

IJMDS
INTERNATIONAL JOURNAL MULTIDISCIPLINES AND THE DEVELOPMENT OF SCIENCE

Journal homepage : https://jurnal.asrypersadaquality.com/index.php/ijmds

Email:internationaljournalmultidisci@gmail.com

INTERPERSONAL COMMUNICATION IN MATHEMATICS TEACHING: BUILDING EFFECTIVE RELATIONSHIPS WITH STUDENTS

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A B S T R A C T

One type of appropriate communication in mathematics learning is interpersonal communication. Interpersonal communication helps teachers and students in learning and carrying out learning, for example, fostering students' interest in learning mathematics. This research aims to determine interpersonal communication in mathematics teaching: building effective relationships with students. This research uses qualitative methods with descriptive analysis and interviews. Based on the results of interpersonal communication research, it shows positive results in improving effective relationships with students.

A R T I C L E I N F O

Article History:
Received 7 Agust 2024
Revised 8 Sept 2024
Accepted 23 oct 2024
Available online 15 Nov 2024

Keywords:
Interpersonal Communication, Effective Relationship

To cite this paper (in APA style):
Author's Nadia Sabrina Siregar *at el International Journal Multidisciplines And The Development Of Science*

INTRODUCTION

Interpersonal communication plays a very important role in every learning process, including in teaching mathematics. Mathematics, which is often considered a difficult and abstract subject by some students, requires a teaching approach that not only focuses on delivering the material, but also on building good relationships between teachers and students. In an educational context, interpersonal communication is not only about conveying information, but also about building and maintaining harmonious relationships between teachers and students. These strong relationships have a direct impact on students' learning interest, motivation, and ultimately academic achievement. Effective interpersonal relationships can increase students' understanding, reduce anxiety, and motivate them to be actively involved in the learning process. In this context, teachers not only act as providers of information, but also as facilitators who support students' emotional and cognitive needs. This article will explore the importance of interpersonal communication in mathematics teaching, as well as how teachers can build positive relationships with students to create a more inclusive and productive learning environment.

According to research by Usman (2015), in Yanuar Rahmat Ndraha, et al (2020) students' interest in learning mathematics is influenced by interpersonal communication by up to 35%. This shows that among the many elements that influence interpersonal communication learning, mathematics has a significant impact on students' learning interest. Furthermore, Lesmana's 2019 study in Yanuar's research found a direct correlation between student learning outcomes in mathematics and interpersonal communication. This implies that student learning outcomes will increase in proportion to the continuity of interpersonal communication. Thus, it can be said that interpersonal communication influences and helps students' mathematics learning.

Communication is a very important skill in human life, where we can see communication often occurs in every human movement. Humans in this case are teachers and students, teachers who do not interact with students closely, causing the communication process becomes less fluent which makes students feel distant from the teacher and students feel reluctant to actively participate in learning (Transparawa, et al).

One form of communication in learning that is appropriate to use is interpersonal communication. Interpersonal communication is communication that occurs directly, face to

face, and usually occurs between two people so that at that time they also know the return of the communication itself (Liliweri, 2015: 1).

Interpersonal communication is a form of communication that emphasizes personal relationships. Therefore, in interpersonal communication learning, it is defined as communication between the teacher and each student one by one that occurs directly and knowing the effects of the communication at that very moment.

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Effective interpersonal relationships can increase students' understanding, reduce anxiety, and motivate them to be actively involved in the learning process. In this context, teachers not only act as providers of information, but also as facilitators who support students' emotional and cognitive needs. This article will explore the importance of interpersonal communication in mathematics teaching, as well as how teachers can build positive relationships with students to create a more inclusive and productive learning environment.

Therefore, good interpersonal communication is characterized by closeness by showing that teacher and student communication does not only take place directly in the classroom during the learning process. However, interpersonal communication can take place inside or outside the classroom. In this way, teachers can also carry out effective learning by having ownership interpersonal relationships established through communication with students.

Therefore, good interpersonal communication will influence student behavior which will influence learning achievement (Atta and Jamil, 2012: 34).

METHOD

To conduct research on Interpersonal Communication in Mathematics Teaching: Building Effective Relationships with Students, the researcher decided to use qualitative research methods. Researchers used qualitative research methods with descriptive analysis. And the researcher also conducted an interview with one of the teachers at school x. We used this research method because it is more detailed and in-depth, considering that this research focuses on skills. Just like teachers' activities in building communication with their students to create good relationships so that the teaching and learning process becomes more effective, we have raised the title Interpersonal Communication in Mathematics Teaching: Building Effective Relationships with Students. Because achieving an effective relationship with students requires an important role from the teacher, therefore we research interpersonal communication in teaching or strategies to make it easier to implement in schools that want teachers to have effective relationships with their students.

RESULTS AND DISCUSSION

Result

In human life relationships, the most important and most complex aspect is communication. The communications and messages we receive from people we don't know greatly influence our daily lives. This includes people we don't even know, both living and dead, as well as people near and far from us. Because communication is so important to our lives, it must be prioritized. Moving others to action is one of the goals of communication. It can be various, such as activities. Communication is a way for people to plan for the future, join groups, interact, and get to know new people. Humans can communicate by conveying information, opinions and ideas. As social creatures, humans always want to talk to each other, exchange thoughts and opinions, share life experiences, and work together to live on Earth. In the humanitarian system, human desires can be realized through interactions and interactions carried out by humans. There are many desires and needs in human life activities which show that humans have the instinct to live with fellow humans; these include the need for affection and satisfaction, as well as the need to be supervised (Lubis, Muya Syaroh Iwanda, 2020: 7).

To achieve learning goals, teachers and students must be able to communicate well by considering their humanist and cultural aspects. Therefore, ethnopragmatic studies are a very relevant approach for this research. The aim of this approach is to offer solutions to problems

that arise in teacher-student communication. The learning process in the classroom consists of teacher-student interaction and reciprocal communication that occurs in a learning environment that is conducive to achieving learning goals. These two elements, interaction and communication, must support each other so that student learning outcomes can be achieved optimally. Facts in schools show that teacher-student communication is still less effective. Most students still have difficulty accepting and understanding the material given by the teacher. The learning process in the classroom consists of teacher-student interaction and reciprocal communication that occurs in a learning environment that is conducive to achieving learning goals. Teachers do not always pay attention to whether students understand the material, whether it is still difficult to understand, whether it needs to be repeated, etc. when they give material to students. Students feel welcome and want to participate more actively in lessons when the teacher provides feedback (Hidayat, Noor Mohammad, 2018; 765).

First we have to understand the word interpersonal, where this word consists of the word “Inter” which means “between” and “personal” comes from the word “person” which means “person”. So literally, interpersonal communication can be interpreted as the process of conveying messages between people or between individuals.

Deddy Mulyana in Wargainangin, quoted by Nur Maghfirah in his book entitled Textbook of Interpersonal Communication, said that interpersonal communication is communication between people face to face, which allows each participant to capture every reaction directly, both verbal and non-verbal. In addition, the quality or intimacy of interpersonal or interpersonal communication is determined by the communication participants. This interpersonal communication involves two people in close proximity “dyadic communication”. Interpersonal communication is closely related to the relationship that is built between the communicant and the communicator. Their communication involves each other in a relationship that is mutually beneficial and interdependent and creates satisfaction for both parties.

Wood in Nur Maghfirah explains that based on the description of Buber’s poetry, interpersonal communication can be identified as a selective, systemic and unique (continuous) transaction process that makes us able to reflect and build knowledge with other people. Selective, because we cannot possibly communicate intimately with everyone we meet in everyday life. Systemic, because it occurs in varying systems. There are many systems that exist in the interpersonal communication process. Each system influences what we expect from other people. Unique, because in interactions that transcend social roles, each person becomes unique and therefore irreplaceable. Every person is unique, and so does friendship. A group of

friends definitely creates their own unique patterns and even terms that only belong to their own group.

Interpersonal communication is also processual, transactional, individual, personal knowledge, and creates meaning. Processual, because interpersonal communication is a continuous process. This means that communication is always evolving and becoming more personal from time to time. Transactional, because basically interpersonal communication is a transaction process between several people. The transactional nature that naturally occurs in interpersonal communication has an impact on the communicator's responsibility to convey messages clearly. Individual, because the deepest part of interpersonal communication involves humans as individuals who are unique and different from other people. Personal Knowledge, because interpersonal communication helps develop our personal knowledge and insight into human interactions. In order to understand individual uniqueness, we must understand other people's thoughts and feelings on a personal level. Creating meaning, because the essence of interpersonal communication is various meanings and information between two parties. We not only exchange sentences, but also communicate with each other. We create meaning as we understand the purpose of the words and behavior displayed by others.

Discussion

Based on the results of the interviews conducted, it can be understood that building initial communication with students can start with a relaxed and warm introduction, then we need to ask about their interests outside of mathematics, because this way it can help create a comfortable atmosphere. In terms of non-verbal techniques in communication, teachers need to make eye contact, show attention and interest in what they are saying. Then express your face, smile, nod or show a supportive expression. The atmosphere when learning must be comfortable, especially creating a pleasant learning atmosphere with a flexible layout and attractive classroom decorations. If there are shy students in the class, the steps taken are; (1) Open questions, we as teachers should be able to ask questions where the answer is not just yes or no but there are other alternative answers so that students who are initially shy will slowly start to open up to the person they are talking to; (2) Give them time to think, we need to give them time to think to prepare the answers they will convey, because otherwise it will be certain that these students will have difficulty conveying their views; (3) Effort Appreciation, praise their efforts no matter how small, this has a big influence on their personal abilities, a level of confidence will arise in students if every positive effort is praised by the teacher or parents at home.

If a student is frustrated, steps they can take are: (1) Listen with empathy, give them space to express their feelings without us cutting them off or in other words without interruption; (2) Problem Identification, trying to understand what is the source or root of their problems, apart from giving space to tell stories without being refuted, the important thing that should not be missed is identifying the problem, in this way the teacher can find out the reasons why the student becomes frustration and then a solution will be sought to resolve the root of the problem; (3) Helping them solve problems, after finding out the root of the problem as stated above, we as teachers must play a role in solving the problem that causes them frustration.

The strategy used to provide constructive feedback without damaging students' motivation is to praise the effort they put in, not just the end result, then provide clear and concise suggestions for what they need to improve, and help them to set achievable goals. Achieved. Suitable ways to demonstrate empathy and understanding of the difficulties faced by students in learning mathematics include: (1) Recognizing that mathematics can be difficult for some people, some people think that mathematics is a complicated, difficult and confusing subject, but for some For other people, mathematics is actually a very exciting, challenging subject and trains their brains well; (2) Sharing personal experiences, namely by exemplifying strategies from one's own experience when learning mathematics; (3) Offering assistance by providing additional time or individual guidance if needed, such as additional tutoring outside of learning. With this tutoring activity, students can have more freedom to discuss lessons with the teacher that they have difficulty understanding, because there are some children who during class learning take place. , he didn't want or was embarrassed to ask his teacher, so when he took additional lessons he was very smooth and easily conveyed the difficulties he was experiencing.

There are definitely communication barriers that may arise due to differences in cultural or language backgrounds, for this reason steps that can be taken are: (1) Avoid technical terms that are difficult to understand; (2) Using visual media such as pictures, diagrams/models that explain the concepts conveyed; (3) Recognize and appreciate cultural differences in the classroom; (4) Involving parents to help students do their homework at home. The methods used to encourage collaboration and communication between students in learning mathematics are: First; group work, dividing students into small groups to build good cooperation and secondly; class discussions to share and express their respective opinions. To develop fluent communication skills, this can be done by asking students to present the results of their work and asking students to write essay reports about the mathematical concepts they have learned.

Handling situations when interpersonal conflict occurs between students in the context of mathematics learning can be resolved by: Mediation; facilitate discussions between students in conflict, then create clear rules of agreement regarding acceptable behavior, and finally teach students how to communicate effectively and resolve conflicts in a peaceful way.

We also quote research results related to the topics discussed, here are some of them. (Sepni Yanti, 2015) "This research examines the influence of self-concept and interpersonal communication skills on critical thinking skills in mathematics of junior high school students in Depok. The results of the analysis show that there is a direct positive influence between self-concept on interpersonal communication skills and critical thinking skills in mathematics, as well as a direct negative influence between interpersonal communication skills on critical thinking skills in mathematics. Apart from that, there is an indirect influence of self-concept on critical thinking skills in mathematics through interpersonal communication skills. "The suggestions given include improving students' self-concept and interpersonal communication skills to support critical mathematical thinking skills." (Muhyidin and Sigit, "This research discusses the relationship between logical-mathematical intelligence, interpersonal communication, and Mathematics learning outcomes among class XI students at Geo Informatics Vocational School.

The aim of this research is to determine: (1) the correlation between logical-mathematical intelligence and Mathematics learning outcomes; (2) correlation between interpersonal communication and Mathematics learning outcomes; and (3) the combined influence of these two variables on Mathematics learning outcomes. The research used a correlational design with a sample of 50 students selected through proportional random sampling. Data collection involves test and non-test instruments that have been validated and tested for reliability. The results show a positive relationship between logical-mathematical intelligence and Mathematics learning outcomes (contribution 17.9%), as well as a stronger positive relationship between interpersonal communication and Mathematics learning outcomes (contribution 60.4%). Overall, these two variables explained 64.3% of the variance in Mathematics learning outcomes. "This research concludes that improving Mathematics learning outcomes can be achieved by increasing students' logical-mathematical intelligence and interpersonal communication skills."

CONCLUSION

The text addresses the challenges posed by cultural and language differences in mathematics education. It proposes several strategies to mitigate these barriers, including:

1. Avoiding technical jargon

2. Utilizing visual aids
3. Acknowledging cultural differences
4. Involving parents in homework activities

The importance of collaboration is emphasized through group work and class discussions, alongside the development of communication skills via presentations and essay writing. Additionally, the text discusses conflict resolution among students through mediation and effective communication training. Research findings indicate that self-concept and interpersonal communication skills positively influence critical thinking and mathematics learning outcomes. The conclusion advocates for enhancing community empowerment activities to better align with local needs and challenges, along with further recommendations for community engagement.

The article highlights the critical role of interpersonal communication in mathematics teaching and its impact on teacher-student relationships. Key points include:

1. Strong interpersonal communication enhances students' interest, motivation, and academic performance in mathematics.
2. Qualitative research methods, including interviews, reveal how teachers can build positive relationships through effective communication strategies.

Key findings emphasize:

1. The necessity of creating a comfortable learning environment
2. The use of non-verbal communication techniques
3. Strategies to engage shy or frustrated students

Teachers are encouraged to practice empathetic listening, identify student challenges, and provide constructive feedback. Overall, the article underscores that effective interpersonal communication is essential for improving student engagement and learning outcomes in mathematics education.

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