Optimizing School Financial Management: The Role of Financial Information Systems in Education

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Abstract
In today’s digital era this, System Financial Information (GIS) has become element crucial in management finance institution education, especially in the environment school. SIK not only works as a digital platform, but also as very important tool for students, parents, and staff school in management finance as well as transaction other. Implementation of SIK in the environment school No only simply step technological, but rather a strategy that can increase level transparency in management finances, reduce burden administration, and help school in optimizing income as well as reduce costs are not need. The existence of SIK becomes key in presenting efficiency and accuracy in the management process finance school. With reduce potency error or obscurity in management finance, SIK has role strategic in prevent and overcome potency problem serious that can be bother performance school in a way comprehensive. Apart from that, the application of SIK is also open opportunity For increase quality education provided to students, because source power and funds available allocated with more effective.

Keywords: Finance, System information, Transparency, Management finance, Education

Abstrak
Dalam era digital saat ini, Sistem Informasi Keuangan (SIK) telah menjadi unsur krusial dalam manajemen keuangan lembaga pendidikan, khususnya di lingkungan sekolah. SIK tidak hanya berfungsi sebagai suatu platform digital, tetapi juga sebagai alat yang sangat penting bagi siswa, orang tua, dan staf sekolah dalam pengelolaan keuangan serta transaksi lainnya. Implementasi SIK di lingkungan sekolah bukan hanya sekadar langkah teknologis, melainkan suatu strategi yang dapat meningkatkan tingkat transparansi dalam pengelolaan keuangan, mengurangi beban administrasi, dan membantu sekolah dalam mengoptimalkan pendapatan serta mengurangi biaya yang tidak perlu. Keberadaan SIK menjadi kunci dalam menghadirkan efisiensi dan ketepatan dalam proses manajemen keuangan sekolah. Dengan mengurangi potensi kesalahan atau ketidakjelasan dalam manajemen keuangan, SIK memiliki peran strategis dalam mencegah dan mengatasi potensi masalah serius yang dapat mengganggu kinerja sekolah secara menyeluruh. Selain itu, penerapan SIK juga membuka peluang untuk meningkatkan kualitas pendidikan yang diberikan kepada siswa, karena sumber daya dan dana dapat dialokasikan dengan lebih efektif.

Kata kunci: keuangan, sistem informasi, transparansi, manajemen keuangan, pendidikan

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1. Introduction

In today's rapidly evolving digital landscape, the importance of robust financial systems cannot be overstated. With the increasing reliance on technology for financial management, organizations across all sectors, including education, are recognizing the need for efficient and effective systems [1]. Schools, in particular, require streamlined processes to handle budgeting, expenses, and revenue tracking to ensure optimal allocation of resources for educational purposes.

The integration of technology into financial systems offers numerous benefits, including improved accuracy, efficiency, and accessibility of financial data [2]. Automated processes reduce the likelihood of errors and enable real-time monitoring of financial transactions, allowing schools to promptly identify and address any discrepancies. Moreover, cloud-based solutions provide the flexibility for authorized personnel to access financial information securely from anywhere, facilitating collaborative decision-making and enhancing overall productivity.

Efficient financial systems not only contribute to better financial management but also support strategic planning and long-term sustainability [3]. By analyzing data trends and patterns, schools can gain valuable insights into their financial performance, identify areas for cost optimization, and make data-driven decisions to achieve their educational objectives. Additionally, robust financial systems enable schools to maintain compliance with regulatory requirements and demonstrate accountability to stakeholders, fostering trust and confidence in the institution's financial stewardship.

Furthermore, the implementation of advanced analytics and predictive modeling within financial systems empowers schools to forecast future financial scenarios accurately [4]. By simulating various what-if scenarios, school administrators can anticipate potential financial challenges and devise proactive strategies to mitigate risks and seize opportunities. Ultimately, investing in a comprehensive financial information system is not just about managing current finances but also about positioning the school for long-term success and sustainability in an increasingly complex and competitive educational landscape.

System information finance the become the more important in the current digital era. This Schools also need it own system effective and efficient information for manage finance they. Al-Kadar High School does not except, they also need it system information finances are possible help manage finance they with Good.

Al-Kadar High School is no exception to this trend. As an educational institution committed to providing quality education, they understand the significance of implementing a reliable financial information system. Such a system can aid in budget planning, monitoring expenditures, and generating financial reports, thereby enabling the school administration to make informed decisions regarding resource allocation and investment priorities. By leveraging technology to streamline financial operations, Al-Kadar High School can enhance transparency, accountability, and fiscal responsibility.

With a robust financial information system in place, Al-Kadar High School can not only manage its finances more effectively but also adapt to the evolving needs and challenges of the education sector. By embracing technological advancements in financial management, the school demonstrates its commitment to excellence and innovation in delivering education to its students.

In terms of this, usage system information finance web-based will be very helpful for Al-Kadar High School for do recording, management, and supervision finance in a way more easy and efficient. With system information finance web-based, Al-Kadar High School can do management finance in real-time and can accessed by authorized parties when just and anywhere. Therefore that, in this article will discuss about planning system information school constraints web-based at SM A Al-Kadar.

Implementing a web-based financial information system will not only streamline financial processes but also enhance accessibility and transparency. Authorized stakeholders, including administrators, faculty, and board members, can securely access financial data and reports in real-time, facilitating collaborative decision-making and fostering a culture of accountability. Moreover, the scalability and adaptability of web-based systems ensure that Al-Kadar High School can effectively meet its evolving financial management needs, regardless of its size or complexity.

In conclusion, the adoption of a web-based financial information system represents a significant step forward for Al-Kadar High School in its quest for excellence in financial management. By leveraging the power of technology, the school can overcome existing challenges, improve efficiency, and position itself for sustained success in the dynamic educational landscape. With a clear roadmap for implementing a web-based financial system, Al-Kadar High School is poised to achieve greater financial transparency, accountability, and ultimately, better educational outcomes for its students.
2. Methods
On part This will explained about method developer software in planning system information website-based school finance at Al-Kadar High School.

2.1. Development Methods System
Methods used in development system information website-based school finance at Al-Kadar High School is method waterfall. Waterfall method is A modele development which system stages the work.
As for the stages in development system use the waterfall method is as following:
1) Communication (analysis)
At stage This done analysis need device software as well as data collection. Data collection was carried out with interviews, observations and also questionnaires.
2) Planning
From the results analysis and data collection, we Already Can take conclusion For making system information announcements and communications can can used at SM A Al-Kadar.
3) Modelling
Staged This arranged design architecture from the system will made use case diagrams, activity diagrams, class diagrams, and also sequence diagrams.
4) Construction
Staged This Already done making system information announcements and communications use Language PHP, JavaScript HTML and CSS programming.
5) Deployments
System has finished made And fulfil need its functional that is SIK.

3. Results and Discussion
3.1. System Design
Design system consists from use cases diagrams, activity diagrams, class diagrams, as well as sequence diagrams.
3.1.1. Use case diagrams
Use case diagrams have objective For give description interaction between user or actor with the system will built

In the image above , it is explained regarding use case diagrams. Where there is an admin on duty For add, edit and delete information.
Teachers and parents can log in and there a number of feature among them feature payments, features editing , cost info school and deadlines payment.
Guests are for those who want get information about AL-KADAR SMA finance.

3.1.2. Activity Diagram
Activity diagrams are types of diagrams that can be show order activity in something system.
In the activity diagram above explained about How method or structure order activity in a system. On the page The main thing is that parents, teachers and admins have it Same login feature However uses for each different functions. This activity diagram also discusses a number of type Types of activity diagrams include: under This:

1) Class Diagram
Class diagrams are one that shows existing classes in system along with the attribute.

2) Sequence diagram
Sequence diagrams are a diagram showing interaction object with A system in detail.

- Sequence diagram (admin)

- Sequence diagram (Teacher)

- Sequence diagram (Student)

3.2. Web Features
3.2.1. Admin/Teacher
1) Class Diagram Dashboards
On the AL-KADAR SMA dashboard there is a data section that can be reviewed by the admin, including:
- Acceptance Today
- Today's expenses
- Total receipts
- Active students
- Calendar

2) Student Transactions
In student transactions there is proof of payment of tuition fees for AL-KADAR SMA students, based on the year of study and student NIM. As proof of backup if at any time it is needed for certain things such as data in the system being unreadable, etc.

3) General Transactions
General transactions are divided into 2, namely:
- Expenditure
These expenses are used when the necessary funds are released from AL-KADAR SMA. Then the output results will appear on the page and can be reviewed by the school/teacher
- Reception
The receipt is in the form of financial assistance from the government and the data is used as evidence and documentation that the AL-KADAR SMA school is given the financial assistance needed by the school.

4) Payment settings
In the payment settings section there are 2 parts, namely:
• Payment name
  In the form of payment objects that must be paid
• Type of payment
  This type of payment can be seen that the student's parents make a payment monthly, daily, weekly, or annually.

5) General settings
In the general settings feature there are several sections that can be reviewed including:
• Madrasa profile
• Month
• Learning year
• Class
• Major
• Learners
• Graduation
• Grade promotion

6) Report
There are 2 parts, including:
• Total financial report
• Reports per class

7) Application users
In the user section of the application you will be able to see who has created the website and already has an account at SMA AL-KADAR, along with the password that can be seen. So that if you forget the password for your account, the admin can provide the correct password.

8) Database backups
The process of making a copy or backup of data from the existing SMA AL-KADAR database. The main purpose of database backups is to protect data from unexpected loss or damage, such as hardware failure, human error, malware attacks, or natural disasters.

   Database backup involves copying all or part of the data contained in a database to another location, be it physical storage media such as an external hard disk, tape drive, or a remote server over a network connection. The data copies resulting from this backup process can be used to restore the database to a consistent state when the backup was created if data loss or damage occurs in the main database.

3.2.2. Teachers and Parents of students (visitors)
1) Dashboards

AL-KADAR SMA dashboard for teachers and parents student There is a data section that can be reviewed like.
• Access payment info school and
• Date payment

2) Student parent transactions
On parent transactions There is student tuition payment information for AL-KADAR SMA students succeed done as proof of expenditure info possible payments _ saved in the application based on the year of study and student NIM the.

3) Report
• Total financial report
• Reports per class

4) General transactions
• Expenditure
  Expenditure this is used for check all total payments students who have issued by parents students , so that when If there is data on the expenditure of funds required from SMA AL-KADAR, the results of the expenditure will appear on that page and can be reviewed by the party. school nor parents ' side student.
• Reception
  On reception This in the form of information that AL-KADAR SMA school that from party go to school need financial assistance needed by the school For interest school.

3.3. Planning
This information system uses the PHP My Admin application, the design is as follows:
3.4. Implementation
The following is an implementation of the information system display that has been developed.

3.5. Black Box and White Box
1) Black Box
The black box testing method is a software testing technique that is based on the results of observations and functional testing of systems or applications without knowing or showing details of the source code. In black box testing, the tester only shows the input and output of the system and tries to test whether the system is working correctly or not.

<table>
<thead>
<tr>
<th>Factor test</th>
<th>Results</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>If the user enters the username and password</td>
<td>√</td>
<td>Succeed</td>
</tr>
<tr>
<td>If the user enters the appropriate username and password correctly or not.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3.5. Discussion
The implementation of Financial Information Systems (FIS) in educational institutions, particularly schools, plays a crucial role in enhancing financial management efficiency and transparency [5]. By reducing errors and uncertainties in financial management, FIS strategically prevents and addresses potential serious issues that could disrupt overall
school performance. Moreover, the adoption of FIS not only optimizes revenue and reduces unnecessary costs but also opens up opportunities to enhance the quality of education provided to students through more effective resource allocation [5].

Research has shown that well-specified and properly implemented financial education programs positively influence the financial knowledge of high school students [6]. This highlights the importance of integrating financial literacy education into school curricula to equip students with the necessary skills for making informed financial decisions. By enhancing financial knowledge among students, schools can contribute to improving their financial readiness and long-term financial well-being.

Furthermore, the correlation between socio-economic status and financial literacy has been recognized as a significant factor in determining individuals' financial knowledge. This underscores the importance of promoting financial education programs not only within schools but also in workplaces and communities to address disparities in financial literacy levels [7]. Policymakers are encouraged to formulate measures that enhance financial education across various settings to improve overall financial capability.

In addition, the effectiveness of school heads' financial management skills has been identified as a critical factor in providing quality education in secondary schools [8]. School administrators with strong financial management skills can contribute to efficient resource utilization, budget planning, and financial decision-making, ultimately impacting the quality of education delivered to students [9]. Therefore, investing in enhancing the financial management skills of school leaders is essential for ensuring effective financial management within educational institutions [10].

Overall, the integration of Financial Information Systems, coupled with comprehensive financial education programs and effective financial management practices, is essential for schools to achieve financial transparency, efficiency, and improved educational outcomes for students. By leveraging technology, promoting financial literacy, and enhancing financial management skills among school leaders, educational institutions can navigate financial challenges effectively and foster a culture of financial responsibility and accountability.

4. Conclusions and Suggestions

In today's digital era, system information finance has become an integral part of success. The role of financial information systems is to optimize revenue and reduce unnecessary costs while opening up opportunities to enhance the quality of education provided to students through more effective resource allocation. In the future, the integration of Financial Information Systems, coupled with comprehensive financial education programs and effective financial management practices, will be essential for schools to achieve financial transparency, efficiency, and improved educational outcomes for students. By leveraging technology, promoting financial literacy, and enhancing financial management skills among school leaders, educational institutions can navigate financial challenges effectively and foster a culture of financial responsibility and accountability.

References


