



Mathematics Learning Difficulties as an Urban Social Issue: Parents' Perspective in Kuala Lumpur

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Abstract

Students' difficulties in learning Mathematics remain a concern as they may affect academic performance and learning outcomes. This study aims to examine parents' perspectives on mathematics learning difficulties as an urban social issue among students in Kuala Lumpur. Adopting a quantitative approach, the study involved 187 parents through questionnaires with descriptive statistical and reliability analyses conducted. The findings revealed that parents' perspectives on mathematics learning difficulties were at a moderate level, with a mean score of 2.828. The reliability analysis demonstrated good internal consistency, with a Cronbach's alpha value of 0.862. These findings suggest that parents perceive mathematics learning difficulties among students to be at a moderate level. Consequently, the moderate level of mathematics learning difficulties perceived by parents highlights the need for early intervention to prevent the issue from developing into a more serious urban social issue.

INTRODUCTION

Mathematics is an important subject for both academic performance and future careers as it develops logical thinking, problem solving and decision-making skills. Despite its importance, many students continue to have difficulties in understanding mathematics even in urban areas like Kuala Lumpur that have considerably better educational facilities. Additionally, mathematics requires a strong foundation, therefore students who have difficulties understanding basic concepts tend to have a hard time mastering more complex topics. Consequently, students may experience mathematics anxiety, insufficient basic knowledge and difficulties in applying mathematical skills, which altogether lead to poorer academic performance (Jamaludin et al., 2023).

In addition to their academic performance, students' emotions, attitudes and classroom experiences also have an impact on their mathematics learning. Apparently, students who experience anxiety or have negative impressions towards mathematics usually feel lack of confidence and motivation to participate in learning activities, which contributes to poor performance (Dowker et al., 2022). Similarly, teaching method approaches also contribute greatly to students' understanding. Even though traditional methods based on memorization continue to be used

extensively, interactive learning approaches like group discussions and problem-solving exercises have proven to increase students' involvement and understanding of basic concepts (Murphy et al., 2023).

Additionally, in an urban setting, difficulties in learning mathematics should not be seen only as an academic issue as they may potentially affect students' future social and economic opportunities. Despite the availability of technology and learning resources, educational gaps still exist since different families have different access to academic support and a good environment for learning (OECD, 2023). Thus, parents play a major role in determining their children's learning difficulties, offering them emotional support and helping them with their academic development. Eventually, the parent's perspectives provide valuable insights into the difficulties that students experience outside of the classroom.

Therefore, it is crucial to take a glance at mathematics difficulties from the parents' point of view to better understand as to why this problem has grown to be a significant urban social concern in Kuala Lumpur in schooling system. This is because parents are in a good position to observe how difficulties in learning mathematics impact their children's morale, academic performance and future goals. Hence, their viewpoints may support a broader understanding of the long-term educational, social and economic implications of difficulties in learning mathematics while providing evidence to support collaborative initiatives involving families, schools and policymakers to further enhance students' learning outcomes. Therefore, this study conducted to examine parents' perspectives on mathematics learning difficulties as an urban social issue among students in Kuala Lumpur.

LITERATURE REVIEW

The process of counting, measuring, and analysing the shapes has facilitated the emergence of mathematics, the science of structure, order, and relations. It involves using computation and logical reasoning to idealise and abstract its subject matter. Mathematics has played an essential role in technology and physics since the seventeenth century and has increased its importance in life sciences in terms of quantitative aspects (Fraser et al., 2026). An equation can be seen as the core concept in mathematics, which expresses equality between two mathematical expressions. The subcategories of mathematics include algebra, arithmetic, calculus, geometry, and trigonometry.

Weak mathematical competencies among secondary school students, specifically in algebra, geometry, number operations, and problem-solving skills (Deepa K. R. and Dr. Minikumari D., 2025). Despite students understanding the basic concepts of mathematics, they struggle with the higher-order skills required to reason through and solve complex mathematical problems. The study attributes the struggles of the students to the teaching methods currently employed in the classrooms, the assessments used to evaluate their understanding, and the lack of remedial assistance to help the students improve their skills. The study highlights the need for early diagnosis of students' mathematical competencies and the implementation of instructional strategies that will help the students improve their mathematical understanding and performance in school overall.

According to Manalu, R. U., & Judijanto, L. (2024), which stated that several barriers in learning mathematics among students can be divided into internal and external factors. Internal barriers to learning mathematics include difficulty in understanding mathematical language, poor basic calculation skills, and low self-confidence. Negative emotions such as fear and stress also hinder the learning process, leading to poor concentration and inconsistent study habits. External barriers exist, including teaching methods that are too fast or uninteresting, limited interaction with the teacher, and fear of strict instructors. In addition, minimal peer collaboration also complicates learning mathematics to be easily understood.

Many students find it difficult to learn mathematics, specifically when they have a weak fundamental understanding. Some students can memorise numbers, but they do not completely understand their meaning. They frequently have trouble solving problems as a result. On top of that, their performance could also be affected if they have trouble understanding basic concepts like whole numbers. These challenges could also lead students to become less confident and even anxious, which would make them less motivated to learn mathematics (OECD, 2023). Furthermore, getting the right answer often becomes more important than understanding the concept. This hinders students' capacity for critical thinking and the application of their knowledge in various situations (UNESCO, 2021).

Moreover, according to research done by Munusamy et al. (2025), it mentions that it is not just the students but also the teachers who have faced challenges in executing differentiated instruction and technology interventions. One such challenge lies in the fact that most of the conventional approaches in education do not consider the various learning styles of learners, particularly those learners who learn best through an interactive mode. Thus,

teachers find it difficult to adjust their teaching styles to meet the needs of these learners. Another important challenge faced by teachers is the pressure of adhering to curricular requirements, wherein the emphasis on procedural learning outweighs that on conceptual learning and critical thinking skills.

Learning is influenced not only by academic instruction, but the student's emotional well-being, relationship, environment and life experiences (Darling-Hammond et al., 2023). There are four important factors that affect effective educational practice which are supportive learning environments, productive instructional strategies, social and emotional learning environments, productive instructional strategies, social and emotional learning and lastly is the system of support for students' needs. It is also highlighting the importance of teaching social and emotional skills like self-regulation, resilience and responsibility as all these skills will support academic success and personal development.

There are factors contributing to the poor performance in mathematics among primary school students in Chirundu, Zambia which are overcrowded classrooms, lack of qualified teachers, insufficient learning materials, negative student attitudes and limited parental involvement are affecting students' performance in school. The study also found that curriculum-related issues such as overloaded content, poor sequencing of topics, and limited real-life application of mathematics reduced students' understanding and interest in the subject. In addition, low socio-economic conditions and inadequate support at home negatively influenced learners' motivation and academic achievement (Emelda et al., 2024).

Students often struggle to understand mathematics when traditional lecture-based teaching methods are used. Therefore, there are recommendation the use of interactive and contextual teaching approaches, concrete learning materials, individual guidance, and collaboration between teachers and parents to improve students' understanding and learning outcomes in mathematics (Nur et al., 2025).

Next, there is an issue of mathematics anxiety among secondary school students in Malaysia by focusing on cognitive, environmental and behavioural aspects of learning experience. The findings revealed that students experienced anxiety during both mathematics learning and assessment because of the stress, pressure, lack of confidence and fear of failures. Meanwhile environmental factors including parental pressure, peer competition, teachers' attitudes and difficult mathematical content also contributed to the mathematics anxiety. In addition, behavioural factors such as excessive memorisation techniques and strong concern about future success also increased students' anxiety towards mathematics (Musa, N. H., Maat, S. M., 2021).

Primary education in Malaysia is the first stage of formal education and is compulsory for all Malaysian children under the Education Act 1966. The education system is managed by the Ministry of Education Malaysia and follows the Kurikulum Standard Sekolah Rendah (KSSR) which include subjects such as Bahasa Melayu, English, Mathematics, Science and Moral or Islamic Education. Overall, primary education in Malaysia aim to develop students' academic foundation, social skills and character before they continue secondary education (Primary Education in Malaysia, 2026).

METHODOLOGY

This study adopted a quantitative research approach employing a cross-sectional survey design to investigate parents' perceptions of students' difficulties in learning Mathematics. A cross-sectional design was considered appropriate because it enables the collection of data from a defined population at a single point in time, thereby providing an efficient means of examining prevailing perceptions and learning-related issues. A non-probability convenience sampling technique was employed to recruit participants. The study involved 187 parents of students aged between 7 and 17 years. Primary data were collected through a structured self-administered questionnaire distributed to the respondents. The questionnaire comprised two sections. The first section collected respondents' demographic information, including the child's age and gender, as well as the parents' employment status and educational attainment. The second section measured parents' perceptions of students' difficulties in learning Mathematics using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The measurement items were developed to assess several dimensions of mathematics learning difficulties, including conceptual understanding, instructional pace, adequacy of learning materials, students' confidence in learning Mathematics, learning-related concerns, and the perceived need for additional academic support. The collected data were analysed using descriptive statistical techniques, including frequencies, percentages, and mean scores, to describe respondents' demographic characteristics and examine parents' perceptions of students' mathematics learning difficulties. Prior to the main analysis, the internal consistency of the measurement instrument was assessed using Cronbach's alpha reliability analysis to ensure the reliability of the questionnaire items..

RESULT AND DISCUSSION

Profile of Respondents

According to Table 1.0, there were 187 parents involved in the study. Based on these participants, 57.8% of their children were female and 42.2% were male, suggesting that there was a relatively balanced representation of both genders in the study. In terms of the ages of the participants, the majority of the children were between 7 and 9 years old (31.6%), followed by children between 10 and 12 years old (25.7%), 13 and 15 years old (21.9%), and 16 and 17 years old (20.9%). Overall, the ages of the participants suggest that the study focused on children who were in the early stages of their education, particularly in relation to their learning of mathematics as a subject. With regard to the respondents' parental background, the majority of the children's parents were employed as salaried employees (69.0%). The remaining parents worked as self-employed individuals while others were unemployed, and some had reached their retirement stage. Most parents obtained their highest education level through bachelor's degrees, which represented 42.2% of the total population. The educational background of the parents included diploma holders and SPM/STPM graduates and those who completed their studies at the postgraduate level. The survey participants came from families who had moderate educational achievements that would probably help parents support their children with math learning.

TABLE 1.0
PROFILE OF RESPONDENTS (N=187)

Profile	Category	Frequency	Percentage (%)
Child's Age	7 - 9 years old	59	31.6
	10 - 12 years old	48	25.7
	13 - 15 years old	41	21.9
	16 - 17 years old	39	20.9
Child's Gender	Male	79	42.2
	Female	108	57.8
Parent's Employment	Salaried Employee	129	69
	Self-Employed	38	20.3
	Unemployed	15	8
	Retired	5	2.7
Parent's Education Level	SPM / STPM	42	22.5
	Diploma	44	23.5
	Degree	79	42.2
	Master	14	7.5
	Doctor of Philosophy	8	4.3

Table 1.1 presents the reliability results; the instrument used in this study. Cronbach's alpha was utilized in the reliability analysis to assess the internal consistency of the study's measurement items. The research data from 12 items about mathematical learning difficulties of students in Kuala Lumpur schools produced Cronbach's alpha score of 0.862 which shows a good level of internal consistency. The results show that these items form a strong connection which helps them work as a team to measure the same fundamental idea. Moreover, an alpha reliability coefficient greater than 0.70 means that the tool has an adequate internal consistency and is reliable for research purposes. Consequently, the questionnaire utilized in this research is a suitable tool for data collection. The instrument demonstrates sufficient reliability which makes it suitable for the next stage of analysis in this research project.

Table 1.1
RELIABILITY TEST

Variable	Number of Items	Cronbach's Alpha	Reliability Assumed
Mathematics Learning Difficulties as an Urban Social Issue: Parents' Perspective in Kuala Lumpur	12	0.862	Good

Mean and Standard Deviation

The analysis of the mean and standard deviation was conducted to examine parents' perspective on mathematics learning difficulties in Kuala Lumpur. Participants assessed their perception views using a five-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree). As shown in the results, the overall mean score was 2.828, which falls within the medium range (2.34 – 3.67), with a standard deviation of 0.713. These findings imply that respondents generally demonstrate a moderate and positive perception of Parents' Perspective in Kuala Lumpur, while the low spread of results indicates variance in their perception. With a sample size of 187, the results provide a reliable representation of parents' perspectives on mathematics learning difficulties as an urban social issue in Kuala Lumpur. The findings offer valuable insights into the level of mathematics learning difficulties experienced by students as perceived by their parents.

The findings from this study indicate that mathematics learning difficulties among students are at a moderate level based on parents' perspectives. This suggests that students experience some challenges in learning mathematics, but the difficulties are not severe. Parents generally agree that mathematics learning difficulties exist and affect students' learning processes to a certain extent. The moderate level may reflect challenges such as understanding mathematical concepts, solving mathematical problems, and keeping up with academic expectations. Therefore, appropriate support from schools, teachers, and parents is important to help students overcome these difficulties and improve their mathematics learning outcomes.

Table 1.2
LEVEL OF MEAN SCORE RANGE

Mean Score Range	Level
1.00 – 2.33	Low
2.34 – 3.67	Medium
3.68 – 5.00	High

Table 1.3
MEAN AND STANDARD DEVIATION

Variable	Mean	Standard Deviation	N
Mathematics Learning Difficulties as an Urban Social Issue: Parents' Perspective in Kuala Lumpur	2.828	0.713	187

CONCLUSION

Mathematics is widely regarded as a core and essential subject within the Malaysian education system. In this context, it is observed that some parents are willing to allocate additional financial resources to enroll their children in supplementary mathematics classes to enhance academic performance and ensure higher achievement in the subject. Findings from this study suggest that difficulties in mathematics learning should be understood not merely as an educational concern but also as a significant urban social issue. From the perspective of parents in Kuala Lumpur, challenges in mastering mathematics may have long-term implications for children's academic performance, employment opportunities, and future socioeconomic well-being. Consequently, addressing these

learning difficulties requires collaborative engagement among parents, schools, and policymakers to better prepare students for future labour market demands and improved quality of life. Mathematics education also plays a critical role in developing students' higher-order thinking skills, enabling them to analyse situations and make logical, evidence-based decisions. It serves as a foundational discipline for STEM-related fields, including engineering, technology, medicine, and finance. In addition, mathematical literacy is essential for everyday life, particularly in managing time, calculating expenses, and making informed financial decisions. Furthermore, it strengthens problem-solving abilities by training students to approach complex situations systematically and identify appropriate solutions. From the perspective of parents, mathematics is often viewed as a determinant of children's future career prospects and earning potential, reflecting its perceived importance in securing stable and high-income employment. There is also growing support among parents for more play-based and engaging learning approaches, as opposed to rote memorisation, particularly for younger learners. Parents further express high expectations for mathematics to be taught in a more practical and applied manner, with the aim of reducing student stress and preventing negative attitudes such as fear or dislike of the subject.

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