Classroom Interaction and Academic Performance: A Mixed Method Research

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ABSTRACT: This study aimed to determine classroom interaction based on pupils' behavior and interest, and its relationship to academic performance. It was conducted two hundred thirty-two (232) Grade 5 pupils and ten teachers from Bugo Central School and Puerto Elementary School of East II District in Cagayan de Oro City Division, School Year 2023-2024. Pupils were selected through stratified sampling. The study utilized the Mixed Method research design and used an adapted questionnaire of Balbosa (2015). Mean, Standard Deviation and Pearson Product Moment Correlation Coefficient were the statistical tools used to interpret and analyze the data. Data revealed that pupil's behavior and interest in class interaction were at High Level. Based on the results of the Focus Group Discussion, teachers demonstrate the value of classroom interaction in discussions because they encourage pupils to participate, boost their enthusiasm to study, create an atmosphere of accomplishment and self-esteem, and encourage successful pupils' results. Pupils' academic performance was at a Very Satisfactory Level. Classroom Interaction showed a significant relationship towards academic performance. Thus, it is recommended that teachers incorporate strategies that will continue to uplift pupils' behavior, interest, and inspiration toward their studies, in attending classes, and in interacting with classmates and teachers during class discussions.

KEYWORDS: Academic performance, behavior, classroom interaction, interest

I. INTRODUCTION

One of the most important factors that a teacher should maintain in an effective learning environment is classroom interaction. It is one of the fundamental elements of teaching that ensures learning and helps teachers and learners achieve their goals in class. So, when there is no classroom interaction between the pupils and the teacher, then, there is no learning happening inside the classroom. But when there is an effective and better communication between the pupils and the teachers, and the teachers to is through classroom interactions, their full potential will be developed most especially their communication skills and social skills. There is a balance of learning if the pupils learn to interact with each other and be able to have an exchange of information and ideas with the teachers. Pupils will become responsive and active in the teaching-learning process if the teachers maintain and are consistent enough in providing an effective classroom interaction.

Nowadays, classroom interaction is essential because it helps the pupils to be competent not just in thinking critically but even in the aspect of expressing their thoughts and opinions. With this, it is very important for the teacher to continuously value the importance of classroom interaction so that learners will be able to engage in learning and be able to increase their academic achievement. For Chrisantus et al. (2019), people can obtain the information, abilities, and mindset needed to live well through learning. However, to support the method of sharing information, teachers and pupils must interact in the classroom in a way that best meets the goals and expected learning outcomes. When this happens, learners are guided on what to do and this will lead them to a more effective learning environment. In light of this, Fredricks (2019) said that encouraging pupils to participate in class can raise engagement and improve their academic performance. With this, pupils will have a better understanding of the lesson and empower themselves to learn more. In fact, according to Hard and Rao Shah (2022), teachers should provide additional opportunities for pupils to participate in class activities to foster their involvement. This implies that the one way for pupils to learn is through their interactions with their surroundings. Hard and Rao Shah added that to help pupils understand what they are doing and how they may improve, teachers should provide feedback on class engagement at various times. Similar to this, a motivated and upbeat teacher would probably have a favorable effect on their pupils as well. To

Classroom Interaction and Academic Performance: A Mixed Method Research

organize their classroom to foster a better learning environment, teachers must create a culture of learning where classroom interaction and participation are highly considered in class. More so, pupils must feel connected to teachers and other pupils. With this, interactions can nurture these connections by focusing on pupils' social and emotional learning.

Becton (2017) asserted that pupils' academic and social success in the classroom is influenced by the quality of their learning environment. To provide a conducive learning environment, work and preparation are required. They should be nurtured by deliberate actions that support educational activities in the classroom, like setting an example of good behavior and creating relationships where pupils actively participate. Classroom interaction has an impact on pupils' academic performance since it makes studying interesting, enjoyable, and productive for pupils. Moreover, pupils need to study in a way that is both academically, socially, and emotionally stimulating. To create a successful learning environment, teachers must use excellent classroom activities that involve the classroom engagement of learners. Contrarily, the teaching-learning process is only successful if the teaching environment as a whole is improved and healthy through efficient and effective classroom interactions of learners to teachers, and the pupils to pupils as well. In the classroom, efficient contact can boost pupils' engagement and linguistic proficiency. It motivates pupils to work on their own during the educational process. Pupils learn more effectively when they are actively involved in classroom activities. Pupils who participate actively in class discussions are better able to communicate and convey knowledge.

This study was anchored on Seimen's Connectivism Learning Theory which was developed in 2005. This theory demonstrates how teachers may and have used technological platforms to share their work and participate in public discussions in a range of educational settings. The connectivism learning theory views sources of information as a true indicator of development. This creates connections that people make with information and other people make it easier for pupils and teachers to reflect on how knowledge from sources outside of the classroom is incorporated into the teaching and learning process. This theory of learning proposes that pupils should integrate concepts, ideas, and general knowledge effectively. It acknowledges that technology plays a significant role in education and that staying connected all the time allows us to make decisions about how one learns. To make the pupils more engaged in different activities in the classroom, the use of technology is very important especially since learners nowadays are more into it. That is why nowadays, teachers should incorporate the positive use of technology in teaching instruction so that there will be better interactions, and the connections between the pupils and the teacher are also intact. The teacher's responsibility is to assist pupils in becoming capable agents of their education and growth. This means that the role of the teacher is only to guide the pupils to design their understanding, take initiative, and build their communities. That is why it is a challenge for the teachers to introduce new opportunities to pupils in which technology is widely used. Through the use of technology in the classroom, the pupils are allowed to express and share their ideas and opinions and collaborate learning with others. It empowers the teachers and pupils to have better connections and make those connections as an opportunity to learn new things in the process of communication.

According to Rohmah (2017), teachers must create communicative and interactive teaching-learning activities that engage a greater number of pupils in conversation. Constant cooperation is said to give pupils the chance to share significant ideas and develop into active learners. When the learners learn to collaborate with teachers and with others, pupils will become effective and at the same time eager to learn new things.

As stated by Adaba (2017), collaborating with others enables pupils to acquire critical social skills. Regardless of pupils' diverse social backgrounds, cognitive capacities, and physical capabilities. Pupils should collaborate with others to acquire information, resolve conflicts, and complete tasks. With the help of technology, activities given by the teacher will be more creative. It will effectively increase the learning motivation and interest of the pupils. Teachers can use connectivism in the classroom to help pupils develop connections with the subjects that interest them to support their learning. It helps teachers mold pupils' interest in learning by creating bonds and connections between them and their peer groups. With this, effective communication and interaction will be developed.

According to Li (2018), for pupils to achieve positive outcomes, then there must be a mutual connection and friendly interaction between pupils and the teachers to have a learning atmosphere where everyone is engaging. It clearly states that when there are classroom interactions happen in the classroom, proper communication and collaboration are always maintained in the teaching-learning process, and there will be increased academic achievement for every student. The purpose of classroom interaction is to help pupils acquire the competencies and productivity that come with effective communication, which in turn leads to both academic success and socio-emotional change. It creates an opportunity for pupils to excel in their academic endeavors. A well-managed classroom gives the pupils a comforting effect that offers a conducive and flexible environment for an effective teaching-learning process.

Classroom Interaction and Academic Performance: A Mixed Method Research

II. METHODOLOGY

This study used a qualitative and quantitative mixed research method. This method is a process used in a single study to gather, examine, and blend quantitative and qualitative research and methods to comprehend an issue related to research. By combining inductive and deductive reasoning, mixed-method approaches enable researchers to employ a variety of techniques. They also equalize the limitations of solely quantitative and qualitative research by utilizing a complementary strategy that optimizes the advantages of each type of data and promotes a more comprehensive understanding of classroom interaction and its effect on academic performance. To generate a solid description and interpretation of the data, improve the interpretability of quantitative results, or comprehend the wider relevance of qualitative findings from small samples, mixed techniques may be used (Team, 2023).

For in-depth analysis and treatment of the data, the researcher made use of the following statistical tools: For problems 1 and 2, Mean and Standard Deviation were used. For problem 3, Pearson Product Moment Correlation Coefficient (Pearson r) was used to establish the significant relationship between the independent and dependent variables.

Moreover, on the qualitative side, the responses of the pupils and teachers-respondents were properly recorded and documented through the following steps: (1) Assembling and compiling the qualitative information that was gathered through written and oral interviews of the respondents, (2) Integrating and structuring the gathered qualitative data, (3) Assigning codes to the gathered qualitative data from the respondents, (5) Looking for insights and emerging theme/s by analyzing the qualitative data, and (6) Interpreting the results derived from the researcher's analysis and findings.

III. RESULTS AND DISCUSSION

Problem 1. What is the level of classroom interaction of pupils based on:

     1.1 behavior; and,

     1.2 interest?

Table 1

Overall Pupils' Classroom Interaction

Indicators	Mean	SD	Description	Interpretation
Behavior	3.91	0.63	Agree	High
Interest	4.14	0.65	Agree	High
Overall Mean	**4.03**	**0.64**	**Agree**	**High**

Note: 4.20 − 5.00= Very High; 3.40 − 4.19= High; 2.60 − 3.39= Moderate; 1.80 − 2.59= Low; 1.00- 1.79= Very Low

Table 1 presents the overall pupil's classroom interaction. It reveals that it has an overall Mean of 4.03 with SD = 0.64, which is described as Agree and interpreted as High. This means that pupils actively participate in class and can interact with their teachers responsibly. They actively engage in the different activities given by the teacher. They exchange their ideas with teachers to understand more about the lesson. They are driven to participate in class because they care about their growth and development. They listen to the teacher attentively and behave well in class. They never hesitate to ask questions for they believe that asking questions is one way for them to understand the lesson. With that, they put their interest into listening to the teacher's discussion. This proves that teachers made every effort to provide pupils with clear and useful instructions.

Barni et al. (2019), stated that active pupil-teacher interaction enhances the efficacy of teachers' instruction. Teachers make sure they provide acceptable instructions so that pupils can effectively transmit learning and maintain classroom management and interactions. As a result, interaction may serve as an important factor in evaluating what the pupils learn in the classroom. Interaction among pupils in the classroom helps them develop the critical thinking skills necessary to communicate their opinions with their peers. The pupils will be able to engage with concepts, ideas, and a variety of other tools and resources for language and cultural learning through classroom engagement.

According to Rohmah (2017), effective teacher-student interaction is possible. As the teacher imparts knowledge to the pupils, the latter modify the material and build it according to their comprehension, applicability, and value. Positive connections with classmates, guidance in identifying personal learning styles, exposure to learning, and improved academic performance in a subject are all benefits of good classroom interactions for pupils.

Interaction in the classroom is crucial since it affects the interpersonal relationship between the teacher and the pupils. Although pupils' performance may not always be a direct result of the teacher's teaching function, it does play a significant role in how much learning occurs in the classroom. According to Schonert–Reichl (2017), the classroom should be a secure, all-encompassing, modest, and compassionate learning environment since it is an essential place for promoting pupils' well-being.

Classroom Interaction and Academic Performance: A Mixed Method Research

Positive classroom interactions can improve pupils' communication skills. Not only do pupils understand the value of positive interactions, but teachers can also enhance their own learning and teaching methods in the classroom.

Problem 2. What is the pupils' level of Academic Performance?

Table 2

Pupils' Overall Academic Performance

Level of Academic Performance	Frequency	Percentage	Mean	SD
Outstanding	44	19		
Very Satisfactory	137	59	88.46	2.17
Satisfactory	51	22		
Fairly Satisfactory	0	0		
Did Not Meet Expectations	0	0		
Total	**232**	**100.00**		

Note: 90-100 Outstanding   85 – 89 Very Satisfactory   80 – 84 Satisfactory
75 – 79 Fairly Satisfactory 74 & below Did not Meet Expectations

Table 2 presents the overall academic performance of the Grade 5 pupils. It reveals that 137 or 59% of the pupils are at Very Satisfactory level. This indicates that pupils are doing well in the classroom. They are making every effort to achieve academic success. They participate enthusiastically in the various exercises that the teacher assigns. They collaborate with others to engage in classroom discussions. They never hesitate to clarify or ask questions about any activity the teacher assigns since they think this is an important aspect of engagement and helps the pupils understand the material. In light of this, communication between teachers and pupils is essential since it helps pupils become more confident and improves their academic performance. Cai and Cao (2019) stated that academic achievement is not only about pupils' academic performance in school, but should also include all aspects of their knowledge, competence, and literacy development. Through the process of classroom involvement, pupils will be able to develop independence where they can interact and collaborate with others and when this happens, learning is possible.

According to Jafari (2019), one of the key factors that determines pupils' academic success is their study habits. If pupils always practice study habits, then their academic performance has a positive effect on learning. This means that there is a significant relationship between pupils' study habits and academic performance. Learning is enhanced when the teacher and pupils have a positive interaction with each other. If the teacher and pupils have a positive interaction then there is effective communication in the classroom discussion.

Problem 3. Is there a significant relationship between pupils' classroom interaction and academic performance?

Table 3 shows Pearson's Correlation test between pupils' classroom interaction and academic performance. The test reveals the two rejecting null hypotheses of behavior and interest with *r*-value of 0.504 and 0.518 and both *p*-values at 0.002, respectively which indicates moderate positive correlation. The computed *p*-values are lower than 0.05 level of significance rejecting the null hypothesis also indicates that there is a relationship between the variables and that the effect is statistically significant. It shows that pupils' diversity and areas of interest can affect their academic performance in addition to enhancing their social skills. It enhances analytical abilities and fosters self-assurance in the classroom. Interest is necessary for academic success.

Table 3

Test Correlation on Classroom Interaction and Academic Performance

Pupils' Classroom Interaction	Academic Performance				
	r-value	p-value	Level	Decision	Interpretation
Behavior	0.504	0.002	Moderate Positive Correlation	Reject Ho	Significant
Interest	0.518	0.002	Moderate Positive Correlation	Reject Ho	Significant

Note: Significant when the computed p-value is less than the p-critical value of 0.05

Classroom Interaction and Academic Performance: A Mixed Method Research

This further shows that the interaction and behavior of pupils can positively affect their academic performance. Teachers need to make sure that the behavior and interest development among the pupils are geared towards the positive side and ideal effects for their academic endeavors. Behavior improves academic performance in a variety of ways, including improved instruction for pupils, cognitive function, and when applied appropriately. Behavior in the classroom allows pupils to think about viewpoints and attitudes that go beyond the ones they have already acquired or that were impacted by friends and family when they were younger. They can critically analyze their thoughts and understand the world in new ways when they are exposed to perspectives that diverge greatly from their own. They get a deeper comprehension of the material when they interact with and collaborate with others from different cultures and backgrounds in the classroom with respect. It also instructs pupils how to use their special talents and viewpoints to cooperate and contribute to a varied work setting without disrespecting others.

According to Grimshaw et al. (2020), to encourage pupils' academic success, knowing the historical context is necessary to provide high-quality instruction based on an ethical mindset that respects and honors diverse cultures and makes use of cultural awareness as a means of instruction. Encouragement of pupils to take into account different points of view can also help them develop the critical communication skills necessary for successful peer interactions—skills that will benefit them for the rest of their lives. With this, teachers need to value and respect diverse learners so that they have an equal opportunity to learn new things and understand the subject. It is believed that learners can fully understand the lesson if teachers guide the pupils appropriately.

Therefore, to help pupils and teachers create a better environment to promote pupils' academic achievement and implement culturally responsible pedagogies, training and forming educational programs may include preparation to serve diverse pupils and develop their ideal behavior and attitude (Bonner et al., 2018).

According to Ahinful et al. (2019), there is a correlation between academic achievement on interest and motivation. This means that if pupils have a high level of interest, then there is high academic performance on the part of the pupils. In this regard, interest affects academic achievement. Pupils with good interest demonstrated improved performance and improved comprehension of the subject matter, developed student's abilities, and increased confidence in their academic achievements. Among the attributes that ought to be noticed is the teacher's verbal instruction and ought to be socially adept so that pupils can have good communication with them.

These social abilities are necessary for each individual to engage and speak with others. Teachers with strong social skills, and good in giving verbal instruction will examine the body and verbal communication. Teachers need to be able to clarify, to ensure the lessons imparted by the teacher are understood by the pupils. Consequently, this will enhance instruction and learning. productive. Pupils' participation in the classroom is influenced by a variety of factors, including teaching strategies, classroom climate, and teacher-student relationships. Pupils are more motivated and participate more actively in class when they are in a good and encouraging setting higher involvement and enhanced academic achievement (Vanner et al., 2020).

According to a related study by Varga (2017), encouraging pupils' involvement and academic performance depend heavily on the relationships between pupils and teachers. A sense of trust and belonging are fostered by supportive and loving interactions, and this increases motivation, involvement, and dedication to learning.

Additionally, educators with strong social abilities will inspire the pupils and resolve the issue with ease. As they possess social consciousness, comprehension, and projection of the pupils' actions and emotions. As a result, social skills are one of the standards for excellence of teachers. Effective feedback, modeling, scaffolding, and positive teacher-pupil interactions are all essential for fostering pupils' development of oral communication skills. By creating encouraging surroundings, offering helpful criticism, and setting an example of good communication. By adopting scaffolding approaches and encouraging positive behaviors, educators can make a substantial impact on their pupils' oral communication development. Pupils that have strong academic interests will constantly improve their academic performance.

IV. CONCLUSIONS

Using the research's findings, the researcher reached the following conclusions:

1. Paying attention to teachers' discussions promotes pupils' good behavior and interest in class interactions.

2. Pupils' academic performance will be at high level if class interaction is present.

3. A moderate to strong positive correlation implies that classroom interaction has a significant relationship to pupils' academic performance.

V. RECOMMENDATIONS

Given the study's findings and conclusions, the researcher suggests the following:

1. Classroom interaction can affect academic performance. Thus, it must be given attention for improvements for the teachers and pupils. Teachers may incorporate strategies that will continue to arouse pupils' interest and inspiration toward their studies and in attending classes.

2. Academic performance must be at an outstanding or very satisfactory level for all pupils, if possible, to ensure that the acquisition of knowledge and skills is achieved by all the pupils. Teachers may create intervention programs and activities that will help those pupils who have low performance especially those who are struggling. The teachers, parents, and the community may help and assist one another in improving the level of academic performance of the pupils for them to be able to reach their full potential and achieve the highest level of performance.

3. Classroom interaction is significant in the level of academic performance of pupils. The higher authority may monitor teachers' and pupils' educational performance timely through good supervision. Moreover, there is a need for all stakeholders to take part in the progress of their children's education.

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