IJIET, e-ISSN 2548-8430, p-ISSN 2548-8422, Vol. 5, No. 1, January 2021

International Journal of Indonesian Education and Teaching
http://e-journal.usd.ac.id/index.php/IJIET
Sanata Dharma University, Yogyakarta, Indonesia

TEACHERS AND STUDENTS' PERCEPTIONS ON THE IMPLEMENTATION OF K-12 SPIRAL PROGRESSION APPROACH

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https://doi.org/10.24071/ijiet.v5i1.2983
received 18 November 2020; accepted 11 January 2021

Abstract
This study was conducted to determine the perceptions of the Teachers and Students on the implementation of the K-12 Spiral Progression approach in teaching Secondary Mathematics at Dr. Geronimo B. Zaldivar Memorial School of Fisheries (DGBZMSF). The study utilized the mixed-method design (quantitative-qualitative research design). Interviews, questionnaires, and observation were used to gather data. The data were collected, analyzed, and interpreted using the following statistical tools: frequency, percentage, and medians. The study showed that most teachers and students were in favor of the implementation of the said curriculum. One of the teacher respondents noted that "The K – 12 program will greatly help us develop and upgrade our educational system in the Philippines, so we may be able to compete globally with our students who are fully equipped with the 21st-century skills", another teacher respondent said, "it provides additional training for the students in preparing for college." According to a student respondent, "K-12 Program can enhance and learn more or know more about mathematics and others", another said that "this new curriculum will prepare the students in college and improve the student's skills." However, they admitted that their performances were much better using the old curriculum. In the qualitative part of the study, the responses were categorized. The study found out that the Spiral curriculum had greatly influenced the curriculum, particularly the content and transitions of subjects, the secondary schools, the learners, and especially the teachers. Based on the findings, teachers were still adapting to the new curriculum. They needed more time and training to master all the fields and learn new teaching strategies because it is challenging to teach something that does not have the necessary mastery. They can teach other branches of their significant subjects without an in-depth discussion because it is not their specialization.

Keywords: K-12 curriculum, Math education, spiral progression approach

Introduction

Nature and Importance of the Study

In the curriculum, the Spiral Progression approach is adapted from the Spiral curriculum model of Bruner (Lucas, 2011). Bruner emphasized that teaching could often lead to cognitive growth is increased. If teachers plan to teach it using only the comprehension level of the instructor, the student may not understand the definition. To build continuously on what they have already studied, the curriculum should be built in a spiral manner. In line with the findings of Clark (2010), Bruner saw the function of the teacher as that of translating knowledge into a format appropriate to the current state of understanding of each child. Davis (2007) added that Hilda Taba also affected the design of the spiral curriculum as designed around concepts, abilities, or values in horizontal learning integration. Following the findings of Clark (2010), Bruner saw the position of the teacher as translating knowledge into a format suitable to the current state of understanding of each child. Davis (2007) added that in the horizontal integration of learning, Hilda Taba also affected the design of the spiral curriculum as designed around concepts, abilities, or values.

The principle in the approach to spiral progression is to introduce learners to a wide range of topics and disciplines before they master it by constantly learning it, but with the distinct deepening of difficulty. Elementary Algebra was taught in the old curriculum in the first year. The second-year was Intermediate Algebra, Geometry in the third year, and Trigonometry, Statistics, and Probability in the fourth year. However, the idea of those essential areas is being trained all at the same time in a new secondary mathematics program introduced in 2012. Students are subjected to a spiral progression approach each year in which four areas are taught per grading period. Mathematics includes many topics of life.

Enhancing the quality of primary education in the Philippines is urgent and important. Due to that, one of the discussions of DepEd is to improve the basic education program of the country in a manner that is least upsetting to the existing curriculum, most affordable to government and families, and consistent with international practice through the K-12 policy. The poor standard of primary education is expressed in Filipino students' low achievement ratings. Many students who finish primary education do not have adequate mastery of the skills available. One theory is that students do not get much instructional time or time on assignment. The insufficient readiness of high school graduates for the world of work or entrepreneurship, or higher education, reflects this standard of education. Graduates of high school often do not possess the requisite skills or emotional maturity necessary for the world of work.

This study is significant to the Department of Education, the schools, administrators, teachers, parents, students, and government and non-government organizations.

Education Department

This research shows the level of implementation of K to 12 in the DGBZMSF (Dr. Geronimo B. Zaldivar Memorial School of Fisheries), where this study was carried out. This data, relative to such a new curriculum, can be used as feedback on the compliance of the schools in this study.

Schools

The data they will obtain from this study can be used as a guide to K to 12, along with the problems and concerns of the heads of school and the teachers experienced in such implementation.

Schools Managers

The same difficulties and problems they face and the implementation of K to 12 from which they can gather ideas about how to synchronize the parents' predicaments and their role as the implementers of the new curriculum can also be reflected in this study.

Undergraduates

In this report, their predicaments will be exposed so that concerned authorities may become conscious.

Objectives of the Study

The following are the main objectives of the Assessment of K-12 Spiral Progression Approach in Mathematics:

1. To determine the readiness of the teachers, students, and schools on the implementation of the new curriculum
2. To compare and explain the academic performance of students of the two curricula (old and new)
3. To determine students and teachers' perceptions on K-12 Spiral Progression Approach

Scope and Limitation

The subjects of this study include the degree to which Dr. Geronimo B. Zaldivar Memorial School of Fisheries (DGBZMSF) applies the K-12 Spiral Progression Approach in terms of its impact on teachers, their perceptions of it the academic performance of the student, and the preparation of the teacher.

The variables comprising the readiness of the student are their competence and academic success, while instructor willingness involves teaching skills, teaching strategies, and educational materials.

Ten teachers and 50 Grade-10 students from Dr. Geronimo B. Zaldivar Memorial School of Fisheries (DGBZMSF) Albuera, Leyte were respondents to the report. The timeframe, on the other hand, includes the 2017-2018 academic year.

The data treatment was delimited to interpret the views of the respondents along with the items given in a questionnaire on the subjects provided by the researchers.

Method

The mixed-method (quantitative-qualitative design) design was used for this. At Dr. Geronimo B. Zaldivar Memorial School of Fisheries, this was carried out. The following statistical methods were used to capture, analyze, and interpret the data: frequency, percentage, medians, and more on the descriptive form of statistics. Ten secondary teachers and 50 Grade 10 students from the said school were recruited within randomly selected sections of DGBZMSF using the critical

sampling method. A validated, researcher-made, Likert questionnaire type scale was used. In the qualitative part of the analysis, the respondents chose to respond by writing five open-ended questions from the researchers.

Findings and Discussion

(Sample: 10 Teachers and 50 students; Population: 32 Teachers and 150 students)

Table 1. The readiness of the teachers on the implementation of the new curriculum

Indicators	Scale					Median	Description
	5	4	3	2	1		
The school was prepared for the K-12 Curriculum Implementation.	0	2	5	2	0	3	Prepared
The teachers were prepared for the K-12 Curriculum Implementation.	1	4	3	1	0	4	Much Prepared
The students were prepared for the K-12 Curriculum Implementation.	0	2	7	1	0	3	Prepared
Uses student-centered teaching style in Mathematics	1	2	3	2	0	3	Prepared
Better understanding of the topics in Mathematics	1	2	2	2	0	3	Prepared
Expert in solving and analyzing Math Problems	0	0	1	4	1	2	Slightly Prepared

Table 1 shows that some of the educators agreed that the students, teachers, and school were prepared for the introduction and use of student-centered teaching and a deeper understanding of the subject, although they were only marginally prepared for the expertise in solving math problems.

Table 2. The readiness of the students on the implementation of the new curriculum

Indicators	Scale					Median	Description
	5	4	3	2	1		
The school was prepared for the K-12 Curriculum Implementation.	22	11	12	2	4	4	Much Prepared
The teachers were prepared for the K-12 Curriculum Implementation.	12	17	15	7	0	4	Much Prepared
The students were prepared for the K-12 Curriculum Implementation.	5	18	19	5	4	3	Prepared
Uses student-centered teaching style in Mathematics	6	18	11	15	0	3	Prepared
Better understanding of the topics in Mathematics	8	16	13	10	3	3	Prepared
Expert in solving and analyzing Math Problems	3	12	16	13	6	3	Prepared

Table 2 (according to the students), the students, colleges, and teachers were prepared for the execution; they were already prepared through the use of student-centered teaching styles, a better comprehension of the subject, and experience in solving math problems.

Both students and teachers are generally prepared for the implementation of the K-12 curriculum, especially in mathematics teaching. It is possible to feel the real influence of this new program in 10 years.

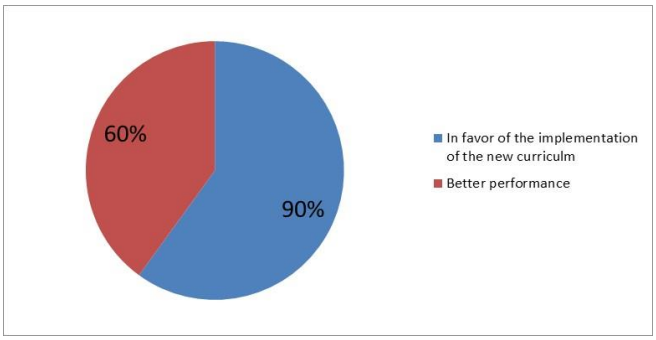


Figure 2. Academic performance of teachers using the old and new curriculum

Figure 2 indicates that most teachers (90 percent) were in favor of adopting the new program. But with the old curriculum (60 percent), they said that their performances were much higher. The lower performance of teachers in the new curriculum could be because they are not yet trained and ready to adopt the new curriculum, and are still adapting to it.

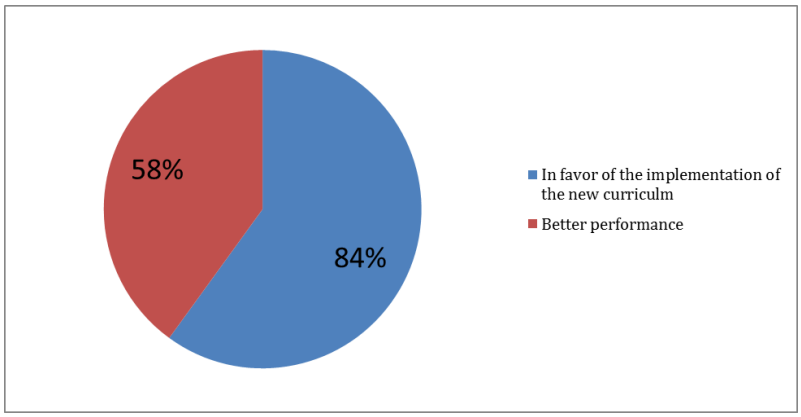


Figure 3. Academic performance of students using the old and new curriculum

Figure 3 suggests that most of the students (84 percent) were not in favor of adopting the new program. They said that with the old curriculum (58 percent), their performances were much higher. Like the teachers, the students were not prepared for the abrupt changes in the curriculum, and their performance was certainly affected.

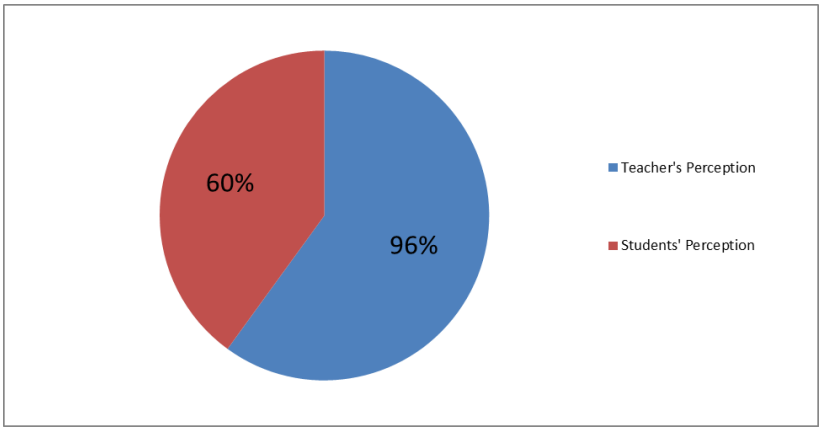


Figure 4. Students and Teachers' perception of K-12 Spiral Progression Approach

Figure 4 indicates that most teachers and students (60 percent and 96 percent) have positive expectations of introducing the new curriculum. While unprepared, teachers and students alike believe that the K-12 Program will help

alleviate the declining standard of education in the Philippines. They hope that the software will soon be able to bring good results.

Conclusion

The following findings were drawn after researching the views of teachers and students on the K-12 Spiral Curriculum at the Dr. Geronimo B. Zaldivar Memorial School of Fisheries (DGBZMSF). First, The teachers, pupils, and schools were not ready to adopt the new curriculum that way. Almost everybody was in the most difficult transition process of the aforementioned curriculum change.mSecond, the change in the curriculum caused students and teachers to have a high adjustment approach to this spiral progression, especially on the contents of each subject. Third, they were all in support of the latest program being introduced because it brings many advances and fresh challenges. Even, they performed better with the old curriculum than with the new one as the students and teachers compare their academic results between the two curriculums.

4) Many students and teachers have optimistic opinions on the introduction of the new curriculum. They may have struggled a lot from the transition, but they still look forward to the best that this new program can bring.

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