

Research Article

Analysis of multicultural mathematics learning with RACISM and students' social attitudes

Lena Rosdiana Pangaribuan^{1*}, Izwita Dewi², Elmanani Simamora²

¹ Universitas HKBP Nommensen, Indonesia

² Universitas Negeri Medan, Indonesia

*Corresponding Author: lenapangaribuan@uhn.ac.id | Phone: +62-81397971231

Received: 26 September 2023

Revised: 27 October 2023

Accepted: 20 November 2023

Available online: 30 December 2023

ABSTRACT

Multicultural learning is a strategy for creating a learning environment and designing a learning experience that integrates culture as part of the learning process. In multicultural learning, culture becomes a method for students to transform the results of their observations into creative forms and principles of nature so that the role of students is not merely to imitate or receive information, but to act as a creation of meaning and understanding. Subjects such as Citizenship Education, Social Sciences, Natural Science, Cultural Arts and Skills are considered to contribute to multicultural learning, but mathematics subjects can also contribute. The research aimed to find out how the use of multicultural learning in mathematical learning, on flat building materials, affected students' racism and social attitudes. This is a qualitative descriptive study that uses the interview method to gather data. The results will be qualitatively analyzed. Interviews were conducted to find out how multiculturalism is integrated into learning, how knowledge construction is built through cultural influences, how prejudice reduction occurs, how equality pedagogy is implemented, how the empowerment of school culture occurs in the learning process, and how it impacts in tackling racism and social attitudes of students after using such learning.

Keywords: Racism; Social Attitude; Multicultural Learning; Mathematics Education

1. INTRODUCTION

Indonesia is a nation or multicultural society consisting of various races, languages, ethnicities, customs, cultures, and religions. Differences like this can give rise to racism. In general, racist actions can originate from things that are considered small, such as: classifying someone based on their appearance, giving judgments about the status of a person or a certain group, or believing that certain personalities can be inherited from certain groups. Thus, racism can be carried out by anyone and anywhere. Racism is a serious problem that has long existed and is increasing in many parts of the world today. Racism is the process by which one group discriminates and excludes other groups based on their physical characteristics, culture, or national origin. Racism takes various forms in almost all countries and poses a major threat to minorities, human rights, public order, and the social democratic structure of society (Castles, 1993).

Multicultural education itself can be defined as an idea, philosophy, or idea that assesses the importance of cultural and ethnic diversity in social life (Banks, 2001). Multicultural education is an idea, an approach to school improvement, and a movement for equality, social justice, and democracy. Multicultural education experts emphasize diverse cultural components and groups, but they have a consensus of respect for the main principles, concepts, and goals. The main goal of multicultural education is to restructure schools so that all students acquire the knowledge, attitudes, and skills needed to function in an ethnically and racially diverse nation and world. Multicultural education seeks to guarantee educational equality for members of different racial, ethnic, cultural, and socio-economic groups and to facilitate their participation as critical and reflective citizens in an inclusive national culture (Zamroni, 2008).

According to Danoebroto (2012), multicultural diversity in Indonesia causes injustice in mathematics learning which often occurs. This is not only felt by minority groups, but also by the majority. For example, students from lower socio-economic groups are often treated more fairly than students from upper socio-economic groups. The same thing applies to students who come from certain tribes or ethnic groups, for example Chinese students and Batak students. Transformative learning supports the achievement of multicultural education goals. Transformative pedagogy is a type of education that shows that each person has freedoms and limitations, and emphasizes how important it is to participate

with others. To participate in a relationship with another person, you must act or behave in a way that accepts the other person as they are. In a learning process based on transformative pedagogy, values such as responsibility, tolerance, cooperation, mutual assistance, respect for various attitudes and perspectives, as well as human actions encourage cooperation. In addition, transformative education reveals human limitations and recognizes the greatness of God (Tilaar, 2002). Nowadays, the learning process in Indonesia lacks a social dimension because it focuses more on individual success. To be a winner (successful in learning), competition is considered a healthy thing. In fact, this educational method is based on liberalism and individualism. In the Indonesian context, the learning process must be based on a sense of mutual need, dependence, and interdependence. Joint success must be prioritized over a win-lose solution approach that prioritizes competition in learning. As the center of the learning process, teachers must be sensitive to students' diverse backgrounds. Therefore, the multicultural learning process must use materials that combine various cultures and socio-economic conditions.

Adopting materials without considering the context and culture of the recipient community can disrupt student learning progress and has the potential to lead to racism. In the same way, learning approaches vary because they are adapted to different ways of thinking (the process of acquiring knowledge) and characteristics. According to multicultural theory, a person's attitudes, values, personal history, and beliefs cannot be separated from the knowledge they acquire (Zamroni, 2008). The knowledge system passed down from generation to generation in an ethnic community influences the way they think, both at school and in their community. So that teachers do not easily have prejudices against their students, which can lead to disharmonious relationships, teachers and students must understand these things correctly. According to Endang (2006), a lack of comprehensive understanding of multiculturalism will lead to moral degradation of the younger generation. Attitudes such as togetherness, respect for others, mutual cooperation will fade due to non-comprehensive understanding. The presence of arrogance due to the dominance of the majority culture gives rise to a lack of understanding in interacting with other cultures and people. Furthermore, Endang (2006) explained that the attitudes and behavior that emerge in multicultural learning are often not receptive, interesting, and even completely contrary to the noble cultural values of our ancestors. Attitudes such as togetherness, respect for others, and mutual cooperation are starting to recede. "The presence of arrogance due to cultural dominance largely results in a lack of understanding in interacting with other cultures and people.

Schools with strong principal leadership must be able to achieve the goals of opportunity and equality in learning, which are the pillars of multicultural education. The principal is more than just a manager. He must be a leader. As stated by John Kotler (1996), a good leader has a sense of urgency, forms a coalition that leads change, develops a vision and strategy, communicates the vision, encourages subordinates to take extensive action, accumulates success after success, celebrates success and develop new methods. On the other hand, school principals who prefer to be managers are often trapped in managerialism. In this situation, managerialism is defined as excessive emphasis on systems and structures to the detriment of the main goals of the organization. It is easy to explain why bureaucratic needs are called one of the main goals of a quality management strategy. According to Muklis (2008) School is the epitome (small scale) of society, one form of education in society is formal education (school). This school is a medium for understanding how to instill multicultural values. Therefore, the educational process in schools must also instill multicultural values. The joy of learning and the creativity of teaching are no match for a thick file of standard operating procedures. Schools prefer to carry out routines rather than building a culture of continuous change (Tony Bush & Les Bell, 2006). In the current era of decentralization, schools have more freedom. The principal's leadership is very important to achieve the goals of multicultural education. It is projected that school principals who can implement the eight stages stated by Kotler above will be successful in realizing this goal. Students from culturally and socially marginalized backgrounds must receive greater attention to achieve established standards of success. Principals must follow the principles of equal opportunity and equality.

Meanwhile, students who are more fortunate because of differences in socio-economic levels and parental culture, they learn to understand each other, help each other, and care for less fortunate friends. In addition, schools must provide opportunities and activities that enable students to acquire life skills that lead to the mastery of certain skills, such as crafts and manual work. To help them earn a living as a provision after they leave school because of their limitations. For socio-economically fortunate students, life skills are also beneficial for their lives, at least by mastering certain skills, they will be able to appreciate manual work which has often been looked down upon. One way to implement multicultural education in mathematics education is by incorporating elements of Indonesian culture into learning activities or by motivating students before they enter the mathematics context. For example, batik cloth patterns resemble the shape of a flat building, the shape of a traditional Indonesian house which consists of several building elements, and other applications such as calculating volume, area, etc. Schools must integrate mathematics learning into everyday life, especially in multicultural contexts, because this is expected to increase students' creativity and their ability to think

critically in solving problems. Apart from that, inserting mathematics lessons into the context of everyday life can bring students closer to mathematics itself. Therefore, research on the implementation of multicultural mathematics learning was carried out.

According to Mania (2010) multicultural education provides hope in overcoming various societal upheavals that have occurred recently considering that multicultural education is education that always upholds values, beliefs, heterogeneity, plurality and diversity, whatever aspects of society. Jaelani (2013) also said that the cultivation of multicultural values must be instilled at every level of education and must involve various levels of society in shaping the character of students, especially in understanding and respecting each other between various ethnic groups, so that it becomes a contribution in efforts to transform cultural values and character. local people with a nationalistic outlook. This research aims to analyze multicultural learning regarding racism and social attitudes in mathematics learning in one of the private junior high schools in the city of Medan, how teachers use a multicultural approach in learning mathematics, and whether the application of multiculturalism in mathematics subject matter can help students overcome racism, both from their own culture and the culture of others, thereby changing their social perspective.

2. RESEARCH METHOD

This research is a qualitative descriptive study that uses the interview method to collect data. The data obtained will be analyzed qualitatively in relation to the application of multicultural education in learning, especially in Mathematics lessons. The purpose of the interview is to find out how multicultural content is integrated into learning, how knowledge construction is built through culture, how prejudice reduction occurs, how equality learning is used in the classroom, how empowering school culture helps overcome racism, and how changes in social attitudes occur after lessons. The subjects interviewed were students and mathematics teachers at one of the private schools in Medan City.

3. RESULTS AND DISCUSSION

The interview results show that mathematics teachers do not have a significant relationship between mathematics learning in the classroom and culture. In several subjects, such as Associations and Social Arithmetic, the mathematics teacher at one of the private schools in Medan City once included cultural elements. Dances, traditional house groups, and others are examples of cultural forms included in the question. It was stated that the culture used as an example was chosen randomly and was not influenced by other cultures, so it did not give rise to racism. In short, Mathematics teachers only tell students about the application of culture to classroom learning activities. Its use in main learning activities is not yet clear. At one of the private schools in Medan City, there are cultural differences between students and other school residents. Differences in religion and ethnicity can indicate cultural differences. Some people come from the Batak and Chinese tribes. Students communicate during learning and do not experience problems, and they communicate like peers. However, some students from different ethnicities are still less open. For example, if students in a study group continue to choose friends from the same background.

The mathematics teacher at Private Middle School in the city of Medan does not differentiate between students in class. However, different treatment is given to each student based on their mathematical abilities. Therefore, different treatment is given by mathematics teachers not because of differences in ethnicity, race, or religion, but because of students' mathematical abilities. For example, teachers often ask students who do not understand certain topics to participate in class activities, such as working on problems on the blackboard in front of the class. This encourages students to try harder and learn more about the topic. To teach mathematics, teachers use approaches that are tailored to the abilities of students in their respective classes. For example, the teacher uses the lecture method in class B, while students in class A use cooperative learning. The goal is to find out where students feel comfortable with the chosen learning method. Learning mathematics does not teach students to love their own culture, only through activities outside the classroom.

They must have local curriculum content that emphasizes skills and life skills in addition to local curriculum content that instills an entrepreneurial spirit. Students must be mentally trained to maintain an unyielding spirit, a positive social attitude toward others, and act innovatively and productively in their work by paying attention to internal efficiency and effectiveness. Learning aims to achieve an action paradigm rather than just passively acquiring theoretical knowledge. Students are invited to talk to build critical awareness, which will lead to empowerment rather than shackles. Data on students' social attitudes was obtained from questionnaires (student self-assessment). Indicators of social attitudes in this research are responsibility, cooperation, tolerance, and politeness. Based on the analysis of the data obtained, social attitudes can be seen in the summary in Table 1.

Table 1. Students' Social Attitudes

No.	Aspects of Social Attitudes	x_a	x_o	X
1.	Responsibility	2.76	2.85	2.80
2.	Team Work	2.72	2.68	2.70
3.	Tolerance	3.00	3.36	3.18
4.	Polite	2.88	3.20	3.04
Average Social Attitudes				2.93

The acquisition of social attitudes shows that it is within the good enough criteria for the responsibility indicator, namely 2.80, good enough for the cooperation indicator, 2.70, the tolerance indicator shows good criteria, namely 3.18, and good criteria for the politeness indicator, namely 2.90. The overall average result for social attitudes is 2.93, this result shows that classical social attitudes are in good condition.

4. CONCLUSION

Mathematics teachers' pay less attention to the relationship between mathematics learning and culture. However, the mathematics teacher at one of the private schools in Medan City has incorporated culture into the material on Association and Social Arithmetic. Examples of the application of culture in learning include dances, collections of traditional houses, and short stories to fill time between assignments. There are no differences in ethnicity, race or religion that cause mathematics teachers to treat students differently. Rather, they do it to prevent racism. Even though there are cultural differences between students and school staff, they communicate smoothly with each other and instill a sense of cultural love in daily activities at school, even though it is less embedded in lessons in the classroom. The average score for the responsibility indicator is 2.80. This score shows that the average student responsibility is classically included in the very good criteria. The cooperation aspect has met the good criteria with an average score of 2.70. The aspects of tolerance and politeness have also obtained very good criteria with an average for each aspect of 3.18 and 3.04. The overall results of students' social attitudes are in a good category. This research shows that students' social attitudes towards learning mathematics are good

CONFLICT OF INTEREST

There are no conflicts of interest declared by the authors.

REFERENCES

- Castles, S. (1993). *Racism: A Global Analysis*. University of Wollongong.
- Danoebroto, S. W. (2012). Model Pembelajaran Matematika Berbasis Pendidikan Multikultural. *Jurnal Pembangunan Pendidikan: Fondasi Dan Aplikasi*, 1(1), 94– 107. <https://doi.org/10.21831/jppfa.v1i1.1054>
- Endang, Rosita, Kusmaryani. (2006). Pendidikan Multikultural sebagai Alternatif. *Jurnal Paradigma*, edisi. 2. Tahun.2006, h. 50.
- Gribb, Robert. (2002). *Bangsa: Menciptakan Indonesia dalam Indonesian Beyond Soeharto*. Editor: Emmerson, Donald. Jakarta: Gramedia.
- Gvosdev, Nikolas. (2008). *Managing Pluralism, The Human Right Challenges of the New Century dalam Multicultural Education: Philosophy, Policy and Practice. Vol. 1*. Yogyakarta: Graduate Program The State University of Yogyakarta.
- Indratno, A. & Ferry T. (2008). *Kurikulum yang Mencerdaskan*. Jakarta: Kompas.
- Jaelani Al Pansori, dkk. Pendidikan Multikultural Dalam Buku Sekolah Elektronik (BSE) Mata Pelajaran Bahasa Indonesia Untuk siswa SMP Di Kota Surakarta. *Jurnal Pendidikan Bahasa dan Sastra Pasca UNS*, edisi 1. Tahun. 2013. hal. 109.
- Kotler, John P. (1996). *Leading Change*. Boston, Massachusetts: Harvard Business School Press.
- Kurniadi. (2020, Agustus 11). Pendidikan Multikultural. Retrieved from Untan: <https://untan.ac.id/pendidikan-multikultural/>
- Mania, Sitti. (2010). Implementasi Pendidikan Multikultural dalam Pembelajaran. *Jurnal Lentera Pendidikan*. edisi 13. Tahun. 2010. hal. 83.

- Mukhlis. (2008). Menimbang Kompatibilitas Multikulturalisme dan Islam: Ikhtiar Menggagas Pendidikan, *Ulumuna*, Vol. XII, No. 2, 2008, h. 214-215.
- Tate, W. (1997). Race-Ethnicity, SES, Gender, and Language Proficiency Trends in Mathematics Achievement: An Update. *Journal of Research in Mathematics Education*, 28, 652–679. <https://doi.org/10.5951/jresmetheduc.28.6.0652>
- Tilaar, H.A. R. (2002). *Perubahan Sosial dan Pendidikan*. Jakarta: Grasindo.
- Tony Bush and Les Bell (Ed.). (2007). *Principles and Practice of Educational Management*. London: Paul Chapman Publishing.
- Zamroni. (2008). *Several Aspects of Multicultural Education*. Yogyakarta: Graduate Program The State University of Yogyakarta.