Dan Goldhaber, Douglas Staiger, Stephen Raudenbush, and Grover Whitehurst. 2010. Evaluating Teachers: The Important Role of Value- Added. Washington, DC.: Brookings Institution. http://www.brookings.edu/reports/2010/1117_evaluating_teachers.aspx (accessed on July 6, 2011)
- 34. Goldhaber, Dan, and Emily Anthony.
 2007. "Can Teacher Quality Be
 Effectively Assessed?" Review of
 Economics and Statistics 89 (1): 134-150
- 35. Gonzales, E., et al. 2006. A Modular Approach to Writing in the Discipline. Anahaw Enterprise, P.O. Box 126, 3100, Cabanatuan City, Philippines.
- 36. Green, P. and D. Skinner, Does time management training work? An evaluation. International Journal of Training & Development, 2005. 9(2): p. 124-139
- 37. Griffiths, R.F., Time management in telework and other autonomous work environments. 2003, Kansas State University: Ann Arbor. p. 145-145 p.
- 38. Gunawardena, C. N., &Zittle, F. (1997). Social presence as a predictor of satisfaction
- 39. Gundogdu, K., Silman, F. (2007). Bir meslek olarak öğretmenlik ve etkili öğretim (Teaching as a profession and effective teaching). Z. Cafoglu (Ed.) (2007). Egitim bilimine giris: Temel kavramlar el kitabı (Introduction to education: Handbook of basic concepts) (259-292). Ankara: Grafiker.
- 40. Häfner, A. and A. Stock, Time Management Training and Perceived

- Control of Time at Work. Journal of Psychology, 2010. 144(5): p. 429-447
- 41. Hands, C. (2005). It's who you know and what you know: The process of creating partnerships between schools and communities. School Community Journal, 15(2), 64–84.
- 42. Harris, Douglas N., and Tim R. Sass.
 2007. "Teacher Training, Teacher
 Quality, and Student Achievement."
 CALDER Working Paper 3.
 Washington, DC: The Urban Institute.
- 43. Holmes, G. & Nielsen, A. (2010). Headteachers or managers: Implications for training. Thesis. Oxford Polytechnic, United Kingdom.
- 44. Hornby, G. & Lafaele, R. 2011. Barriers to parental involvement in education: an explanatory model. Educational Review, 63(1):37-52
- 45. Hussain, S., Ali, R., Khan, M. S., Ramzan, M., & Qadeer, M. Z. (2011). The attitude of scholarly school teachers towards the teaching profession. International Journal of Academic Research, 3(1), 985-990.
- 46. Jacob, Brian A., and Lars J. Lefgren. 2008. "Principals as Agents: Subjective Performance Measurement in Education." Journal of Labor Economics 26 (1): 101-136.
- 47. Jones, D. (2007). Millennium man: Constructing identities of male teachers in early years contexts. Educational Review, 59(2), 179-194. doi:10.1080/00131910701254973
- 48. Kane, Thomas J. and Steven Cantrell. 2010. Learning about Teaching: Initial Findings from the Measures of Effective Teaching Project. Seattle, WA: Bill and Melinda Gates Foundation. http://www.metproject.org/downloads/Preliminary_Findings-

Research_Paper.pdf (accessed December 20, 2010)

- 49. Kanuka, H. & Note, N (2003). Exploring the Effects of Personality Type on Perceived Satisfaction with Web-Based Learning in Continuing Professional Development. Distance Education, Vol. 24, No. 2, October 2003
- 50. Khajehpour, M., & Ghazini, S. D. (2011). The role of parental involvement affects children's academic performance. Procedia Social and Behavioral Sciences, 1204–1208.

https://doi.org/10.1016/j.sbspro.2011.03. 263

- 51. Khan, M.S. (2014). The Impact of Job Satisfaction and Organizational Commitment on the Intention to leave among the Academicians. International Journal of Academic Research in Business and Social Sciences Vol. 4, No. 2. 00ISSN: 2222-6990
- 52. Kimball, Steven M. 2002. "Analysis of Feedback, Enabling Conditions and Fairness Perceptions of Teachers in Three School Districts with New StandardsBased Evaluation Systems." Journal of Personnel Evaluation in Education 16 (4): 241-268.
- 53. Kisa, A. and K. Ersoy, The Need for Time Management Training Is Universal: Evidence fromTurkey. Hospital Topics, 2005. 83(1): p. 13-19.
- 54. Kwatubana, S. & Makhalemele, T. 2015.
 Parental involvement in the process of implementation of the National School Nutrition Programme in Public Schools.

 International Journal of Educational Sciences, 9(3):315-323
- 55. Lacdao, Melchor O. (2004) "A Comparative Study of the Effects of Modular Instruction and Lecture-Discussion Method on the Achievement of Grade Six Pupils in Mathematics"

- Unpublished Master's Thesis, Eastern Samar State College, Borongan, Eastern Samar.
- 56. Ladd, Helen F. 2008. "Value-Added Modeling of Teacher Credentials: Policy Implications." Paper presented at the second annual CALDER research conference, "The Ins and Outs of Value-Added Measures in Education: What Research Says," Washington, D.C., November 21. http://www.caldercenter.org/upload/Sunny_Ladd_presentation.pdf.
- 57. Lau, E. Y.H., Li, H. & Rao, H. 2011. Parental involvement and children's readiness for school in China. Educational Research, 53(1): 95-113.
- 58. Lemmer, E. M. 2007. Parent involvement in teacher education in South Africa: International Journal about Parents in Education, 1(0): 218-229.
- 59. Lego, M.A. (2016). Criteria for the master teacher. Retrieved from https://www.teacherph.com /criteria-master-teacher/
- 60. Macarandang, M. A. Evaluation of a Proposed Set of Modules in Principles and Method of Teaching. E-International Scientific Research Journal, 1, 1-24. 2009.
- Magdirila, J. (2009). Organizational 61. culture and administrative capabilities of the provincial government of Nueva Vizcaya. Unpublished master's thesis. Nueva Vizcaya State University, Bambang, Nueva Vizcaya.Mahmood, K. Textbook Evaluation in Pakistan: Issue Conformity to the National of Curriculum Guidelines. Bulletin of Education and Research, 32, 15-36. 2010.
- 62. May-as, A. D. Development of Instructional Materials for Interactive Learning. 2006.

- 63. Milanowski, Anthony T. and Herbert G. Heneman. 2001. "Assessment of Teacher Reactions to a Standards-Based Teacher Evaluation System: A Pilot Study." Journal of Personnel Evaluation in Education 15 (3): 193-212.
- 64. Mondy (n.d.). www.humandev.com.us
- 65. Naguit, NC. (2012). Administrative philosophies, emotional quotient, anxiety level and stress-coping mechanisms: Their relationship to administrative competencies of secondary school administrators in Nueva Vizcaya. A Dissertation. Nueva Vizcaya State University, Bambang, Nueva Vizcaya.
- 66. Nardo, M.T.B. 2013. Development and Evaluation of Modules in Technical Writing. Doctor Dissertation. Benguet State University, La Trinidad Benguet.
- 67. Nardo, Ma. T. B. (2017). Modular Instruction Enhances Learner Autonomy. American Journal of Educational Research, 5(10): 1024-1034. doi: 10.12691/education-5-10-3.
- 68. Nardo, Ma. T. B. (2017). Modular Instruction Enhances Learner Autonomy. American Journal of Educational Research, 5(10): 1024-1034. doi: 10.12691/education-5-10-3.
- 69. Ntekane, A. (2018). Parental involvement in education. Research Gate Journal
- 70. Obico, K. (2013). Impact of parental involvement on student achievement. Retrieved from http://www.nwmissouri.edu/library/Obico,%2520Kent.
- 71. Patricia P. Willems and Alyssa R. Gonzalez-DeHass -School—Community Partnerships: Using Authentic Contexts to Academically Motivate Students
- 72. Reiser, B. J., et al. Design Strategies for Developing Science Instructional

- Materials. National Association for Research in Science Teaching. 2003.
- 73. Robles, R. (2012). Empowerment and professionalism of faculty as related to the organizational performance of selected SUCs of Region II, IV, and NCR. Unpublished dissertation. Technological University of the Philippines, Manila.
- 74. Saban, A. (2003). A Turkish profile of prospective elementary school teachers and their views of teaching. Teaching & Teacher Education, 19(8), 829. doi:10.1016/j.tate.2003.03.004
- 75. Salandanan, G. Teacher Education Journal. Quezon City: Katha Publishing Co., Inc. 2001.
- 76. Salandanan, Gloria G. (2005) Teaching, and the Teacher, Quezon City: Adriana Printing Co., Inc.
- 77. Sanders, M. G. (2006). Building school-community partnerships: Collaboration for student success. Thousand Oaks, CA: Corwin Press.
- 78. Sapungan, G.M. & Sapungan, R. M. 2014. Parental Involvement in Child's Education: Importance, Barriers, and Benefits. Asian Journal of Management Sciences and Education, 3(2): 42-48
- 79. Shepperd, R.S., Predictors of Student s\Success in Distance Education Courses, in College of Human Resources and Education. 2002, Dissertation submitted to West Virginia University:

 Morgantown, WV.
- 80. Sigh, P., Mbokodi, S. M. & Msila, V. T. 2004. Black parental involvement in education: South African Journal of Education, 24(4):301-307.
- 81. Skelton, C. (2003). Male primary teachers and perceptions of masculinity. Educational Review, 55(2), 195.
- 82. Strongman, K.T. and C.D.B. Burt Taking breaks from work: An exploratory

- inquiry. Journal of Psychology, 2000. 134(3): p. 229-42.
- 83. Van Eerde, W., Procrastination at work and time management training. Journal of Psychology, 2003. 137(5): p. 421-434.
- 84. Vijaya, R. (2016). Parental involvement and academic achievement among high school students. International Journal of Multidisciplinary Research Review, 5(12). Retrieved from https://www.reserachgate.net/publication/317545158
- 85. Weaver-Hightower, M. (2011). Male preservice teachers and discouragement from teaching. The Journal of Men's Studies, 19(2), 97-115.
- 86. Weisberg, Daniel, Susan Sexton, Jennifer Mulhern, and David Keeling. 2009. The Widget Effect: Our National Failure to Acknowledge and Act on Teacher Effectiveness. New York City: The New Teacher Project.
- 87. Yukselturk, E., & Bulut, S. (2007)
 Predictors for student success in an online course.