

## Analysis Of Student's Participation in Extracurricular Class at Sekolah Citamulia Using RFM Model

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ARTICLE INFO	ABSTRACT
<p><b>Keywords:</b> RFM Method, Extracurricular, Academic, Student Profile, Segmentation</p>	<p><i>The cognitive development of children, as well as the academic performance of students, can be influenced by various factors. One of these factors is students' active involvement in extracurricular activities outside the classroom. These activities are supplementary programs designed to facilitate students' interests and talents in specific fields. It is crucial to maintain a high level of student participation because active participation significantly impacts cognitive and academic improvement. The objective of this study is to assess the level of active student participation by categorizing students based on their engagement using the RFM (Recency, Frequency, Monetary) method. The second objective is that, once the student engagement mapping is established, it will allow for targeted programs and policies tailored to each group, thereby enhancing overall student participation in extracurricular activities. In this RFM method, recency represents the date of the student's most recent attendance at an activity. Frequency represents the total number of student attendances, and monetary represents the total nominal amount spent. The data was collected from January to September 2024, involving 250 students participating in extracurricular activities. Generally, the RFM output reveals student segmentation based on activity can be categorized into seven groups, which are Ashamed, Nice Tried, Bored, Initiative, Committed, Excited, and Passionate. Based on these results, several policies can be formulated according to the conditions of each student.</i></p>

### INTRODUCTION

In formal education processes at school, learning encompasses several models, not just official class lessons. One alternative learning form is extracurricular activities, which are held outside of regular class hours and require an additional fee to participate. These activities aim to facilitate students' interests and help hone their talents. Additionally, students' engagement in these activities can have a positive impact on their cognitive, social, and emotional development, as well as contribute to improvements in their academic performance. Given the significant positive impact of extracurricular activities on students' growth and academic success, it is important for schools to ensure student participation in these activities and to maintain their quality and relevance (Wulansari & Heikal, 2024).

This study examines student engagement in extracurricular activities at Citamulia School. Citamulia Qur'an Tahfizh School is an Islamic school based on the Qur'an, with two educational levels: primary and junior high school. As a religious-based school, Citamulia not only focuses on religious curricula but also ensures that students' developmental needs are holistically met.

Guided by the philosophy of "balance and essential," Citamulia designs its educational curriculum based on three sources: the national education curriculum for academic subjects, Citamulia's distinctive curriculum for Qur'an, religious, and Arabic studies, and the Cambridge curriculum for English language studies. In line with this balanced approach, various types of extracurricular activities are offered outside the classroom (Perdhana &

Heikal, 2024). These activities aim not only to support understanding of in-class materials, providing direct experience and contextual learning for students, but also to ensure balanced growth in students' skills and talents. These outside-the-classroom activities include field trips, Qur'an camps, leadership camps, and extracurricular programs.

Field trips are learning activities to specific locations related to certain lesson themes, such as visits to museums, hydroponic farms, rice fields, or livestock farms. Qur'an camp is a highly favored activity among students, involving overnight stays either at school or out of town, for worship activities and Qur'an memorization. Leadership camp is similar to Qur'an camp but focuses on leadership skills and training.

Extracurricular activities differ from the other out-of-classroom activities mentioned above (Wulansari & Heikal, 2024). These activities specifically aim to facilitate students' self-development, focusing on interest and talent development. At Citamulia, student self-development is fostered gradually according to age and grade level.

At the primary level, students are in the initial stage of self-discovery and exploration of their personal strengths. At the beginning of this level, students may not yet fully understand their interests or talents. They are encouraged to explore various interest-based classes available in extracurricular activities (Alford & Hughes, 2008). By the higher grades, typically from fourth grade onwards, most students start to seriously pursue their interests and talents.

In junior high school, students enter the phase of sharpening their potential and begin planning for future development, although some students at this level may still be in the interest exploration stage. At the junior high level, the school provides additional facilities to support students' self-development through product creation programs in addition to extracurriculars (Pradina et al., 2024). This program trains students to create a product related to their interest and teaches them to plan so that their creations can have long-term business value and contribute positively to society.

Extracurricular activities at Citamulia have been offered since the school's founding. The school offers a wide range of extracurricular classes, such as archery, futsal, robotics, basketball, badminton, swimming, and English club, among others. However, the popularity of these classes fluctuates each year, so not all classes are held annually. In 2024, four classes are open: futsal, archery, robotics, and basketball.

1. Futsal

Futsal extracurricular activities are designed to train students in soccer skills in a smaller, faster format. Training stages include basic skills, tactical and strategy development, and physical fitness. Once students are skilled enough, the team enters a sparring period to apply learned strategies and gain real-world experience by sparring with other school teams. The peak of this activity is participating in various levels of tournaments and competitions, which not only enhance futsal skills but also foster teamwork, discipline, and sportsmanship among students.

2. Archery

The archery extracurricular focuses on training precision, concentration, and discipline. Stages include basic archery introduction, bow-drawing techniques, accuracy and concentration training, and physical balance training. Like futsal, the highlight of the archery activity is participating in competitions once students reach a certain level of proficiency. Archery not only hones technical skills but also trains mental focus, patience, and emotional control.

3. Robotics

The robotics extracurricular aims to develop technological and problem-solving skills through robot design and programming. Training stages include the basics of robotics and its main components, robot design and construction, robot programming, and special projects with problem-solving challenges. The peak activity is participation in robotics competitions. Robotics activities teach not only technical skills but also logic, innovation, and collaboration.

4. Basketball

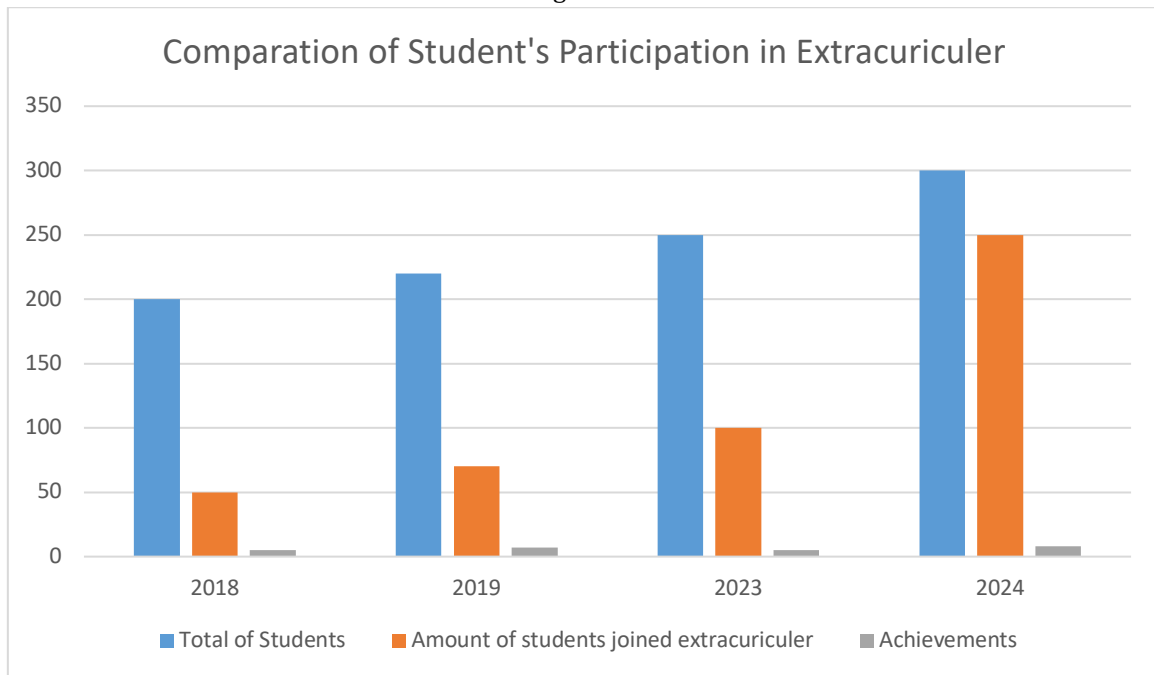
The basketball extracurricular is designed to develop basketball skills, physical fitness, and teamwork. Training stages include basic skills training, tactical and strategy development, physical fitness training, and sparring. Similar to other classes, the students' pinnacle achievement is competing in tournaments. Basketball activities enhance technical and physical skills as well as build discipline, sportsmanship, and teamwork.

Although many classes are offered, the school policy limits each student to a maximum of two classes only. Over the past eight years since its establishment, student participation in extracurricular activities has steadily increased. However, over time, it has become clear that the extracurricular activities have not developed

as expected and have not yet significantly produced students with remarkable achievements in their fields. Thus, this study aims to examine students' activity levels in these extracurricular activities as a primary evaluation before proceeding to further evaluation of each extracurricular program's implementation process. Student engagement is a crucial factor in a program's success. If students are not actively involved, it will be challenging for the program to support student development or to help them achieve excellence in their talents.

Diagram 1.1 shows the comparison between the number of students, the number of students participating in extracurricular classes, and the number of achievements they have attained. Although achievements have increased, the number of student achievements has not yet matched the rise in enrollment in extracurricular activities. This discrepancy makes it interesting to study the effectiveness of the ongoing activities. During the COVID-19 pandemic, these extracurricular activities were halted for three years (2020, 2021, and 2022) as all school activities moved online. The activities resumed in 2023.

Diagram 1.1



## METHOD

In Strategic Database Marketing, Arthur Middleton Hughes discusses the RFM (Recency, Frequency, Monetary) model as a pivotal tool for understanding and segmenting customer behavior. He stated that "the RFM model is a powerful method for identifying your best customers and tailoring your marketing efforts to meet their needs."

Hughes emphasizes that by analyzing how recently customers have purchased (Recency), how often they purchase (Frequency), and how much they spend (Monetary), businesses can gain valuable insights into customer loyalty and profitability. This approach enables marketers to craft targeted strategies that enhance customer retention and boost sales.

In this study, data from January to September 2024 was used, with a total of 250 students registered for classes. Using the RFM model to calculate student participation is appropriate for schools to classify students and understand the barriers they face. The RFM model is a consumer behavior analysis method used to measure consumer loyalty. While this model is typically used in business marketing, it is applied here to measure student activity in extracurricular activities at school.

In this study, Recency refers to how recently a student participated in extracurricular activities. A score of 3 is assigned to students who have recently participated, a score of 2 for students who last participated over a month ago, and a score of 1 for those who have not participated for more than two months.

Frequency represents the total number of student attendances. A score of 3 is for students who are actively present, attending more than 30 times; a score of 2 for moderately active students, attending 8 to 20 times; and a score of 1 for students who are rarely present, attending less than 8 times.

Monetary measures the amount of money students pay to attend classes. The monetary factor consists of only two categories: IDR 1.6 million binned as score 1 and IDR 3.2 million binned as score 2. The monetary score

is binned into only two groups because the school's policy limits students to a maximum of two classes. Therefore, the monetary value is divided based on attending either one class or two classes.

**RESULTS AND DISCUSSION**

The results of the data analysis using the RFM model are presented in Table 1.

**Table 1. Frequency score \* Monetary score \* Recency score Crosstabulation**

Recency	Frequency	Monetary		Persona Category	Sum
		1	2		
1	1	11	3	Ashamed	14
	2	27	7	Nice Tried	34
	3	5	32	Bored	37
2	1	29	12	Initiative	62
	2	0	21		
	3	5	12	Committed	17
3	1	25	0	Excited	57
	2	1	31		
	3	15	14	Passionate	29

The RFM output reveals two major groups, each comprising 32 students and 31 students. The first group is characterized by low recency, meaning they have not participated in over two months, but they had a high attendance rate and strong financial commitment when they were actively participating. This group tends to be enthusiastic only at the beginning of activities and fully supported by their parents financially.

The second group has recently participated in activities but has a moderate overall attendance rate, despite having a strong financial commitment from their parents also. This group is still eager to join but lacks consistency. Meanwhile, only 12 % or 29 students are classified as passionate students, with high attendance and consistent participation up to the last scheduled activity.

A potential group to consider is one that is relatively large, nearly matching the size of the largest groups mentioned earlier, with around 20-29 students per group. Specific policies need to be formulated for this group to significantly increase overall student participation. On average, this group consists of students with infrequent or moderate attendance who have not participated in a while. Additionally, there are 26 students who have recently attended but have very low overall attendance.

Based on the RFM result, the participation level of student's engagement in extracurricular class in Sekolah Citamulia can be divided into at least 7 groups as follows:

1. Ashamed

This group usually consists of younger students, where their activity is only high at the beginning of joining the class, but then they stop returning to the class completely. The number of students in this category is 14 students or 6%. For this last group, usually younger students who may struggle to choose or quickly lose interest, a trial program can be offered, allowing them to try out different classes to find the ones they enjoy most.

2. Nice Try

Students in this group were only enthusiastic at the start of the first semester, with a relatively high frequency score early on, but have not participated in activities for quite some time. In the following months, they stopped attending altogether. The number of students in this category is 34 students or 14 %. The school can support students in this group by offering trial classes for those who may have changed their minds about their initial class choice, allowing them to confirm their interests.

3. Bored

Students in this group were very active in the first semester but stopped attending classes after entering the second semester. This may be due to boredom with the activity or a feeling that they have not found their passion in the chosen activity. The number of students in this category is 37 students or 15 %. The school can support students in this group by offering trial classes for those who may have changed their minds about their initial class choice, allowing them to confirm their interests. Additionally, counseling sessions can be arranged to understand the challenges they are facing in the second semester.

4. Initiative

In this group, students have an interest but are not yet consistent in being active. These students were involved about 2 months ago but with inconsistent attendance. The number of students in this category is 62 students or 25%. Coaching programs can be offered to help understand the obstacles they face for this group, along with special points awarded for continuous attendance, which can be converted into tangible rewards or school fee discounts.

5. Commit

In this group, students demonstrate a good level of commitment, as seen from their frequency score, but they have faced challenges in attending classes over the past month. The number of students in this category is 17 students or 7%. To re-engage students in this group, a coaching program should be prepared to understand and assist with the personal challenges each student is facing.

6. Excited

In this group, students have an interest but are not yet consistent in being active. These students have been involved recently but with inconsistent attendance. The number of students in this category is 57 students or 23%. Reward programs such as certificates and award needed for this group, along with official recognition in front of the class or school, can be implemented.

7. Passionate

This group consists of students who are almost always present and remain consistent from the beginning of the year until the last scheduled class. The number of students in this category is 29 students or 12 % of all students. They are highly likely to discover their passion in this extracurricular activity, motivating them to engage actively and consistently. For this group, providing opportunities to participate in competitions is essential to boost their enthusiasm and test their achievements.

## CONCLUSION

After reviewing the RFM analysis results, it can be concluded that the reason for the mismatch between the increase in student participation in extracurricular activities and student achievements is due to the low level of student's engagement in these programs. Many students only register for participation but do not actively engage in the activities. Besides implementing direct policies aimed at rekindling student enthusiasm, a second improvement should focus on evaluating and enhancing the program's execution process. By maintaining high-quality standards, students can stay motivated to continue attending classes, and the well-maintained process will align with positive impacts on their personal development and achievements in their chosen fields.

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