INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES

Vol 14, Issue 3, (2024) E-ISSN: 2222-6990

# Applications of Multiple Intelligence in Learning Process of Special Education Needs Student Visual Impairment

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**To Link this Article:** http://dx.doi.org/10.6007/IJARBSS/v14-i3/21029 DOI:10.6007/IJARBSS/v14-i3/21029

***Published Date:*** 04 March 2024

**Abstract**

The theory of multiple intelligences, presented by Howard Gardner, recognizes that each person has different intelligences and can be developed using various methods. One of the intelligences expressed in Howard Gardner's theory of multiple intelligences is about mathematical-logical intelligence. Mathematical-logical intelligence does not only refer to the ability to calculate or solve mathematical problems. However, this intelligence also involves the ability to organize, analyze, and formulate statements logically. Mastery of logical-mathematical intelligence can be one of the challenges for students with special needs. However, with adaptive teaching and learning, this intelligence can be developed and validated to help students achieve success. For example, teachers can take advantage of modern technology such as the use of applications for students to understand problem-solving questions. Not only that, role play activities can also help students to understand concepts and develop students' mathematical-logical intelligence.

**Keywords:** Multiple Intelligence, Learning Process, Special Education Needs Student, Special Education, Visual Impairment

## Introduction

The development of this intelligence is very important for students with special needs because this can help students to think logically in their daily lives. The ability to complete basic mathematical operations can help them in daily situations such as shopping, budgeting and so on (Mosbiran et al., 2021). Not only that, this intelligence can help students with special needs to open wide career opportunities in various fields. In conclusion, mathematical-logical intelligence is very important for the development of the potential of special education students. With a teaching approach that is adaptive, innovative, and utilizes

modern technology, this intelligence can be developed and directed to help students achieve success in the field of mathematics and help them in the development of critical thinking skills.

The theory of multiple intelligences, (multiple intelligences) presented by Howard Gardner, shows that there are different types of intelligence beyond the traditional concept of IQ. There are nine intelligences, one of which is interpersonal intelligence. Interpersonal refers to the interaction and relationship between people. How to communicate with people around, understand and relate to each other. Interpersonal skills involve the ability to communicate effectively, build relationships and interact with other people in a positive and productive way (Mizan et al., 2021). In addition, interpersonal relationships can occur in various contexts, such as family, work and social environments and involve various interactions such as verbal and nonverbal communication, active listening. , empathy and conflict resolution. Referring to the ability to understand and interact effectively with other people, this is no exception for students with special needs, developing interpersonal intelligence is very important because it can help them navigate social situations, build relationships, and improve communication skills.

**Literature Review**

There are several strategies that can be used to improve interpersonal intelligence for students with special needs such as teachers or family members need to play a role in building a suitable social environment such as creating or involving a scenario that students may face in a social situation and guiding them through how to respond exactly (Bin Shafie et al., 2022). Examples such as simulating a group game activity or a project that requires students with special needs to interact, communicate and give students the opportunity to work together and develop their social skills. In addition, peer mentors also play an important role. Giving partners or peers who excelling in interpersonal skills can help them learn by example and receive guidance in social situations. Social skills training Formal training sessions can teach students specific social skills, such as active listening, effective communication, and conflict resolution. Overall, developing interpersonal intelligence can benefit students with special needs in many ways, including increased socialization, self-esteem, and academic achievement (Jaya et al., 2021).

Howard Gardner's Multiple Intelligence Theory through his book Frames of Mind published in 1983 states that every individual including individuals with special needs has intelligence but each intelligence profile may vary individually based on genetics or personal experience. Among the nine intelligences introduced by Howard Gardner, verbal-linguistic intelligence and logical-mathematical intelligence are the most evaluated intelligences among students in school. Although this theory has been criticized since it was introduced because Gardner's definition of intelligence is too broad and the 9 intelligences in question may refer to a person's talents, personality traits and abilities, as well as the lack of empirical studies, but this theory is popular among educators. Multiple Fitness Theory is widely integrated by many teachers in teaching and learning in the classroom so that teaching and learning are in line with the abilities and capabilities of students to help students understand the content of the lessons delivered to them including involving students with special education needs (MBPK) (Alwi & Nordin, 2022).

Some MBPK in the autism category have the same intellectual intelligence as typical children. In most cases, autistic children are known to be highly gifted children. This is because autistic children have a broad and diverse spectrum of autism that varies from individual to individual.

MBPK in the autism category who suffer from Asperger's syndrome, for example, have high intellectual intelligence (Bin Nordin et al., 2022). Usually these children do not show interest when the teacher teaches in class but when asked a question, they can definitely answer correctly. This is because MBPK in the autism category who suffer from Asperger's syndrome have a good hearing sense or sensor.

Among the examples of gifted autistic children suffering from Asperger's syndrome is an 8-year-old girl named Adhara Perez from Mexico who has a level of brain intelligence or IQ above Albert Einstein and Stephen Hawking as reported by the media. Adhara Perez an autistic child with Asperger's syndrome has an IQ score of 162, compared to Einstein and Hawking who are estimated to be around 160. This means that the child may have some intelligence such as logical-mathematical intelligence and verbal-linguistic intelligence because of his age just 8 years old, Adhara has successfully completed primary and secondary schooling and now she is continuing her studies in two different courses online while writing a book titled 'Don't Give Up.'Humans are in a diverse context, so are with intelligence. In a class, there are various intelligences that can be seen in each student, some are good at writing, some are smart at math and even some are inclined towards sports and games. Music is an intelligence without objects that Gardner has highlighted.

**Discussion**

In the scope of Students with Special Educational Needs (SES), this approach to learning through music is particularly preferred by students with Autism because music can create a pleasant atmosphere. Autistic students can easily memorize the lyrics and melodies of songs. Sometimes the information in their learning has been processed in the music of their favorite songs. For example, in the subject of Islamic Religious Education, students learn about the order of ablution which has 5 steps. These autistic students will change the lyrics of their favorite songs to the ablution order in the music. Usually this student will not sing it out loud at the beginning. When they feel confident with the new lyrics, then they sing it out loud.

Autistic students are very inclined to musical instruments such as the piano. Usually when they hear a song, they can translate the melody using the piano. Most autistic children are encouraged to take piano lessons taught by experienced teachers who are experts in the field of music. Although some of these autistic students cannot pronounce the lyrics of a song accurately, the tempo and melody are correct as they are heard (Nordin & Alwi, 2022) There are also those who managed to change the tempo of the music to something more unique and pleasant to listen to. Autism students who are good at playing the piano are able to create a new sound using the foot strike or blowing from their mouth to add sound to the piano music. This means that 3 movements of the limbs, namely fingers, feet and mouth, will occur simultaneously while they play the piano.

A unique thing that can be seen in autistic students who love music is that they tend to sing songs in English. They can say the words or lyrics of the song correctly and accurately while they sing. They also easily memorize the lyrics through the music they listen to. Students with special educational needs (MBPK) who have mathematical logical intelligence tend to be seen as individuals who can solve math problems and know numbers efficiently (Nordin et al., 2022). This MBPK with mathematical logic is also savvy with programming and likes to explore and investigate something more scientific. This has also been seen by myself when handling two 1st year students who entered my school, SK Lelaki Jalan Batu. These two students were confirmed by the doctor in the multiple intelligence category. They are seen to be inclined towards mathematics subjects and successfully answered the Final Academic Session Test

(UASA) paper for Year 6 students in the past 2022/2023 session. This shows their high and deep cognitive ability in solving mathematical problems involving numbers.

**Conclusion**

The results of my reading on the Theory of Multiple Intelligences also found that these intelligences are not necessarily dependent on each other, but these intelligences often operate separately. I can relate to this when two of my MBPK students show different abilities in mathematical logic because they also have different additional tendencies. Pupil A has a very high mathematical tendency and is accompanied by linguistic intelligence. This is seen when Student A can read and understand the questions well without needing the teacher's help. Pupil A also likes to explore and shows a high interest in programming such as playing chess. Student A is also able to tell stories with good intonation in Malay and English. However, Student B needs the teacher's help in the linguistic aspect because he is seen as weak in the use of language such as reading. Student B shows more interest in spatial visual intelligence. For example, student B is seen to be able to complete a rubik's cube very quickly after completing the task given by the teacher. Accordingly, as a Special Education teacher who teaches mathematics subjects, I can see MBPK's tendency in mathematical logic, especially through the activities carried out in the Learning and Facilitation (PdPc) session. Thus, appropriate teaching techniques and strategies need to be implemented to attract MBPK's interest to undergo PdPc sessions effectively. For example, learning mathematics that has elements of learning while playing by creating language and visual spatial games. As a result, students can develop their potential in various aspects of intelligence in addition to having a high ability to be applied in everyday life.

**References**

Alwi, A., Nordin, M. N. B. (2022). Applying Information Technology-Based Knowledge Management (KM) Simulation in the Airline Industry. *International Journal of Mechanical Engineering*, 2022, 7(1), pp. 1249–1252

Bin Nordin, M. N., Rajoo, M., Maidin, S. S., Sulaiman, M. S. S., Mosbiran, N. F. (2022). Competencies on Implementations of 21st Century Technology on Teaching, Learning and Assessment. Res Militaris, 2022, 12(2), pp. 7320–7331

Bin Shafie, A. S., Binti Rubani, S. N. K., Nordin, M. N., Ibrahim, E., Talip, S. (2022). Micro-Pits Effectiveness for Controlling Friction in Planestrain Extrusion. International Journal of Mechanical Engineering, 2022, 7(1), pp. 1270–1280

Jaya, S., Zaharudin, R., Hashim, S. N. A., Mapjabil, J., Nordin, M. N. (2021). Employing Design and Development Research (DDR) Approach in Designing Next Generation Learning Spaces (NGLS) In Teachers' Pedagogy and Technology Tools. Review of International Geographical Education Online, 2021, 11(7), pp. 1237–1246

Mizan, M. Z., Lada, S., Hamzah, A. A., Esam, A., Nordin, M. N. (2021). Movement Control Order (MCO): An Syar'iyyah Political Approach. Review of International Geographical Education Online, 2021, 11(7), pp. 1225–1230

Mosbiran, N. F. B. M., Mustafa, M. Z. B., and Nordin, M. N. B. (2021). Special Elements and Values Needed in Leadership for Special Education. Review of International Geographical Education (RIGEO), 11(4), 712-722. doi: 10.33403/rigeo. 8006784

Mosbiran, N. F., Mustafa, M. Z., Nordin, M. N., Abenoh, N. A., Saimy, I. S. (2021). Analysis of the Study of Individual Education Plans in Special Education. Review of International Geographical Education Online, 2021, 11(7), pp. 1231–1236

Nordin, M. N., Alwi, A. (2022). Digital Video Broadcasting Implementation in WSN Environments. International Journal of Mechanical Engineering, 2022, 7(1), pp. 1256–1259

Nordin, M. N., Alwi, A. (2022). Knowledge Management Model Implementation in Electronic Devices. International Journal of Mechanical Engineering, 2022, 7(1), pp. 1253–1255

Nordin, M. N. B., Maidin, S. S., Rajoo, M., Magiman, M. M., Mosbiran, N. F. (2022). International Frameworks For 21st Century Competences: Comparative Education. Res Militaris, 2022, 12(2), pp. 7332–7344