

Reception towards Mathematics Learning of Junior High School Students

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Abstract – *The study explored the students' reception towards mathematics learning. It utilized the mixed method of research. The participants of the study were the 307 junior high school students of a public secondary high school in the Philippines. Findings showed that the students seek peer support but lack efficiency, especially emotional support, set goals for self-study but lacking in learning strategies, and have stress tolerance and willingness to receive help from peers but with lessened interest in the lessons. Results revealed that seeking peer support, self-study, and behavioral response is significant in learning mathematics. Some of the recommendations were to communicate a growth mindset through feedbacking and behavioral conditioning, differentiate instruction, and establish effective peer support and enhancement programs including emotional literacy in learning mathematics and effective time management to bridge the gap of learning caused by students' negative reception towards mathematics learning. Educational management can encourage teachers to implement extension programs related to developing students' positive reception towards mathematics learning. Also, the teachers can teach and train students to develop positive reception behaviors by integrating them into their teaching and learning activities as values integration.*

Keywords – *behavior, peer support, reception towards mathematics learning, self-study, mathematics learning*

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INTRODUCTION

Mathematics is fundamental to the lives of every individual and in its simplest role that deals with numbers and operations which are necessary to human life. Learning mathematics is an advantage because it provides life skills which are very useful in any field of practice. In the Philippines, the Department of Education (DepEd) regarded Mathematics as a subject that pervades life at any age and in any circumstances [1].

However, mathematics teaching faces a challenge that is needed to be addressed by the educational sectors. Such challenge is the declining mathematics performance of the students reflected both in international and national level. The Programme for International Student Assessment (PISA) 2018 results showed that the students in the Philippines still lag behind in terms of mathematical skills that only got a score of 353 and ranked 76th, second to the lowest ranking among participating countries [2]. Similarly, the National Achievement Test (NAT) 2017 result also showed lower performance. In the Bicol Region, the low performance in Mathematics of students was shown on the Mean Percentage Score (MPS) obtained in Mathematics which is only 35.52. Further, considering the NAT result one of the Divisions in Bicol Region which only ranked 11th in elementary and 9th in secondary (administered to grade 7 and grade 11) out of 13 divisions in 2017 regional NAT ranking, this showed that there is an urgent need to carefully craft a plan to address this challenge since NAT results is an exit assessment and determine if the learners are meeting learning standards [3]. Since then, this declining performance in Mathematics of students in all levels has gained increasing attention in the research community.

Piaget explained that knowledge cannot simply emerge from sensory experience, some initial structure is necessary to make sense of the world. Wadsworth added that the brain is filled with schemata where each one telling an individual how to react to incoming stimuli or information [4]. In learning mathematics, each of the students has different response when presented with the topics especially when encountered complex problems. These reactions are reflected by the students' behavior which becomes the students' way of reception towards mathematics learning. The study of Mata, Monteiro, & Peixoto [5] revealed that teachers and the social support of peers are highly significant in understanding

students' attitude towards mathematics. Such attitudes are manifested by the students in seeking peer support, motivation that leads to self-study and behavioral reactions that can be positive or negative which are identified as students' reception towards learning mathematics. Din, et al. [6] emphasized that peer support greatly influenced students' mathematics learning in the classroom. Seeking peer support is also one of the effective coping mechanisms of a student which influences mathematics learning and achievement of students [7]. Peer support includes help giving, and help receiving towards mathematical learning [8]. Peer support is identified as one of the most influential factors and has a vital role in learners' mathematical achievements. They may benefit from being with their support groups because it provides encouragement and motivation [9].

Self-study can take into different forms. It is very important to have learning strategy for a student in achieving mathematics learning. It includes preview, question, reading, reflect, recite, and review as strategies for self-learning in mathematics learning [10]. Another way of self-study is the self-explanation which is also one of the most effective learning strategies in improving student's learning [11]. The Kumon Centre [12] emphasized that self-learning is an important skill for children as they journey through education and beyond to adulthood. It helps students build independence and ability to progress without reliance on a teacher and solidify their learning

However, some students tend to manifest negative behavioral response towards mathematics learning as they do not know how to or do not want to perform such tasks [13]. Most common negative behavioral reaction of the students is being task-avoidant. Hirvonen et. al [14] found that math performance and task-avoidant behavior develop in tandem which means that an increase in task-avoidant behavior was related to less improvement in mathematics. And a high initial level of task-avoidant behavior predicted less improvement and slower improvement in math later on. On the other hand, having positive behavioral reactions result to better learning in mathematics.

This study is anchored to the cognitive theory of psychopathology of Beck [15]. This model describes how people's thoughts and perceptions influence students' learning. It explains individuals' emotional, physiological, and behavioral responses as mediated by their perceptions of experience, which are influenced by their beliefs and characteristic ways of interacting with the world, as well as by their experience. Mcleod [16] also explained that how students think (cognition), how students feel (emotion) and how students act (behavior) all interacts together. He stressed that students' thoughts determine their feelings and behavior. In mathematics, students' reception towards learning mathematics determines their feelings and behavioral actions such as to seek peer support, self-study, or act positively or negatively.

In the quest on improving mathematics learning, the abovementioned literatures and studies justified the need to

closely study the students' reception, its relationship and if it is a possible predictors of students' mathematics learning. The students' reception towards mathematics learning is comprised of seeking peer support, self-study, and behavioral response. The term 'reception' and 'behavior' towards learning mathematics was used interchangeably.

This study is deemed important not only on the part of the teachers but also to the parents to have knowledge of the effects of students' behavior and actions. Findings on the effects on students' reception towards learning mathematics will pave the way for teachers and parents to help these students overcome challenges and make appropriate learning plan for better reception towards learning mathematics in the future. This will give teachers the opportunity to provide students with appropriate environment for learning as to provide enough learning support, resources, and counselling, if necessary. And also, it will be an avenue for students to develop good reception towards learning in mathematics and improve performance.

OBJECTIVES OF THE STUDY

This study generally aimed to determine the influence of students' reception towards mathematics learning of Junior High School students. Specifically, it examined the relationship and effect of seeking peer support, self-study, and behavioral response towards mathematics learning; determine if students' receptions are predictors of mathematics learning, and to recommend ways to improve students' reception and mathematics learning.

MATERIALS AND METHODS

Research Design

Mixed method employing correlational research design and thematic analysis were used to answer the research questions. Correlational design was utilized to determine the relationship and effects of students' reception towards mathematics learning and regression analysis to determine the possible predictors using the validated research instrument and students grades in mathematics. Thematic analysis was used to determine ways on how to improve students' reception and learning mathematics using the informal semi-structured interview and focus group discussion.

Respondents

The respondents of the study were the 307 junior high school students of one of the national high schools in the Philippines school year 2019 – 2020 selected using the stratified random sampling technique from a population of 1,164 students. The school was chosen because it has the enough number of respondents appropriate for the study and best representative based on their NAT performance.

Data Gathering Instrument

The students' reception towards mathematics' questionnaire were constructed with the help of an expert in the field of psychology and guidance and counselling through

observation and informal interviews with the students. The questionnaire underwent series of revisions and validations. Before the final utilization of the questionnaire, the researcher consulted five (5) experts in ensuring the effectiveness and validity of the questions. The experts give suggestions and rated the questionnaire very good with weighted mean of 4.00, 4.33, 4.33, 4.00, 4.33, and 4.00 along clarity and direction of terms, presentation and organization of items, suitability of items, adequateness of the content, attainment of purpose, and objective, respectively. And along scale and evaluation rating the experts rated the questionnaire excellent with weighted mean of 4.67. After revisions and compliance of the suggestions given by the validators, the questionnaire was tried to 52 students to test the reliability of the questions. To establish its reliability, Cronbach Alpha was computed and found good at .81, .74, and .78 for seeking peer support, self-study, and behavioral response, respectively. Interview guide questions were also used during the informal semi-structured interviews and focus group discussion to get the ideas of students and teachers that are not manifested by the researcher-made questionnaires in reception towards learning mathematics.

Data Gathering Procedure

A letter requesting to conduct the study was prepared and given to the head of the school. Upon approval, the researcher worked on the preparation, construction, and validation of the research instruments from November to December 2019. Data gathering on the students' reception towards learning mathematics questionnaire were done by January 6 -31, 2020. Informal interviews and focus group discussions were run for two weeks and done by Feb. 14, 2020.

The informal semi-structure interview was employed to 20 randomly selected students to get their ideas as to the details of their experiences in mathematics regarding their way of reception towards learning mathematics. From the interview, thematic analysis was done and the causes and ways to manage stress in mathematics was recorded, analyzed, and interpreted. For the second phase, 10 students and 3 teachers were also identified and participated in the focused group discussion.

Personal interview with the teachers was also conducted for purposes of triangulation and as regards to their ideas on how to improve mathematics learning in the context of students' behavior. Finally, these 30 selected respondents and 3 teachers who participated in the semi-structured interview and focused group discussion were requested to share their opinions, ideas, and suggestions regarding the students' reception to enhance students' learning in mathematics. For the validity and authenticity, they were personally interviewed after the focus grouped discussion by the researcher for purposes of corroboration, enhancement, verification, and to capture other answers that are not found in the notes.

Data Analysis

Pearson Product-Moment Correlation (r) was employed to determine the relationship of students' receptions to learning mathematics and Coefficient of determination (r^2) was used to determine its influence. Further, regression analysis was employed to determine probable predictors along aspects of students' reception towards learning mathematics.

In testing the significant relationships between means, both the r -value together with its corresponding p -value was used: p -values less than 0.05 were significant while those greater than 0.05 was interpreted as Not Significant (NS). In computing for the r -value with its corresponding p -value, Minitab 17 software was utilized.

Students' responses in reception towards learning mathematics questionnaire were classified into the following scale and interpretations: 3.50 – 4.00 for very high reception, 2.50 – 3.49 for high reception, 1.50 – 2.49 for moderate reception, and 1.00 – 1.49 for low reception.

Ethical Considerations

Before the data gathering, the researchers sought informed consent from the proper authorities and the respondents. Data gathered were kept confidential through coding anonymously of the respondents. Respondents were also informed that they were selected randomly as participants and informed consent from their parents through letter was secured by the researcher. The confidentiality of respondents' test scores, and responses was assured.

RESULTS AND DISCUSSION

Reception towards Learning Mathematics

In this study, reception towards learning mathematics pertains to the students' way of behaving as a response to the mathematical learning stimulus. The students' reception towards learning mathematics is comprised of seeking peer support, self-study, and behavioral response.

Seeking Peer Support

Lev Vygotsky [17] defined intelligence as the capacity to learn from instruction. He emphasized the fact that there is a requirement for a more knowledgeable other person or 'teacher' which was referred as 'more knowledgeable other' (MKO). More knowledgeable others can be parents, adults, teachers, coaches, classmates, experts or professionals.

Table 1 reflects the reception of students along seeking peer support. The students' reception towards learning along seeking peer support were 'high' except in finding information support from siblings and tutors which was noted as 'moderate'. It can be inferred that the students highly seek support for learning from group study through their classmates and teacher. Further, beside from information support from others, students also seek emotional support. Overall, the students weighted mean along seeking peer support is 2.61 and interpreted as high reception along seeking peer support. It means that the students have high reception towards learning mathematics by way of seeking support from others.

Table 1. *Students' Reception towards Learning Mathematics*

Receptions towards Learning Mathematics	Weighted Mean	Interpretation
Seeking Peer Support		
I try to find the information that I need to understand the topic in mathematics through others who know the lesson such as my siblings and tutors.	2.31	Moderate
I join a support group (group study) to help me with the problem in mathematics.	2.80	High
I am able to communicate my needs to my mathematics teacher.	2.64	High
I try to find people who can offer me information or otherwise help me with my problem in mathematics.	2.55	High
I seek out emotional support from others.	2.79	High
Self-study		
I set goals to help improve my performance in mathematics.	2.44	Moderate
I try to do the best I can give despite of the constraints of the situation.	2.90	High
I think of ways that I can change the situation to make it better.	2.81	High
I develop learning strategies to get me back on track.	2.78	High
I think there is information available about a problem in Mathematics I have, I will seek it out.	2.26	Moderate
Behavioral Response		
I throw myself into reckless behavior (cutting class, not listening to the teacher, etc.) to get my mind off my real problems in mathematics.	2.22	Moderate
Even when people want to help me, I reject their offer.	2.06	Moderate
I find myself wasting more time watching movies, series, etc.	1.57	Low
I just stay in bed in sloth mode because I can't deal with my problems.	1.11	Low
My thoughts are consumed by the stressful situation(s).	2.04	Moderate

According to Campit, et al. [18], seeking peer support is one of the effective ways of students in studying that influences their mathematics learning and achievement. Results also showed that students need more knowledgeable others (other than the teacher itself) to guide them to the zone of proximal development.

Self-study

As shown in table 1, the students' weighted mean along resisting constraints, thinking of ways for better learning, and developing learning strategies were 2.90, 2.81, and 2.78, respectively and all interpreted as high reception along self-study. It means that the students have 'high' reception along self-study by doing their best despite of the constraints of the situation, think of ways to make situations better, and develop learning strategies to keep on the right track. It can also be noted that the students have moderate reception along seeking out information about their problem in mathematics. Overall, the students' reception towards learning mathematics weighted mean along self-study was 2.64 and interpreted as high reception through self-study.

It shows that the students are also striving to improve their own learning through self-study. However, as noted by the moderate response on the availability of resources needed for their mathematical problems, it means that the students may have doubt on the availability of the learning resources.

Dunlosky et al. [19] mentioned that self-explanation is one of the most effective learning strategies in improving

students' learning. The study of Kleden [20] mentioned that learning process is not only for the sake of learning, but to prepare students to learn for life. Students are expected to initiate their own learning process. initiating self-learning, scheduling learning time, identifying learning necessities, formulating learning goals, identifying resources and materials for learning, selecting and employing appropriate learning strategy, and evaluating learning outcomes, are important aspects in learning mathematics. Students will put in their utmost effort since they are the ones who designed their own learning and are rendered to be responsible for what they have set and will employ all what is necessary to succeed.

Behavioral Response

Table 1 also shows the students' behavioral response towards learning mathematics. Behavioral descriptions were constructed in negative statements which mean that the higher the response of the students, the higher is the negative behavioral reaction towards learning mathematics.

Data shows that the weighted mean along doing reckless behavior, rejecting offer, and consumed by stressful situations were 2.22, 2.06, and 2.04, respectively and all interpreted as moderate negative behavioral response. On the other hand, the students' weighted mean along wasting time and being in sloth mode were 1.57 and 1.11, respectively and both interpreted as low negative behavioral response. Overall, the students' weighted mean was 1.8 and interpreted as moderate negative behavioral response.

It means that the students have negative moderate behavioral response towards mathematics learning through throwing themselves to reckless behavior such as cutting class and not listening to the teacher, rejecting offer to help them in their learning, and decrease productivity because their thoughts are consumed by what they perceived as stressful situation. However, students have low negative behavioral response along watching movies and staying in bed. It means that they still go to school even though they have negative

behavioral actions towards learning. Further, it means that when the students tend to cut class, are not listening to the discussions and lectures, rejecting any help from anyone, and being so quite which seem they are consumed by complex tasks, they are in the midst of negative reception towards mathematics learning. According to Woods [21], students tend to manifest negative response because they do not know to or do not want to perform such tasks.

Table 2. Students' Mathematics Performance

Year Level	n	mean	Performance Level	Descriptive Rating
Grade 7	90	86.97	86.97%	Moving towards Mastery
Grade 8	89	85.25	85.25%	Average Mastery
Grade 9	75	84.80	84.80%	Average Mastery
Grade 10	53	85.32	85.32%	Average Mastery
Overall	307	85.58	85.58%	Moving towards Mastery

Students' Mathematics Learning

The students' learning in mathematics was measured using the students' grades in mathematics subjects. Table 2 reflects that grade 7 has a performance level of 86.97% and interpreted as moving towards mastery. While grade 8, 9, and 10 have a performance level of 85.25%, 84.80%, and 85.32%, respectively, and all interpreted as average mastery. Overall, the students' mathematics performance level was 85.58% which was interpreted as moving towards mastery. It can also be observed that there is an observable trend of slight decrease of performance as the grade level increases.

Students' Receptions and Mathematics Learning

This section shows the correlation and simple regression analysis between students' reception and mathematics learning. The r-value indicates the strength of relationships between students' reception towards mathematics learning (independent variables) and mathematics learning (dependent variable). The significance was reflected through the p-values. In addition, the r^2 -adjusted value gives the accountability of the independent variable to the changes in the dependent variables with regards to the sample of the study. Then, the r^2 -predicted value indicates the predicting power of the simple regression equation model using the two variables. Finally, the coefficient of the independent variable reflects the value on how many units/values is the change in dependent variable when the independent variable increases or decreases.

Table 3 shows that computed r-value of students' reception along seeking peer support and mathematics learning, self-study and mathematics learning, and behavioral response and mathematics learning were 0.121, 0.263, and -.196, respectively, all with p-values less than .05 and interpreted as significant relationship. Even though, the strength of relationships of each variable is low, since it was

significantly related, it was imperative to determine the effects or accountability of each aspect of students' receptions to students' mathematics learning.

Specifically, the regression analysis along seeking peer support and mathematics learning has an r^2 -adjusted value of 1.14%, r^2 -predicted value of 0.14%, and a coefficient of 0.932. And along self-study and mathematics learning, the computed r^2 -adjusted value was 6.63%, r^2 -predicted value was 5.76%, and a coefficient of 2.018. While the Behavioral Response and Mathematics Learning has an r^2 -adjusted value was 3.54%, r^2 -predicted value was 2.57%, and a coefficient of -1.362.

It can be inferred that seeking peer support can be accountable at 1.14% of the changes in the students' learning in mathematics and it has a predicting power of 0.14%. The coefficient of 0.932 explained that every one unit increase in the students' seeking peer support, there correspond an increase of 0.932 in students learning in mathematics. The predicting power of 1.14% explained that peer support can predict 1.14% of the students learning in mathematics.

It means that the students' seeking peer support affects students' mathematics learning. It can also be inferred that the students' self-study and mathematics learning can also be accountable at 6.63% of the changes in students' learning in mathematics. And the predicting power of self-study was 5.76% and a coefficient of 2.018. It means that in this study, 6.63% of the changes in the learning of mathematics of the students can be accounted to their self-learning. When used as predicting variable, self-study can predict 5.76% of the students' learning in mathematics. Further, everyone unit increase in self-study, there correspond an increase of 2.018 in the changes in students' learning.

Table 3. Relationship between Students' Reception and Mathematics Learning

	Pearson Product Moment Correlation Coefficient (r)		Interpretation	Simple Regression		
	r_{xy}	p-value		r^2 -adj.	r^2 - pred.	Coef
Seeking Peer Support vs. Mathematics Learning	0.121	.034	Significant	1.14%	0.14%	0.932
Self-study vs. Mathematics Learning	.263	.000	Significant	6.63%	5.76%	2.018
Behavioral Response vs. Mathematics Learning	-.196	.001	Significant	3.54%	2.57%	-1.362

On the other hand, behavioral response and mathematics learning has negative correlation which means that the relationship was inverse. It means that as negative behavioral response decreases, mathematics learning increases. Behavioral response can be accounted at 3.54% changes in the learning of mathematics. The predicting power was 2.57%. And the coefficient means that for everyone unit increase in the negative behavioral responses of the students, there correspond a -.1362 decrease in the students' mathematics learning. This means that behavioral response affects learning and was also significant factor in learning.

Further, it can be deduced that the influence of peer support, self-study, and behavioral response were at first glance may seem at very minimal degree, however, these variables affect students' learning in mathematics and were very significant to be accounted to which can also filled the gap of other unexplained variables of other research study. Other variables that are not included in this study were the unexplained variables that can also affect students' learning in mathematics at a certain level. Examples of such variables were the students' prior learning, learning styles, academic resources [22]. Overall, among the students' reception towards learning, self-study has the highest accountability and predicting power followed by behavioral response and seeking peer support.

Results of the study were related to the study of Odiri [23] which revealed that study habits influence students' achievement in mathematics and that there was a significant difference between good study habits and poor study habit in mathematics achievement. He then stressed that good study habits lead to better academic achievement in mathematics compared to those with poor study habits while poor study habits lead to poor achievement in mathematics. Also similar with the study of Gladys [24] also found that significant positive relationship exists between student' study habits and academic performance in mathematics and also stressed that self-studying has a significant role or influence on the level of performance.

Valdez [25] in her study found that among so many factors affecting the performance of the pupils in mathematics, results revealed that only the Mathematics teacher was found to be the significant predictor. She stressed that her study

proved and strengthen the long-time belief that pupils' success in learning greatly depends on the teacher. In this study, seeking peer support includes the teacher which means that teacher significantly predicts students' learning in mathematics because the very first peer support a student can have was the teacher. Further, teachers should help students manage their thoughts, emotions, and behavior towards mathematics to avoid future negative actions when faced with challenging problems in the subject since it is the nature of mathematics. And also, teachers should help the students develop holistic learning; to enjoy mathematics by having fun while learning; provide students with various teaching methodology and approaches in training them to become confident through practice; and provide reinforcements and encouragement that mathematics is not complex but a manageable subject [26].

Ways to Improve Students' Reception and Mathematics Learning

Randomly selected students were interviewed and participated in the focus group discussion which discussed the students' reception towards learning in mathematics in-depth to get their ideas and learning experiences. Selected mathematics teachers were also interviewed and participated in a focus group discussion to recommend ways to improve students' reception towards learning mathematics.

The students during the Focus Group Discussion relayed their anxiety towards mathematics because according to them, there are some lessons that they cannot easily catch up. There are some problems that she cannot solve and it cause her so much worry and stress. Acharya [27] confirmed this response with the result of his study that mathematics anxiety is one of the factors affecting difficulties in learning mathematics. It refers to the students' negative feeling to mathematics learning process. It is a feeling of tension or fear that interfere the mathematics performance. One of the students said, "I always feel that mathematics is a difficult subject." (Student 12). Further the students explained that the common cause of this negative feeling that cause negative behavioral response was because of difficult problems or equations the teachers are giving them, without discussing it very well. That is why it seems that they do not understand it well. Ewing [28] stated that student-teacher interaction in mathematics can really have

an impact on how to cope up with learning. He emphasized that the teacher is a big factor if the student hate or like mathematics, or if he will be able to cope up or not with challenges he is experiencing towards math. Students in the focus group discussion also shared that they experienced difficulty in mathematics learning especially in understanding different kinds of formula because it is hard for them to remember previous discussion of some topics in mathematics. Another said that he is having a hard time reviewing his previous notes. It was also noted during the interviews that the students experienced a hard time managing their subjects because of other requirements being pressured for them to submit almost same at a time, which sometimes resulted for them not to have time to review in math.

On the other hand, the teachers confirmed that students have negative behavioral response in learning mathematics and because of this; it causes low comprehension and poor retention. One of teachers stated, “*Some of the students are afraid of mathematics because of wrong concept instilled in their mind that mathematics is difficult which became true especially when teacher lacks encouragement to students*”. These lead students to have low performance and interest to the subject which lead to poor reception towards learning mathematics. The teachers also confirmed that some of the students have no in-depth understanding about the basic operations, signs and symbols being used in math. They have no mastery of the subject matter or not that well-versed in math. When student has no mastery, it will lead them to experience stress, lack of basic knowledge, and poor foundation. The study of Acharya [29] found that some students are being promoted in the subjects of mathematics at lower level without the basic concept of mathematics, so they were unable to perform well in mathematics, and experience so much stress towards it. One teacher-participant shared that there are some teachers who do not demonstrate in-depth understanding of the topics or on how to teach it more effectively and it causes the students feel difficult to catch up and hindered the acquisition of learning competencies. Further, contrary to the statements of the students, the teachers shared that they noticed students are having difficulty in managing their time properly because of so many distractions such as the over-used of social media, mobile games, and others that resulted to lessen their time and attention to studying.

CONCLUSION AND RECOMMENDATION

Results of the study confirmed the cognitive model theory that how the students behave affects their cognition and emotion, vice versa. Specifically, the students’ reception towards learning mathematics such as seeking peer support, self-study, and behavioral responses were significant and can be predictors in learning mathematics. The reasons why some of the students developed negative behavioral responses towards learning mathematics were because of the poor pedagogy used in the discussion of the topics, absence of differentiation of learning especially on the students’ level of

learning and readiness, bombarded with over-lapping tasks, and lack of effective peer support for learning and emotional support. Other reasons that affect mathematics learning were students’ mindset in mathematics, poor mathematical foundations, teacher-factor, and loss of focus of in studying.

It is recommended that teachers should employ appropriate teaching pedagogy which can be done through differentiating teaching and learning process with emphasis on learning paths and assessment which also gives opportunity in establishing effective peer support groups, should only give realistic learning tasks considering the learning needs and capabilities of the students which can be done through proper coordination meetings within faculty members, should help communicate growth mindset among students and encourage focus on their studies which can be done through feed backing and behavioral conditioning, and more importantly, should ensure to master the content of the topics to be taught which can be done through proper lesson preparation, attending trainings, and seminars.

It implies that the Educational Managers should ensure that students’ reception towards learning mathematics are monitored, such as encouraging parents to support their students in self-study and develop positive behavioral responses. Further, the study results could help the educational management implement enhancement activities, including emotional literacy in learning mathematics and time management, to bridge the gap of learning caused by negative students’ reception towards mathematics learning. The teachers can give parents and students an orientation as an extension activity to impart knowledge about the significance of reception behaviors to improve mathematics learning. Also, teachers can teach and train students to develop positive reception toward learning mathematics by integrating it into their teaching and learning activities as values integration. The study was limited only to the students’ reception towards mathematics learning included in the study. Researchers can investigate other reception behaviors to incorporate to the present study.

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