

## ANALYSIS OF THE USE ACTIVITY BASED COSTING IN DETERMINING TUITION FEES

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### ABSTRACT

Numerous educational institutions in Indonesia suffer financial deficits, negatively impacting educational quality. This study aims to ascertain the Tuition Fees at Nurul Fajri Islamic Boarding School Majalengka utilizing the Activity-Based Costing (ABC) method. It investigates the application of the ABC method in determining Tuition Fees within educational foundation institutions, a novel approach, particularly for pesantren foundations. The research adopts a qualitative methodology with a problem-focused approach. Data collection involved interviews and an analysis of pertinent financial and operational documents. Cost activity data was processed using ABC costing, resulting in tuition fees calculations based on the ABC method. These calculations were then juxtaposed with the Tuition Fees established by the school administration. The analysis identified a cost discrepancy (undercharging), where the cost per student exceeded the total Tuition Fees income and School Operational Funds (SOF) or Government Subsidy. For junior high school grades 1, 2, and 3, the differences were Rp 68,092, Rp 65,877, and Rp 85,668, respectively. For high school levels 1, 2, and 3, the discrepancies were Rp 6,674, Rp 49,014, and Rp 51,354, respectively. The study recommends that the school increase the monthly tuition fees to adequately cover the actual costs of education.

## 1 Introduction

Ki Hajar Dewantara, the Father of Indonesian National Education and the first Minister of Education in 1956, emphasized the importance of education in guiding individuals to grow well and achieve optimal safety and happiness. Similarly, Melmambessy Moses (2012) describes education as the systematic transfer of knowledge aimed at fostering maturity in thought and personality. Islamic boarding schools, or pesantren, are educational institutions based on Islamic teachings that operate with a dormitory system. In pesantren, students receive specialized education focused on studying, understanding, and practicing Islamic teachings, with the ultimate goal of enhancing their knowledge and moral conduct.

Prioritizing the quality of pesantren is essential to ensure they contribute significantly to national progress. Despite the increasing number of Islamic boarding schools in Indonesia, the quality remains a concern. Historical data from [binaqurani.sch.id](http://binaqurani.sch.id) illustrates the growth of pesantren from the 16th century to 2020, showing a significant increase in numbers. As of January 2022, Indonesia had 28,975 Islamic boarding schools, with West Java Province hosting around 30.92% of these institutions (Mutia, 2022).

**Table 1. The Growth of Numbers Islamic Boarding School in Indonesia**

| No. | Year  | Amount                 |
|-----|---|------------------------|
| 1.  | 16 <sup>th</sup> century                        | 613 boarding school    |
| 2.  | 19 <sup>th</sup> century (Netherland Goverment) | 1.835 boarding school  |
| 3.  | 1942 (Japan Goverment)                          | 1.871 boarding school  |
| 4.  | Around 1970 (After Independece)                 | 3.745 boarding school  |
| 5.  | 1980  | 4.200 boarding school  |
| 6.  | 1985  | 6.235 boarding school  |
| 7.  | 1998 (after reform)                             | 9.700 boarding school  |
| 8.  | 2001  | 13.078 boarding school |
| 9.  | 2003  | 14.067 boarding school |
| 10. | 2006  | 16.000 boarding school |
| 11. | 2009  | 25.785 boarding school |
| 12. | 2012  | 27.230 boarding school |
| 13. | 2020  | 28.194 boarding school |

Several educational institutions, including pesantren (Islamic boarding schools), face challenges in effectively managing education costs, which can impact the quality of education provided to students. Despite the increasing number of pesantren, they face financial challenges, particularly in accurately calculating education costs. This study addresses the discrepancies in cost calculation methods, specifically between the Activity-Based Costing (ABC) method and traditional methods. Some institutions experience

overcosting with traditional methods, while others face undercosting, highlighting the need for a more precise approach. Accurate education cost calculation methods, such as ABC, are crucial to support healthy financial management and the sustainability of educational institutions, aligning with Dewantara's vision of quality education.

Traditional methods often consider only the number of students, without accounting for specific resource-consuming activities. This can lead to distortions in cost allocation and inaccurate cost information. In contrast, the ABC method identifies educational activities and links costs based on actual resource consumption, providing a more accurate picture of education costs per student and aiding better decision-making regarding resource allocation and cost determination.

Differences in cost calculation results between traditional methods and the ABC method can significantly impact educational institutions, particularly pesantren. Overcosting with traditional methods may result in higher education fees, burdening parents and potentially reducing access to education. Undercosting, on the other hand, may lead to financial losses, forcing pesantren to cut resources or educational programs, thereby threatening their operational sustainability.

This study addresses the discrepancies in education cost calculations using the ABC method versus traditional methods in various educational institutions, including public schools and pesantren. Some studies reveal overcosting with traditional methods, while others indicate undercosting. These variations underscore the necessity of using accurate methods, such as ABC, for calculating tuition fees (Sumbangan Pembinaan Pendidikan or SPP) in schools or pesantren. The ABC method more precisely identifies and allocates costs related to learning activities according to individual resource consumption.

Recent advancements in cost accounting methods have shown that traditional costing methods, which typically allocate costs based on a single cost driver such as the number of students, often lead to inaccuracies in educational institutions. The ABC method, on the other hand, provides a more refined approach by identifying multiple cost drivers related to specific activities (Cidav et al., 2020). Studies have demonstrated that the ABC method can lead to more accurate cost allocation, thereby improving financial management in educational settings (Sorros et al., 2017).

However, the application of ABC in pesantren remains underexplored. While research has shown its effectiveness in public and higher education institutions (Coskun & Yilmaz, 2013; Karagiorgos & Papatsouma, 2006; Sorros et al., 2017), there is a significant gap in understanding its impact and implementation in pesantren. This gap highlights the need for targeted research to adapt and validate the ABC method within the unique operational contexts of pesantren.

This study aims to analyze the application of the Activity-Based Costing method in determining tuition fees costs in educational institutions, particularly at Pesantren Nurul Fajri Majalengka, to provide a more accurate depiction of the education costs that should be charged to Islamic boarding school students (in Indonesian, known as santri).

## 2 Literature Review

The activity-based costing (ABC) method has gained significant development in the past decade (Gunasekaran & Sarhadi, 1998) due to its ability to address the limitations of traditional absorption costing methods, which often rely on direct labor for allocating

indirect costs (Niñerola et al., 2021). ABC provides more accurate cost information, especially in complex manufacturing processes or when products are produced in varying volumes, by allocating indirect costs such as utilities and maintenance to the products that consume these resources (Cidav et al., 2020).

ABC has been extended to cover non-production costs, including distribution and selling expenses. The system's cost driver measurements, like on-time deliveries and inventory turnover, aid in operational control, cost management, and decision-making, also providing essential data for budgeting (Majid & Sulaiman, 2008). Unlike traditional costing systems that allocate only manufacturing costs to products, ABC assigns a broader range of costs, including administrative and marketing expenses, to cost objects such as activities, products, and customers. Many authors argue that ABC offers more accurate product costs, which are valuable for performance measurement, cost control, and strategic decisions. Studies have shown that ABC helps companies reduce costs and improve profitability (Almeida & Cunha, 2017).

ABC allocates resource costs to products or customers based on activities, which are the drivers of work and costs. Essentially, ABC assigns costs to products according to the activities and resources involved in producing, marketing, selling, delivering, and servicing them. The core concept of ABC is that activities generate costs and outputs create the demand for activities. An ABC system is designed to break down departmental boundaries and provide more accurate cost information, revealing hidden profits and losses (Quesado & Silva, 2021).

The adoption of Activity-Based Costing (ABC) in educational institutions has been the focus of several studies, highlighting its potential benefits over traditional costing methods. Sorros, Karagiorgos, and Mpelesis conducted a survey in Greece's education sector, revealing a growing interest in ABC due to its ability to provide accurate cost information and enhance financial management (Sorros et al., 2017). Coskun and Yilmaz (2013) emphasized the importance of ABC in pricing decisions within educational institutions, demonstrating how it enables fairer and more transparent pricing by accurately allocating costs based on activities (Coskun & Yilmaz, 2013). Akyol, Tuncel, and Bayhan (2007) compared ABC with traditional costing methods, finding that ABC offers significant advantages in terms of cost accuracy, which aids in better budgeting, cost control, and resource allocation (Akyol et al., 2007).

Gupta and Galloway (2003) explored the broader implications of ABC/Management (ABC/M) for operations management, noting its capacity to improve operational efficiency and decision-making, which is applicable to educational settings (Gupta & Galloway, 2003). Karagiorgos and Papatsouma (2006) further highlighted the importance of accurate cost information for decision-making and financial stability in educational institutions, advocating for the use of ABC to support strategic planning and effective financial management (Karagiorgos & Papatsouma, 2006). Collectively, these studies underscore the value of ABC in enhancing cost control, pricing strategies, and overall financial performance in educational institutions, ultimately contributing to their sustainability and success.

### **3 Methods**

The research method employed in this study is a qualitative approach with a problem-focused research design. Qualitative research is a procedure used to generate information in descriptive form, encompassing spoken or written words and the attitudes of the

subjects studied (Tamwifi, 2019). The problem-focused research approach is intended to conduct an in-depth and intensive examination of a specific problem, event, or context. Its distinctive characteristics lie in the targeted research focus and the support of information from various sources (Astuty & Ferinza, 2021).

In this study, data collection was carried out through several methods: in-depth interviews with the management of Nurul Fajri Majalengka Islamic Boarding School, including the pesantren caretakers, school principals, and financial staff, to obtain detailed information about the financial management process, activities undertaken, and the calculation of education costs at the pesantren; direct observation at Nurul Fajri Majalengka Islamic Boarding School to directly observe the activities, facilities, infrastructure, and ongoing learning process; and document analysis by collecting and analyzing relevant documents, such as financial reports, budget data, operational cost data, and other documents related to financial management and the calculation of education costs at the pesantren. By using various data collection methods, researchers can obtain comprehensive and accurate data to support the analysis of the application of the Activity-Based Costing (ABC) method in determining the cost of education at Nurul Fajri Majalengka Islamic Boarding School, as well as increase the validity and reliability of research results through triangulation.

The research focuses on calculating the tuition fees (Sumbangan Pembinaan Pendidikan or SPP) for students at the Nurul Fajri Majalengka Islamic Boarding School Foundation, using the Activity-Based Costing system. This involves interviews and observations with relevant sources involved in the research. To ensure the accuracy and reliability of the analysis results, the researchers will also validate the interview and observation results with relevant secondary data, such as comparing the ABC results with the actual costs incurred by the pesantren (Putra & Firmansyah, 2022). This validation is crucial to ensure that the research findings are credible and reflect the actual conditions at the Nurul Fajri Majalengka Islamic Boarding School.

#### **4 Results and Discussion**

In the research, researchers carried out observations and interviews and also made assumptions related to expenses/costs in accounting principles. Researchers succeeded in identifying the activities carried out by the Nurul Fajri Majalengka Islamic Boarding School. Based on the results of the interview, it was found that the income received by the Nurul Fajri Islamic boarding school came from monthly fees for the Islamic boarding school. Based on interviews, all junior and senior high school school fees are free, all operational costs are borne by School School Operational Funds (SOF) . However, I saw that the Islamic boarding school combined School School Operational Funds (SOF) fees and student fees for the needs of the Islamic boarding school, foundation, junior high school and senior high school. This can be seen from the small size of the School School Operational Funds (SOF) in covering the school's operational costs. Students are charged the same monthly fees for both junior high school and senior high school levels. The

following are the types of admission at the Nurul Fajri Majalengka Islamic Boarding School.

**Table 2. Type of School Revenue**

| No | Type Revenue                          | Junior High School        | Senior High School        |
|----|---------------------------------------|---------------------------|---------------------------|
| 1  | School School Operational Funds (SOF) | Rp. 91.667/student/month  | Rp. 133.334/student/month |
| 2  | School Fees                           | Rp. 560.000/student/month | Rp. 560.000/student/month |

Source: data processed

Then, from the results of observation, identification and interviews, researchers found 25 activities or events.

**Table 3. Activities Islamic Boarding School Nurul Fajri Majalengka**

|    |  |
|----|--|
| 1  | Procurement of food for students                                 |
| 2  | Procurement of Learning Evaluation Materials                     |
| 3  | School fees subsidy  |
| 4  | Ikhsan (Teacher) Salary  |
| 5  | TU (Education Personnel) Salary                                  |
| 6  | Power and Services Subscriptions                                 |
| 7  | Intensive Food Allowance for Teachers and TU                     |
| 8  | Procurement of ATK   |
| 9  | School Management  |
| 10 | Development of the library sector                                |
| 11 | Extracurricular activities                                       |
| 12 | Teaching and learning activities                                 |
| 13 | Midterm exam and Final exam activities                           |
| 14 | Class trip 7, 8, 10, 11  |
| 15 | Class 9 and 12 Final Exams                                       |
| 16 | Development of tahfidz and religious skills                      |
| 17 | Promotion of junior and senior high schools                      |
| 18 | Teacher Development and administrsion affair staff               |
| 19 | Transportation and business trips                                |
| 20 | Haflaf activity at the end of sanah (graduation)                 |
| 21 | Commemoration of Islamic holidays                                |
| 22 | Maintenance of buildings and structures                          |
| 23 | Procurement of Islamic boarding school and school infrastructure |
| 24 | School management  |
| 25 | Maintenance of facilities and infrastructure                     |

Then, from the activities that have been identified, the activities are then classified into activity based costing, including unit level activity costing, batch related activity costing, product sustaining activity costing, and facility sustaining activity costing. Unit level activity costing is applied to the costs of activities utilized by individual students and will increase as the number of students increases. Examples of unit level activity costing

costs are procurement of food for students, procurement of learning evaluation materials, and tuition subsidies.

Then for batch level activity costing, it is the cost of activities used by students in groups, for example based on study groups in a school and will increase as the study group/students increase. Examples of batch level activity costing costs are Ikhsan (Teacher) Salaries, Administration affair (Education Personnel) Salaries, Power and Service Subscriptions, Intensive Meals for Teachers and Tus (administration affair), Procurement of office stationery, School Management, Development of the library sector, Extracurricular Activities, Teaching and Learning Activities, middleterm exam and final exam activities, Classes 7, 8, 10, 11, Final Exams for Classes 9 and 12, Development of tahfidz and religious skills

Then the third activity cost is product sustaining activity costing, the activity costs are activities carried out by the agency to improve the quality of products (in this case students) in the agency, the costs are allocated per number of activities. Product level activities relate to research and development of a particular product and the costs of maintaining the product so that it remains marketable. Activities included in this category are promotion of junior and senior high schools, teacher and administration affair staff development, transportation and official travel, final haflaf (graduation) activities, commemoration of Islamic holidays.

Then the fourth activity cost is facility sustaining activity costing. These activity costs are costs for maintaining and adding to existing facilities at the agency. Included in the costs of this activity are building and structure maintenance, procurement of Islamic boarding school and school infrastructure, school management, maintenance of facilities and infrastructure.

The next step, after the activities have been categorized according to their respective categories, is to calculate the cost driver for each cost activity. This calculation is carried out in order to find out what the rate/unit is for each cost driver. These various activities are then traced to the implementation costs, based on units per student, student class hours, group number of working days, frequency of activities, and area size. Unit level activities use the cost driver of the number of students, group batch level activities use the cost driver of student lesson hours, working days, number of groups. For product level activities, use cost drivers, frequency of activities and facility level activities, using cost drivers, number of groups, frequency of activities, and area.

**Table 4. Cost Drive for Each Activity**

| No                     | Activity                                     | cost driver            | Total Cost Driver | Total Cost    |
|------------------------|--|------------------------|-------------------|---------------|
| Unit level activities  |  |                        |                   |               |
| 1                      | Procurement of food for students             | the number of students | 451               | 1,461,240,000 |
| 2                      | Procurement of Learning Evaluation Materials | the number of students | 451               | 9,600,000     |
| 3                      | School fees government subsidy               | the number of students | 215               | 727,200,000   |
| batch level activities |  |                        |                   |               |

*Analysis of the Use Activity Based Costing in Determining Tuition Fees...*

|                           |  |                         |      |             |
|---------------------------|--|-------------------------|------|-------------|
| 4                         | Teacher Payroll                                  | Student Class Hours     | 2700 | 598,236,000 |
| 5                         | Payroll of Education Personnel                   | Working days            | 213  | 29,509,000  |
| 6                         | Service Power Subscription                       | Number of Rombels       | 12   | 75,550,000  |
| 7                         | Payment of Meal Allowance for Teachers and Staff | Working days            | 213  | 196,880,000 |
| 8                         | Procurement of Office Stationery                 | Number of study group   | 12   | 45,938,000  |
| 9                         | School Management                                | Number of study group   | 12   | 65,123,000  |
| 10                        | Library Development                              | Number of study group   | 12   | 25,087,000  |
| 11                        | Extracurricular activities                       | Number of study group   | 12   | 30,864,000  |
| 12                        | Teaching and learning activities                 | Number of study group   | 12   | 56,239,000  |
| 13                        | Mid and Final exam Assessments                   | Number of study group   | 12   | 25,168,000  |
| 14                        | Fieldtrip Class 7,8,10,11                        | Number of study group   | 8    | 47,510,000  |
| 15                        | Class 9 and 12 Final Exams                       | Number of study group   | 4    | 41,441,000  |
| 16                        | Development of tahfidz and religious skills      | Number of study group   | 12   | 6,000,000   |
| Product Level Activities  |  |                         |      |             |
| 17                        | School Promotion                                 | Frequency of activities | 2    | 32,777,000  |
| 18                        | Teacher and Staff Development                    | Frequency of activities | 2    | 4,209,000   |
| 19                        | Transportation and official travel               | Frequency of activities | 10   | 15,000,000  |
| 20                        | Final haflaf activities (graduation)             | Frequency of activities | 2    | 30,500,000  |
| 21                        | Commemoration of Islamic holidays                | Frequency of activities | 5    | 40,000,000  |
| facility level Activities |  |                         |      |             |
| 22                        | Building Maintenance                             | Number of study group   | 12   | 127,120,000 |
| 23                        | Procurement of Infrastructure                    | Number of study group   | 12   | 84,847,000  |



|    |                               |                         |    |               |
|----|-------------------------------|-------------------------|----|---------------|
| 24 | School Management             | Number of study group   | 12 | 136,958,000   |
| 25 | Maintenance of Infrastructure | Frequency of activities | 1  | 19,187,000    |
|    |                               |                         |    | 3,932,183,000 |

After identifying the cost driver, then determine the rate per unit of the cost driver. Because every activity has a cost driver by dividing the total cost by the cost driver.

**Table 5. Determining Cost Per Unit Cost Driver**

| No                     | Activity   | cost driver            | Total Cost Driver | Total Cost    | Cost per unit |
|------------------------|--|------------------------|-------------------|---------------|---------------|
| Unit level activities  |  |                        |                   |               |               |
| 1                      | Procurement of food for students                 | the number of students | 451               | 1,461,240,000 | 3,240,000     |
| 2                      | Procurement of Learning Evaluation Materials     | the number of students | 451               | 9,600,000     | 21,286        |
| 3                      | School fees government subsidy                   | the number of students | 215               | 727,200,000   | 3,382,326     |
| batch level activities |  |                        |                   |               |               |
| 4                      | Teacher Payroll                                  | Student Class Hours    | 2700              | 598,236,000   | 221,569       |
| 5                      | Payroll of Education Personnel                   | Working days           | 213               | 29,509,000    | 138,540       |
| 6                      | Service Power Subscription                       | Number of Rombels      | 12                | 75,550,000    | 6,295,833     |
| 7                      | Payment of Meal Allowance for Teachers and Staff | Working days           | 213               | 196,880,000   | 924,319       |
| 8                      | Procurement of Office Stationery                 | Number of study group  | 12                | 45,938,000    | 3,828,167     |
| 9                      | School Management                                | Number of study group  | 12                | 65,123,000    | 5,426,917     |
| 10                     | Library Development                              | Number of study group  | 12                | 25,087,000    | 2,090,583     |
| 11                     | Extracurricular activities                       | Number of study group  | 12                | 30,864,000    | 2,572,000     |
| 12                     | Teaching and learning activities                 | Number of study group  | 12                | 56,239,000    | 4,686,583     |
| 13                     | Mid and Final exam Assessments                   | Number of study group  | 12                | 25,168,000    | 2,097,333     |

|                           |   |                         |    |               |            |
|---------------------------|---|-------------------------|----|---------------|------------|
| 14                        | Fieldtrip Class 7,8,10,11                   | Number of study group   | 8  | 47,510,000    | 5,938,750  |
| 15                        | Class 9 and 12 Final Exams                  | Number of study group   | 4  | 41,441,000    | 10,360,250 |
| 16                        | Development of tahfidz and religious skills | Number of study group   | 12 | 6,000,000     | 500,000    |
| Product Level Activities  |   |                         |    |               |            |
| 17                        | School Promotion                            | Frequency of activities | 2  | 32,777,000    | 16,388,500 |
| 18                        | Teacher and Staff Development               | Frequency of activities | 2  | 4,209,000     | 2,104,500  |
| 19                        | Transportation and official travel          | Frequency of activities | 10 | 15,000,000    | 1,500,000  |
| 20                        | Final haflaf activities (graduation)        | Frequency of activities | 2  | 30,500,000    | 15,250,000 |
| 21                        | Commemoration of Islamic holidays           | Frequency of activities | 5  | 40,000,000    | 8,000,000  |
| facility level Activities |   |                         |    |               |            |
| 22                        | Building Maintenance                        | Number of study group   | 12 | 127,120,000   | 10,593,333 |
| 23                        | Procurement of Infrastructure               | Number of study group   | 12 | 84,847,000    | 7,070,583  |
| 24                        | School Management                           | Number of study group   | 12 | 136,958,000   | 11,413,167 |
| 25                        | Maintenance of Infrastructure               | Frequency of activities | 1  | 19,187,000    | 19,187,000 |
|                           |   |                         |    | 3,932,183,000 |            |

**Estimation Educational cost Per student per month**

**Table 6. Calculating Educational Cost Per Student Per Month**

|                                | 1 <sup>st</sup> Grade | 2 <sup>nd</sup> Grade | 3 <sup>rd</sup> Grade |
|--------------------------------|-----------------------|-----------------------|-----------------------|
| Number of student              | 74                    | 75                    | 74                    |
| Total Cost                     | 639,145,662           | 645,789,273           | 654,753,313           |
| Total Cost/student/year        | 8,637,104             | 8,610,524             | 8,848,018             |
| Total cost/student/month       | 719,759               | 717,544               | 737,335               |
|                                |                       |                       |                       |
| Government subsidy fund /month | 91,667                | 91,667                | 91,667                |
| School fees/month              | 560,000               | 560,000               | 560,000               |

|  |          |          |          |
|--|----------|----------|----------|
| Total revenue/student/month                          | 651,667  | 651,667  | 651,667  |
| The difference between total revenue and total costs | (68,092) | (65,877) | (85,668) |

For Senior High School

|  | 1 <sup>st</sup> Grade | 2 <sup>nd</sup> Grade | 3 <sup>rd</sup> Grade |
|--|-----------------------|-----------------------|-----------------------|
| Number of student                                    | 80                    | 74                    | 74                    |
| Total Cost   | 672,007,511           | 659,204,446           | 661,282,795           |
| Total Cost/student/year                              | 8,400,094             | 8,908,168             | 8,936,254             |
| Total cost/student/month                             | 700,008               | 742,347               | 744,688               |
| Government subsidy fund /month                       | 133,333               | 133,333               | 133,333               |
| School fees/month                                    | 560,000               | 560,000               | 560,000               |
| Total revenue/student/month                          | 693,333               | 693,333               | 693,333               |
| The difference between total revenue and total costs | (6,674)               | (49,014)              | (51,354)              |

From this table we can see that the total cost/student/year for junior high school 1<sup>st</sup> grade is Rp. 8,637,104 or total cost/student/month is Rp. 719,759. Then the total cost for junior high school 2<sup>nd</sup> grade total costs/student/year is Rp. 8,610,524 or total cost/student/month is Rp. 717,544. Then the total cost for junior high school 3<sup>rd</sup> total costs/student/year is Rp. 8,848,018 or total cost/student/month is Rp. 737,335.

From this table we can see that the total cost/student/year for senior high school 1<sup>st</sup> grade is Rp 8,400,094 or total cost/student/month is Rp. 700,008. Then the total cost of senior high school grade 2<sup>nd</sup> total costs/student/year is Rp. 8,908,168 or total cost/student/month is Rp. 742,347. Then the total cost of senior high school grade 3<sup>rd</sup> total costs/student/year is Rp. 8,936,254 or total cost/student/month is Rp. 744,688.

From this table we can also see that there is a less difference in charging school fees where the cost per student is greater than the total revenue from school fees and School Operational Funds. for junior high school grades 1, 2 and 3, respectively, it is Rp. 68,092, Rp.65,877, and Rp.85,668. Then for Senior high school level, grades 1, 2, and 3, respectively, it is Rp. 6,674, Rp.49,014, Rp.51,354.

## Discussion

The Nurul Fajri Islamic boarding school is a modern Islamic boarding school with a school curriculum based on the Ministry of Education and Culture. There are 2 levels of education covered by this Islamic boarding school, there are junior high school and senior high school. In his statement based on the results of the interview, it was said that schools (junior and senior high schools) are free, students are only charged fees for educational activities at Islamic boarding schools. However, the results of our observations found that there was a joint burden between the Foundation, Junior High Schools and Senior High Schools, where if you relied on School Operational Funds (government subsidy) funds, it would not cover the operational costs of Junior High Schools and Senior High Schools, so in this case the researchers saw that there was a cross subsidy between Islamic boarding school and academic school tuition funds (School fees).

The highest activity cost is the provision of food for students, which is Rp.1,461,240,000, this is because Islamic boarding schools implement a dormitory system which requires students to stay in the Islamic boarding school environment, so food costs are the highest costs. Then the second is the activity of tuition fees subsidy costs which reached Rp. 727,200,000, of which the Islamic boarding school provides free fees for 85 of its students (74 orphans and 11 with special conditions) and 130 students receive fee relief. Then the third largest cost activity is teacher salaries amounting to Rp. 598,236,000.

Islamic boarding schools are public sector institutions whose operations are not profit-oriented. The important thing about public sector agencies is how the agency realizes the budget. Then income should be equal to expenditure, which means school income from students and the government must be equal to expenditure. However, it is different from the Nurul Fajri Majalengka Islamic Boarding School, in its operations it apparently experienced losses where the income from students did not cover the existing expenses of this Islamic boarding school.

The total cost/student/year for junior high school class 1 is Rp. 8,637,104 or total cost/student/month is Rp. 719,759. Then middle school class 2 total costs Total costs/student/year is Rp. 8,610,524 or total cost/student/month is Rp. 717,544. Then middle school class 3 total costs Total costs/student/year is Rp. 8,848,018 or total cost/student/month is Rp. 737,335.

From this table we can see that the total cost/student/year for high school class 1 is IDR. 8,400,094 or total cost/student/month is Rp. 700,008. Then high school class 2 total costs. Total costs/student/year is Rp. 8,908,168 or total cost/student/month is Rp. 742,347. Then high school class 3 total costs. Total costs/student/year is Rp. 8,936,254 or total cost/student/month is Rp. 744,688.

There is a less difference in charging school fees where the cost per student is greater than the total income from fees and School Operational Funds. for junior high school grades 1, 2 and 3, respectively, it is Rp. 68,092, 65,877, and 85,668. Then for high school level, grades 1, 2, and 3, respectively, it is Rp. 6,674, 49,014, 51,354.

These findings are consistent with previous research by Desirianingsih et al. (2022), which showed undercosting, where the tuition fees (traditional costing) were not able to cover (lower than) the costs incurred (ABC costing) at SMKN 1 Manokwari. Similarly, a study by Rizki Catur Putra and Amrie Firmansyah (2022) found significant overcosting at Pesantren X Pacitan. However, these results differ from the studies by Baiq et al. (2019) and Riza Firmansyah et al. (2022), which found overcosting, where the school fees (traditional costing) were higher than the actual expenses (ABC costing).

The differences in these research results underscore the importance of using the appropriate method in calculating tuition fees (SPP) in schools or Islamic boarding schools. The traditional method, which only considers the volume or amount of production, is considered less accurate in calculating the consumption of resources by each student/santri. Therefore, it is necessary to use the Activity Based Costing (ABC) method, which can more accurately identify and allocate costs related to learning activities to students/santri according to their individual resource consumption (Winatha et al., 2021).

The findings of this research show that there are higher costs for certain activities, such as providing food for Islamic boarding school students and subsidizing educational costs, which are influenced by the complexity of activities, frequency and scale of Islamic boarding school operations. The implication of these findings is the need for the Nurul Fajri Majalengka Islamic Boarding School to evaluate and adjust its financial management, taking into account cost efficiency strategies while maintaining the quality of education and accessibility for students. Implementing the Activity Based Costing (ABC) method on an ongoing basis can help Islamic boarding schools obtain accurate cost information and support better decision making in financial management, in order to maintain operational sustainability without sacrificing the quality of education provided to students.

## 5 Conclusion

In determining tuition fees (Sumbangan Pembinaan Pendidikan or SPP), Nurul Fajri Islamic Boarding School currently does not use a specific calculation method. The monthly fees for students are determined by comparing revenue with year-end calculations. If a significant discrepancy is observed, the boarding school considers increasing the fees. Using the Activity-Based Costing (ABC) method reveals an undercharging issue, where the cost per student exceeds the total revenue from fees and School Operational Funds (SOF). For junior high school grades 1, 2, and 3, the differences are Rp. 68,092, 65,877, and 85,668, respectively. For senior high school levels 1, 2, and 3, the differences are Rp. 6,674, 49,014, and 51,354, respectively. Therefore, the school needs to increase the monthly fees for students.

The ABC method can be considered for application at Nurul Fajri Islamic Boarding School. This method can more accurately identify and allocate costs related to learning activities based on individual resource consumption. It is particularly suitable for educational institutions such as Islamic boarding schools, which have various activities and facilities utilized by students. By employing the ABC method, the boarding school can determine the actual cost of each activity and make more informed decisions regarding school fees.

The practical implications of this research are significant. Nurul Fajri Islamic Boarding School should consider using the ABC method to calculate the cost of education per student, ensuring more accurate and fair school fees. The findings of this study can serve as a basis for the school to evaluate and adjust fees to cover all operational costs. This research can also serve as a reference for other Islamic boarding schools or educational institutions interested in applying the ABC method for cost determination. Additionally, for stakeholders, including parents, this study provides transparency and a better understanding of the cost components that constitute school fees at Nurul Fajri Islamic Boarding School. By applying the ABC method and considering the practical

implications of this research, Nurul Fajri Islamic Boarding School can improve efficiency and fairness in managing education costs and ensure long-term operational sustainability..

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