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EFFECTIVENESS OF SELF-LEARNING DISTANCE MODULES TO LEARNERS WITH SPECIAL NEEDS

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ABSTRACT:

The present paper aims to evaluate the effectiveness of the SLM in the implementation of MDL to students with special needs at the elementary level under the new normal. The respondents of this study are 10 randomly selected students from Pangdan Elementary School, 10 students from Balirong Elementary, 10 students from CEPOC Elementary School and 20 students from Naga Central Elementary School. Comparative-evaluative research design was used to determine the effectiveness of SLM in the implementation of MDL to students with special needs. In this study, the researchers compare the academic performances before pandemic and during pandemic while having modular distance learning of student-respondents involved. Then, after comparing the two approaches—traditional and modular learning, the research evaluates the efficacy of the modules to these students with special needs. Factors such a) the profile of the students based on their personal/family background; b) academic performance in school before pandemic and during pandemic while having modular distance learning; and c) comparative results of grades before pandemic where traditional class is employed and today's new normal with the use of self-learning modules. The modular learning approach has several weak spots. To address them, there is a need for revising the modules given to students with special needs. Hence the following recommendations can be brought up to the division office: a) give ample time to teacher-writers to create a very suitable module for students with special needs; b) the writer of the module must be, of course, a special education teacher herself, in order for her to get a better view of the self-learning modules that fit to the learning styles of SPED students; c) there must a SPED teacher assigned to check, monitor, and feedback students with special needs. Thus, a revised self-learning module is made to make sure that learners with special needs are entitled with modules that fit to their learning styles.

KEYWORDS:

SELF-LEARNING DISTANCE MODULES, LEARNERS' TAXONOMY, INDEPENDENCE, STRUCTURE, DIALOGUE, STUDENTS WITH SPECIAL NEEDS.

INTRODUCTION

The COVID-19 pandemic shifts the traditional classroom or face-to-face teaching and learning into distance learning. For a year now, Department of Education uses Modular Distance Learning as one of the best-seen alternative response to ensure continuity of education despite the nonstop war against COVID-19. This learning modality made education possible through providing printed and digital modules to students in all public schools and making sure students continue to learn while staying safe at home.

Further, the modules should include the same pattern of activities in traditional learning such as motivation, lesson proper, activities/drills and assessment that serve as a complete guide for both the teacher's and students' desired competencies. The teachers will monitor the learner's progress through home visits (following social distancing protocols) and feedback mechanisms and guide those who need special attention.

With the advent of modular learning, students with special needs are viewed to experience challenges all throughout their modular learning experience. While distance learning for basic education students is a challenge, it's even more so for teachers figuring out how best to teach students with disabilities (Magsambol, 2020). Hence, this posed a bigger problem to the distance learning approach when most SPED teachers in public schools handle a class of students with different disabilities.

As the nation's seven million students with disabilities, their families and schools transition to distance learning, parents are deeply concerned about the educational progress of their children, and advocates are troubled by the lack of equity among students receiving special education. Across the nation, families are struggling as they adjust to distance learning with varying levels of success. The challenge is even greater for parents of students with disabilities as they take over the role of not only the primary educator but also the child's

Individualized Education Program (IEP) team – teacher, aide, therapist, interventionist and specialist services.

In City of Naga Division, they implemented Modular Distance Learning (MDL) in which a self-learning module(SLM) is the primary tool in the teaching and learning process. All students, including special education students are given these stereotyped modules made by teacher-module writers designated by the division. For one whole school year, this is the process adapted the whole division of Naga to ensure continuity of learning among all Nagahanons.

Thus, this study aims to evaluate the effectiveness of the SLM in the implementation of MDL to students with special needs in Naga Central Elementary School, Pangdan Elementary School, Balirong Elementary School and CEPOC Elementary School in the City of Naga Division under the new normal. Results of this study will be the basis for revised self -learning modules to be distributed to all students with special needs in the City of Naga Division. The timeline for this study will be in two months.

PROBLEM STATEMENT

This action research aims to evaluate the effectiveness of using self-learning distance modules to students with special needs from Naga Central Elementary School, Pangdan Elementary School, Balirong Elementary School and CEPOC Elementary School in the City of Naga Division. The results of this study will be the basis for revised modules crafted by teachers themselves and distributed in the City of Naga Division for School Year 2021-2022. Further, the study aims to answer the following queries: a) what is the profile of the students based on their personal/family background; b) how do these students perform in school before pandemic and during pandemic while having modular distance learning; c) how effective are the self-learning modules distributed to students with special needs; and d) based on the results of this study, what interventions can be proposed.

LITERATURE REVIEW

In October 2020, the Department of Education (DepEd) reopened classes amid the still rampant coronavirus outbreak, and one method of teaching the department appraised to be effective in this situation was modular learning. Modular learning is a form of distance learning that employs the use of self-learning modules. These self-learning modules are based on the most essential learning competencies (MELCS) provided by DepEd. Hence, the use of modular learning anchored on Moore's Transactional Distance Theory.

MOORE'S THEORY OF TRANSACTIONAL DISTANCE. It has a direct bearing on e-learning. It explains and quantifies the learning relationship between instructor and student in the e-learning situation, where there is a substantial physical or temporal distance between the two. First formulated in 1997, it considered the many different forms of distance learning as part of a group which could similarly analyzed.

Transactional distance - as distinguished from physical or temporal distance - refers to the psychological or communicative space that separates instructor from learner in the transaction between them, occurring in the structured or planned learning situation (Moore, 1997, p. 1).

In Moore's theory, three clusters of variables control the extent of transactional distance: Dialogue, Structure, and Learner Autonomy.

Moore (1997) indicates the important consideration in this respect relates not to the frequency of dialogue, but to its quality and the extent to which it is effective in enabling the resolution of learning problems the distance learner may be experiencing.

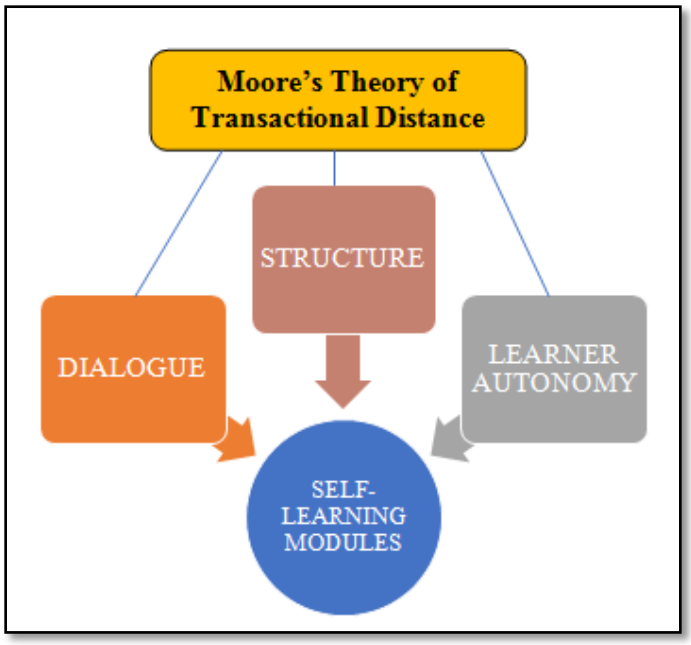

FIGURE 1. THEORETICAL FRAMEWORK OF THE STUDY

The second factor Moore (1997) refers to is the nature of the course structure, which is described as the level of the course's rigidity or flexibility. This factor includes aspects such as the extent to which course goals and objectives are pre-prescribed, the pedagogical model used in teaching the course (e.g., teacher- vs. student-centred), the nature of course assessment, and the ability of the course to accommodate individual student needs (Zhang, 2003).

The third factor, learner autonomy, is contingent upon the previous two, in that it refers to the sense of both independence and interdependence perceived by learners as they engage in the course. Learner autonomy is intimately tied in with a learner's sense of self-direction or self-determination, and this can be significantly affected by the dialogue, the level of rigidity or flexibility inherent in the course design and delivery, and the "extent to which the learner exerts control over learning procedures" (Giossos et al., 2009, p. 2).

Moore's theory asserts that an inverse relationship exists between these three factors, in that increases in one can lead to corresponding decreases in others (McIsaac & Gunawardena, 1996). For example, a course with an inflexible structure can lead to a decrease in the quality of dialogue and sense of learner autonomy, thereby increasing the students' perception of transactional distance. However, Moore (1997) also notes that when course structure drops below a particular threshold (although he does not specify what this is), the sense of transactional distance can actually increase, due principally to the potential for learner confusion or dissatisfaction.

A number of studies have been carried out to determine the empirical status of Moore's theory (for example, Bischoff, 1993; Bischoff, Bisconer, Kooker, & Woods, 1996; Chen, 2001a, 2001b; Force, 2004; Saba & Shearer, 1994), which, although not unanimously accepted (Gorsky & Caspri, 2005), generally confirm its usefulness as a framework against which to analyses distance education practice. As Garrison (2000) puts it, theories such as transactional distance "are invaluable in guiding the complex practice of a rational process such as teaching and learning at a distance" (p. 3), while Jung (2001) comments that it "provides a useful conceptual framework for defining and understanding distance education in general" (p. 527). While acknowledging the design of this study was not experimental in the classical sense,

Moore's theory was particularly relevant, as it offered a lens through which the researcher could assess the value of using the virtual classroom in online teaching to promote quality dialogue as a means of helping diminish learner perception of transactional distance. Through his discussion of the nature of quality dialogue and interaction, the diverse forms this takes, and how it affects the learner's experience, Moore's ideas provided a theoretical frame of reference, through which the researcher was able to interpret and code the responses of the research participants into themes derived from the three research questions indicated below. Although not seeking to quantify the impact of the virtual classroom on the learners' experience, the study focused on exploring if and how it may have enhanced the quality of that experience through improving dialogue, and in doing so, may have helped to diminish their sense of transactional distance.

Learner autonomy is the third factor to consider in this process. "Learner autonomy is the extent to which in the teaching/learning relationship it is the learner rather than the teacher who determines the goals, the learning experiences, and the evaluation decisions of the learning program" (p. 6). The greater the transactional distance, the more autonomy the learner must exercise. Therefore, if it is recognized beforehand that the targeted learners have a predilection for autonomy, the course can be designed in that direction, e.g., it could be tightly structured with a minimum of dialogue, thus increasing transactional distance.

Moore's theory was conceived on the cusp of the full-scale integration of the computer into society, which introduced an additional component into the mix: the enhanced teleconferencing abilities of the computer and Internet broadened the bilateral dialogic relationship that heretofore had just been between teacher and student, into a multilateral relationship which could include other students, as well (p. 7).

In reviewing the area of independent learning in distance education, the term "independence" is used initially because of its connection to the beginnings of the modern practice and study of distance education through Wedemeyer's (1971) work on independent learning. This review will pull together threads of discussion from several related areas, each of which contributes in its own way to our understanding of the ways in which learners are seen as independent. The fields of distance education and adult education, the field from which much of the early theoretical work in distance education arises, provide three dominant descriptors for this area: self-directed learning (SDL), autonomous learning, and independent learning. These descriptors are often used with a considerable degree of equivalence. Tight (1996), for instance, suggests that the concepts of independent and SDL are so closely linked that they are essentially synonymous, while Moore (1986), in describing one type of educational transaction, explained them by saying "This is autonomous, or self-directed learning" (p. 12). These areas and the various concepts that have coalesced around each in relation to distance education, form the basis of the literature from which this chapter draws.

Modular teaching approach is an extension and advanced shape of programmed instruction/learning. The trend of using modules as teaching-learning approach is becoming very popular in recent times. In this approach the teacher uses teaching modules prepared for specific purposes instead of traditional textbook.

The module will be self-contained although certain combinations of modules may represent a progression through the curriculum. This change is due to the reason that in about last decade learning theories have moved from a stimulus-response point to information processing. It assists students in understanding complex and difficult concepts.

In educational context, now the shift has moved from traditional teaching approach to modular teaching approach. Modular approach dates from B.F. Skinner's and others' research in 1950s which led to the formulation of different principles of teaching and which later on became main characteristics of programmed instruction such as division of subject matter into small steps, active participation of students, immediate feedback, and self-pacing. These are all the principles that are used in modules' making. Moon (1988) describes that the modular studies syllabus seeks to facilitate an approach to learning, which is experiential, practical, and related to life in the community and wider world.

Thus, if Moore's theory is true to the nature of modular learning, then, the best way to make self-learning modules is to follow the simple algorithm- make sure there is a contextualized structure of modules, dialogues presence in the modules and learners' taxonomy where it embodies activities/drills that fits to students with special needs. This way, learning is ensured that students with special needs can really acquire the competencies as stated in MELCS set by Department of Education.

STRATEGY/INTERVENTION

DESIGN

Comparative-evaluative research design was used to determine the effectiveness of SLM in the implementation of MDL to students with special needs. In this study, the researchers compare the academic performances before pandemic and during pandemic while having modular distance learning of student-respondents involved. Then, after comparing the two approaches—traditional and modular learning, the research evaluates the efficacy of the modules to these students with special needs. Factors such a) the profile of the students based on their personal/family background; b) academic performance in school before pandemic and during pandemic while having modular distance learning; and c) comparative results of grades before pandemic where traditional class is employed and today's new normal with the use of self-learning modules.

PARTICIPANTS

The respondents of this study are 10 randomly selected students from Pangdan Elementary School, 10 students from Balirong Elementary, 10 students from CEPOC Elementary School and 20 students from Naga Central Elementary School. Sample respondents of the study are determined through stratified sampling where in this method, the population is first divided into subgroups (or strata) who all share similar characteristic— students with special needs. The study sample is then obtained by taking equal sample sizes from each school.

MEASURES AND PROCEDURE

The data in this study are to be tallied, tabulated, and statistically analyzed. Thus, the following tools are used to help the researcher in the analysis and interpretation of data gathered. First, simple percentage is used on the profile of the students according to their personal/family background. Second, paired t-test is used in determining the comparison between students academic performance before pandemic with the use of traditional learning styles and today's new normal learning setting with the use of modular learning. Lastly, weighted mean is used to measure the SLM quality of content, usability, students' perception on the modules' efficacy.

On the conduct of this study, the following phases where followed by the researchers. 1) A permission letter was asked from the school principal/ head of Pangdan Elementary School, Balirong Elementary School, CEPOC Elementary School and Naga Central Elementary School for this study to be conducted. They also asked consent from parents of the randomly selected participants of this study. 2) Once a consent is given, researchers use the adapted survey (Nambisan, 2014) which comprises a) the profile of the students based on their personal/family background; b) academic performance in school before pandemic and during pandemic while having modular distance learning; and c) comparative results of grades before pandemic where traditional class is employed and today's new normal with the use of self-learning modules. Of course, when conducting this survey, researchers follow the safety protocols as prescribed by the IATF and the local government unit of the City of Naga.

FINDINGS

Based from the data gathered, these were the results of the study that provided: a) the profile of the students based on their personal/family background; b) academic performance in school before pandemic and during pandemic while having modular distance learning; and c) comparative results of grades before pandemic where traditional class is employed and today's new normal with the use of self-learning modules

FIGURE 1 SHOWED THE PROFILE OF THE STUDENTS BASED ON THEIR PERSONAL/FAMILY BACKGROUND.

Criterion	*f*	%
MOTHER'S EDUCATIONAL ATTAINMENT		
Elementary level	10	20%
Secondary level	27	54%
Tertiary level	13	26%
FATHER'S EDUCATIONAL ATTAINMENT		
Elementary level	15	30%
Secondary level	24	48%
Tertiary level	11	22%

FIGURE 1.1 STUDENTS' PARENTS' EDUCATIONAL BACKGROUND

Based from the table 1.1, it can be observed that these students are with varied parents' educational background. Parent educational background is a parental characteristic which has been studied as a variable in predicting a child's educational attainment (Li, 2018). The concept is related to both family socioeconomic level and parental occupation and some effort has been made to partial out the effects of these variables. It is clearly stated that most of their parents, both mothers and fathers, have finished secondary level. Thus, it can be inferred that their parents have enough learning backgrounds to support them while learning independently at home.

Criterion	*f*	%
With own internet connection	28	56%
Without internet connection	22	44%

FIGURE 1.2 STUDENTS INTERNET CONNECTIVITY

The next table showed the availability of internet

connection at students' homes. As Obligar (2020) viewed, internet is an important tool at the current way of learning modality used in the new normal. Hence, the results showed that most of the students already have internet connection but still there were some who have no access to internet connection due to financial crisis they have at home.

Table 2 shows the academic performance in school before pandemic and during pandemic while having modular distance learning.

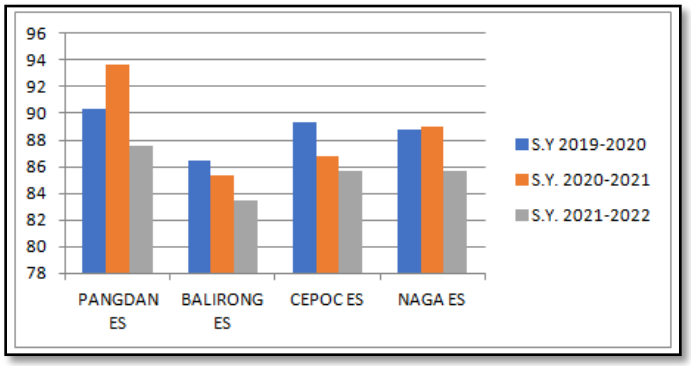

FIGURE 2. COMPARISON ON STUDENTS' ACADEMIC PERFORMANCE FOR THREE SCHOOL YEARS

On the table presented, this illustrates the decreasing general weighted average of students with special needs as they transcend from traditional learning to modular learning today. Ghada (2021) explained that the unplanned and rapid move to online distance learning at the time of pandemic did not result in a poor learning experience as was expected.

Table 3 shows the weighted mean on students' perception on the use of self-learning modules they receive last and this school year. The survey consists of three parts tackling on the modules' structure, dialogue and students' autonomy.

ITEMS	M	SD	VD
A. STRUCTURE			
Absence of varied learning activities	1.2	0.3	CT
Unclear discussion on lessons	1.1	0.4	CT
Too many tasks given in each module	1.3	0.7	CT
Unstructured pattern of activities	1.2	0.3	CT
Uncontextualized examples stated in the module	2.6	0.6	UT
B. DIALOGUE	1.1	0.4	CT
Absence of teacher's constructive instruction	3.6	0.3	UNT
Lacking of teacher's follow up after giving of modules	3.1	0.4	ST
Lacking of teacher's feed backing after the submission of answer sheets	3.3	0.4	ST
C. LEARNERS' TAXONOMY	1.1	0.4	CT
Experience difficulties answering the module alone	2.4	0.6	UT
Lacking parental/guardian's guidance during the answering of modules	2.5	0.8	UT
Demotivation to respond to modules	1.3	0.6	CT

FIGURE 3. STUDENTS' PERCEPTION ON THE EFFECTIVENESS OF SELF-LEARNING MODULES

LEGEND:

1.0-1.80 - Completely True, 1.81- 2.60 - Usually True, 2.61- 3.40 - Somewhat True, 3.41- 4.20 -Usually not True 4.21-5.00 - Never True

The next table presented the results from the Likert scale on students' perception towards the effectiveness of self-learning modules. The results are based from the modified survey sheets given to respondents which is composed of three categories: structure, dialogue, and learners' taxonomy.

Based on the weighted mean and standard deviation, it has showed that most of the respondents find the **structure** of the module to have a) Absence of varied learning activities, b) unclear discussion on lessons, c|)too many tasks given in each module, and d) Uncontextualized examples stated in the module.

On the second category- **dialogue**, the respondents did not find a) absence of teacher's constructive instruction, b) lacking of teacher's follow up after giving of modules and c) lacking of teacher's feed backing after the submission of answer sheets.

Lastly, on students' taxonomy, the result showed that students with special needs indeed are a) experiencing difficulties answering the module alone; b) Lacking parental/guardian's guidance during the answering of modules and c) demotivation to respond to modules

Thus, modular learning significantly affects students' learning process.

DECISION/CONCLUSION

This modular learning approach is hanging by a thread, and it's not the teachers' or the students' fault. As Estrada (2021) quoted, the plan seems to be flawed from the start. With so many students, especially in public schools, it would be hard to give each one equal and undivided attention. Teachers also struggle to reach out to all of their students but fall short because economic and social factors stand in their way.

This is even more difficult to the students with special needs. There are a lot more challenges concerning

modular learning, but these are the most prevalent. Both the students with special needs and the teachers are at a disadvantage. The quality of education, however hard it is to admit, may have dropped due to the not quality assured modules/ stereotyped modules given without even taking a glimpse of the students with special needs. But because we're still in the middle of a pandemic, it's not their fault. Learning is hard for these kids when they are doing it alone.

The modular learning approach has several weak spots. To address them, there is a need for revising the modules given to students with special needs. Hence the following recommendations can be brought up to the division office: a) give ample time to teacher-writers to create a very suitable module for students with special needs; b) the writer of the module must be, of course, a special education teacher herself, in order for her to get a better view of the self-learning modules that fit to the learning styles of SPED students; c) there must a SPED teacher assigned to check, monitor, and feedback students with special needs.

Thus, a revised self-learning module is made to make sure that learners with special needs are entitled with modules that fit to their learning styles. Hence, these revised self-learning modules are designed where the learner is free to choose what to learn, how to learn, when to learn and where to learn.

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