



The Influence of Tutoring Business Management Innovations and Educational Technology Developments on Operational Efficiency in Binasi

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Abstract

Operational efficiency is the ability of an organization to provide products or services cost-effectively and on time by maintaining quality and customer satisfaction while reducing inputs, such as time, costs and resources. This is because technological developments continue to advance, creating various innovations in maintaining service quality. This research aims to determine the influence of innovation in tutoring business management and developments in educational technology on operational efficiency at BINASI. The approach used is a quantitative approach with a sample size of 50 respondents. The analysis method uses analysis by testing using the SPSS tool. The results of hypothesis testing show that there is an influence of innovation in tutoring business management and the development of educational technology on operational efficiency at BINASI.

Keywords: Innovation, Technology, Efficiency, Education.

1 Introduction

The growth of education has been accompanied by the need for tutoring institutions to support student learning. However, competition in this field is getting fiercer, and operational efficiency is the most important key to business success and sustainability. One way to achieve this is through management innovation in the tutoring business. These innovations cover a wide range of aspects, from teaching methods to technologies used in management and operational strategies (Suwandi et al., 2022).

Innovation in running a tutoring business involves many different aspects, from information technology to more effective marketing strategies. The application of technology such as digital learning is basically learning that involves the creative use of digital tools and technology in the teaching and learning process, and is commonly referred to as *Technology-Enhanced Learning* (TEL) or *E-learning* (Boiliu & Telaumbanua, 2022). Through this digital learning process, it allows institutions to target prospective students more specifically. Therefore, wasted costs and time are reduced and operational efficiency is increased.

Binasi stands for "Fostering Generations", which specifically focuses on the education services sector. This business offers comprehensive services for elementary and junior high school students at the same level. Various innovations have been implemented by Binasi to increase productivity and reduce *overhead*. This study aims to assess the impact of these innovations on the operational efficiency of the institution. A deep understanding of this can provide valuable insights for other tutoring managers who want to implement similar practices. It is important to note that operational efficiency includes not only the financial aspect, but also human resources and time management. Successful innovation requires

the ability to integrate these various elements harmoniously. The study also sheds light on how Binasi is coping with changes in its operational environment and how it is impacting its overall performance.

This is important to ensure that the innovations implemented actually provide substantial added value. It is essential to guarantee that the innovations implemented have substantial additional benefits. In an increasingly competitive environment, high operational efficiency is a key factor that separates successful organizations from failed organizations. By understanding the impact of management innovation on efficiency, tutoring institutions can develop better strategies. The study also assesses the challenges faced by Binasi in implementing innovations and solutions achieved.

2 Literature Review

2.1 Innovation

Innovation is a specific means for a company where with the creation of innovation, the company can explore and take advantage of the changes that will occur as an opportunity and opportunity in running a business that is different from before (Sovania, 2022). Innovation is the ability to create and apply creative solutions to problems and provide opportunities to improve and enrich human life (Yuliani et al., 2022). Innovation can be concluded as a means of creating and applying solutions in exploring an upcoming opportunity and can be used to increase the potential that exists in a company.

2.2 Innovation in Educational Services

Innovation in education is the application of new ideas, methods, or technologies to improve the quality, accessibility, and effectiveness of the learning process (Haryanti et al., 2022). Innovation in education is a new idea, product, or job that aims to improve students' learning experience, increase their engagement and motivation to learn, and solve problems in the world of Education (Riduan, 2022). With these innovations, education is not only more effective, but it also provides students with the necessary skills in an ever-changing world.

2.3 Types of Innovation in Educational Services

Here are some types of innovations in education services as follows (Haryanti et al., 2022) :

1. Technological Innovation: Utilizing online platforms to provide lessons that can be accessed anytime and anywhere. This facilitates distance learning and allows for flexibility in managing study time.
2. Changes in Learning Methodology: It encourages students to solve problems, work together, and apply theories in the real world.
3. Innovation in the Curriculum: Subject matter can be tailored to the unique interests and needs of students, allowing students to learn in a way that best suits them.
4. Innovation in Assessment: Exams conducted online allow for more flexible proctoring and faster processing of results.
5. Learning Environment Innovation: is a learning space that encourages creativity, teamwork, and student interaction. This includes the use of flexible furniture and interactive technology.
6. New Developments in Social and Emotional Learning: Students need training in interacting with others, managing their emotions, and becoming leaders. This is crucial for their personal and professional advancement.
7. New Innovations in International Cooperation: Programs that allow students to learn from the perspectives of different cultures, improve their understanding of the world, and better communicate with others.

The purpose of this innovation is to make the student learning environment more effective, relevant, and interesting. This will give them the ability to thrive in an ever-changing era.

2.4 Information Technology

Information technology (IT) is the use of various technologies used to create, process, store, secure, and share electronic data (Susanti & Nurdiana, 2018). Information technology (IT) is a broad field that includes the use of computers and software to store, process, and distribute information (Ariguna, 2020). Thus, daily life is affected by information technology, which affects the way people communicate, work, and access information.

2.5 Purpose and Function of Information Technology

The objectives and functions of information technology (IT) are as follows (Susanti & Nurdiana, 2020) :

1. Increasing Efficiency: IT aims to speed up business and operational processes, increase productivity, and reduce the time it takes to complete tasks.
2. Supports Decision Making: IT helps managers and leaders of organizations make better decisions by providing accurate and timely data and information.
3. Improving Information Accessibility: Information Technology makes work more flexible as users can access data from a variety of devices and places.
4. Improves Communication: Information Technology helps individuals and groups communicate more quickly and effectively, both internally and externally.
5. Supporting Innovation: IT helps companies stay competitive by driving the development of new products and services and improving existing processes.

The functions of Information Technology are as follows (Susanti & Nurdiana, 2020) :

1. Data Processing: Information Technology collects, processes, and stores data to produce relevant and useful information.
2. Information Management: Information Technology allows organizations to better manage information, including data storage, retrieval, and dissemination.
3. Process Automation: IT helps automate mundane tasks, which reduces human error, and saves time.
4. Data Security: Information Technology provides security systems to protect data from threats, maintaining confidentiality, integrity, and availability.
5. System Development: IT helps build and maintain information systems that meet the requirements of users and organizations.
6. Analysis and Reporting: Information Technology enables thorough data analysis and report generation for performance evaluation and strategic planning.

Therefore, information technology is essential to improve the performance and competitiveness of organizations in various industries.

2.6 The Role of Information Technology in Education

Information technology (IT) is very important for education, both in schools and universities, as well as for professional development (Mukhsin, 2020). Overall, information technology is increasingly important in our lives, it is a tremendous and important force for the future as it can improve efficiency, expand access, drive innovation, and transform the way we live and work (Lestari & Mangkurat, 2022). Therefore, information technology is very helpful in improving the quality, accessibility, and relevance of education in the modern era.

2.7 Operational Efficiency

Operational efficiency is an organization's ability to deliver products or services cost-effectively and on time while maintaining quality and customer satisfaction while reducing inputs, such as time, cost, and resources (Lestari & Mangkurat, 2022). The main goal of the organization is to increase productivity

and reduce waste (Lestari & Mangkurat, 2022). Thus, the long-term success of an organization depends on operational efficiency, which allows them to thrive and innovate in a more competitive world.

3 Research Methods

The method used in this study is a quantitative method, with the aim of determining the influence of guidance business management innovations on operational efficiency in animal husbandry. In its approach, it uses exploratory factor data analysis where the goal is to analyze several variables that have a relationship with each other. The population in this study is the parents of BINASI participants totaling 30 people. Sampling in this study using all members of the population is called a saturated sample.

In the technique of collecting data needs, the researcher conducted a literature study and field study by making direct observations on the objects and subjects concerned, namely the parents of BINASI participants, conducting interviews and distributing questionnaires to the parents of BINASI participants after the confirmation process was completed. In this study, descriptive statistical data analysis was used using a Likert scale of 5, then a Simple Linear Regression was performed with the assistance of IBM SPSS Statistics 24 software.

4 Research Results and Discussion

Variables Entered/Removed			
Model	Variables Entered	Variables Removed	Method
1	Development of Educational Technology (X2), Innovation in Tutoring Business Management (X1) ^b		Enter

a. Dependent Variable: Operational Efficiency (Y)

b. All requested variables entered.

The "Variables Entered/Removed" *output table* above provides information about the research variables as well as the methods used in the regression analysis. The independent variables used in this analysis are Guidance Business Management Innovation (X1) and Educational Technology Development (X2). While the dependent variable is Operational Efficiency (Y). Regression analysis uses the enter method. No variables are removed so that in the removed variable column there are no numbers or empty.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.827a	.684	.670	4.012

a. Predictors: (Constant), Development of Educational Technology (X2),
Innovation in Tutoring Business Management (X1)

The *Model Summary table* provides information about the value of the determination coefficient, which is the contribution of the influence of interest and motivation variables simultaneously (together) to the achievement variable. The *adjusted R Square* value in the *Model Summary Table* is the percentage of model match, or a value that shows how much the independent variable (Guidance Business Management Innovation (X1) and Educational Technology Development (X2)) explains the dependent variable (Operational Efficiency (Y)). Simultaneously. In the output image of the Model Summary, it can be seen that the R² value is 0.684, meaning that the motivation and interest variables can explain the achievement variable by 68.4%, while the remaining 31.6% (100% - 68.4%) is explained by other variables that are not included in the model. The value of R = 0.827 means that the correlation or relationship between the variables of Guidance Business Management Innovation (X1) and Educational Technology Development (X2) with Operational Efficiency (Y) is 0.827 which means that the degree of relationship between the two variables is very strong.

ANOVA					
Model	Sum of Squares	df	Mean Square	F	Mr.
1 Regression	1636.373	2	818.187	50.836	.000b
Residual	756.447	47	16.095		
Total	2392.820	49			

a. Dependent Variable: Operational Efficiency (Y)

b. Predictors: (Constant), Development of Educational Technology (X2), Innovation in Tutoring Business Management (X1)

The Anova table provides information on the influence of the variables of Guidance Business Management Innovation (X1) and Educational Technology Development (X2) simultaneously (together) on the achievement variables.

Based on the "ANOVA" output table above, it is known that:

1. By comparing the significance value (Sig.) with the probability value in the F test is 0.000 because the sig value is $0.000 < 0.05$, then as the basis for decision-making in the F test, it can be concluded that the variables of Guidance Business Management Innovation (X1) and Educational Technology Development (X2) simultaneously (together) affect Operational Efficiency (Y) or mean significant.
2. By comparing the F value of the calculation with the F value of the table with the F value of 23.978 and the F value of the table of 3.19 so that the F value is $23.978 > \text{the F table is } 3.19$, then as the basis for decision-making in the F calculation, it can be concluded that Guidance Business Management Innovation (X1) and Educational Technology Development (X2) simultaneously affect Operational Efficiency (Y).

The F table is searched in the f table with a significance of 5% or 0.05 with the formula $F \text{ table} = (k; n - k)$ where "k" is the number of independent variables or independent variables, while n is the number of respondents. In this study, there are 2 independent variables and 50 respondents so that $F \text{ table} = (2; 50 - 2) = (2.48) = 3.19$ as shown in the F table figure above.

Coefficients ^a				
Model	Unstandardized Coefficients	Standardized Coefficients	t	Mr.

	B	Std. Error	Beta		
(Constant)	2.600	3.791		.686	.496
1 Tutoring Business Management Innovation (X1)	.487	.171	.242	2.849	.006
Development of Educational Technology(X2)	.709	.083	.729	8.568	.000

a. Dependent Variable: Operational Efficiency (Y)

The "Coefficients" table provides information about the regression equation and whether or not the interest and motivation variables are partially (individually) affected by the achievement variables. The equation formula in multiple linear regression is as follows:

$$Y = b_0 + b_1X_1 + b_2X_2 + \dots + b_nX_n + \varepsilon$$

B₀ = constant number of unstandardized coefficients. In this case, the value is 2,600.

B₁, B₂ = regression coefficient numbers. The value is 0.487 for the variable of Guidance Business Management Innovation (X₁) and 0.709 for the variable of Educational Technology Development (X₂).

So the regression equation is as follows:

$$Y = 2,600 + 0,487X_1 + 0,709X_2 + \varepsilon$$

In the Coefficients table, a t-test will be conducted to determine the influence of motivation and interest partially on performance.

1. The first t-test was carried out to find out whether there was an effect of Tutoring Business Management Innovation (X₁) on Operational Efficiency (Y).

The hypothesis for the X₁ variable research is:

H₀ : Guidance Business Management Innovation (X₁) has no effect on Operational Efficiency (Y)

H₁ : Guidance Business Management Innovation (X₁) affects Operational Efficiency (Y)

In the coefficient table, it can be seen that:

- a Based on the significance value (Sig.), it is known that the significance value (sig) of the variable of influence of Guidance Business Management Innovation (X₁) is 0.006. Since the sig value of 0.006 > the probability value of 0.05, it can be concluded that H₀ is rejected. This means that there is an influence of Tutoring Business Management Innovation (X₁) on Operational Efficiency (Y).
- b Based on the t-count value and t-table, it is known that the t-value of the motivation variable (X₁) is 2.849. Then the t-value of the table is 2.011. Since the t-value is calculated 2.849 > t table 2.011, it can be concluded that H₀ is rejected. This means that there is an influence of Guidance Business Management Innovation (X₁) on Operational Efficiency (Y).

Note: to find the t of the table, namely t table = (α/2 ; n-k), where the value of k in the t table is the number of variables studied (Independent + dependent), in this study there are 2 independent variables and 1 bound variable so for the number of k is 3, so the formula t of the table is (0.05/2; 50-3) = (0.025; 47) = 2.011

Based on the regression curve image above, it is known that the t-value of 2.849 is located in the area of positive influence, thus it can be concluded that H1 or the first hypothesis is accepted which means that there is an influence of Tutoring Business Management Innovation (X1) on Operational Efficiency (Y). Then if the variable of Guidance Business Management Innovation (X1) increases or increases, the variable for Operational Efficiency (Y) will also increase or increase.

2. The first t-test was carried out to find out whether there was an influence of Educational Technology Development (X2) on Operational Efficiency (Y).

The hypothesis for the X1 variable research is:

Ho : The development of Educational Technology (X2) has no effect on Operational Efficiency (Y)

H1 : The development of Educational Technology (X2) affects Operational Efficiency (Y)

In the *coefficient table* , it can be seen that:

- a Based on the significance value (Sig.), it is known that the significance value (sig) of the variable of influence of Educational Technology Development (X2) is 0.000. Since the value of sig is 0.000 > probability value of 0.05, it can be concluded that H0 is rejected. This means that there is an influence of Educational Technology Development (X2) on Operational Efficiency (Y).
- b Based on the t-count value and t-table, it is known that the t-count value of the Educational Technology Development variable (X2) is 8.568. Then the t-value of the table is 2.011. Since the t-value is calculated $8.568 < t \text{ table } 2.011$, it can be concluded that H0 is rejected. This means that there is an influence of Guidance Business Management Innovation (X1) on Operational Efficiency (Y).

Innovation in tutoring business management is closely related to how management optimizes resources, both human, technological, and financial, to create higher value at a lower cost. Improved Management and Administration Systems: Innovations in business management can include automation of administrative systems such as student data management, class schedules, payments, and financial records. An automated and integrated system reduces the time required for administrative tasks, reduces the risk of manual errors, and reduces operational costs. Development of More Efficient Teaching Methods: Management innovations can also be seen from the development of more effective curricula or teaching methods that are in accordance with student needs. With a more structured and efficient teaching method, student learning outcomes can be more measurable, so that teaching staff and other resources can be used more efficiently. Digital Marketing Strategy: Innovation in marketing management using digital strategies, such as social media marketing, SEO, or data-driven advertising, helps tutors reach a wider audience without exorbitant marketing costs. This can increase the number of student enrolments without significantly increasing the cost.

The development of educational technology (EdTech) also plays a significant role in improving the operational efficiency of tutoring. Use of Online Learning Platforms: Educational technologies such as online-based learning platforms (LMS) allow tutors to deliver classes without physical restrictions. With online classes, student capacity can be increased without the need to add physical infrastructure such as classrooms or other facilities. This reduces operational costs, especially those related to premises and logistics. Utilization of Technology-Based Evaluation Tools: Technology allows for automation in evaluations such as online exams that can directly provide results to students. With technology-based evaluation tools, teachers' time efficiency in checking and providing feedback increases, which directly impacts increasing the productivity of teaching staff. Personalized Learning: Educational technology enables personalized learning through the use of analytical data that analyzes each student's progress and learning needs. This allows tutoring to provide more targeted services without the need to significantly increase human resources, thereby increasing operational efficiency.

Use of AI and Chatbots: The application of artificial intelligence (AI) in the learning process and customer service such as chatbots can improve operational efficiency. The chatbot can provide answers to common questions of students or parents 24/7 without the need for direct staff involvement, which can save time and labor.

5 Conclusion and Suggestions

Based on the results of research and discussion on the influence of guidance business management innovations and the development of educational technology on operational efficiency in binasi, it was concluded that there is a positive and significant relationship between guidance business management innovations and operational efficiency in binasi and the development of educational technology there is a positive and significant relationship with operational efficiency in binasi. Educational technology and innovation in the management of tutoring businesses greatly affect operational efficiency in this field. Tutoring with the latest technology can accelerate learning, improve the quality of education, and make it easier for students to access.

References

- Ariguna, J. (2020). *Audit Sistem Informasi/Teknologi Informasi Dengan Kerangka Kerja Cobit Untuk*.
- Boiliu, E. R., & Telaumbanua, S. (2022). Inovasi Pembelajaran Digital dalam Meningkatkan Motivasi Belajar Siswa: Suatu Analisis Pendidikan Agama Kristen. *REAL DIDACHE: Journal of Christian Education*, 2(2), 90–100. <https://doi.org/10.53547/rdj.v2i2.242>
- Haryanti, D., Qomariah, N., & Alimah, N. (2022). Inovasi Pendidikan dalam Mempertahankan Keputusan Orang Tua Memilih Jasa Pendidikan Sebelum dan Sesudah Belajar dari Rumah (BDR). *Jurnak Pendidikan Islam Usia Dini*, 653–674. <https://doi.org/10.19105/kiddo.v5i1.12482>
- Lestari, M., & Mangkurat, U. L. (2022). *Konsep Inovasi Pendidikan Serta Pentingnya Peranan Guru Dalam Proses Pendidikan Di Era Teknologi Informasi*. 1–9.
- Mukhsin, M. (2020). Peranan Teknologi Informasi Dan Komunikasi Menerapkan Sistem Informasi Desa Dalam Publikasi Informasi Desa Di Era Globalisasi. *Teknokom*, 3(1), 7–15. <https://doi.org/10.31943/teknokom.v3i1.43>
- Riduan, M. (2022). *Inovasi Pendidikan Dalam Teknologi Informasi*. 5–6.
- Sovania, E. (2022). Strategi Inovasi Dalam Mempertahankan Eksistensi Produk Umkm Di Masa Pandemi Covid-19. *Jurnal Abdi Masyarakat*, 6(1), 1–11. <https://doi.org/10.30737/jaim.v6i1.2867>
- Susanti, D., & Nurdiana, N. (2018). Pengaruh Pemanfaatan Teknologi Informasi Terhadap Kualitas Pelayanan Mahasiswa. *JSiI (Jurnal Sistem Informasi)*, 5(2), 38–43. <https://doi.org/10.30656/jsii.v5i2.774>
- Suwandi, Widya Jati Lestari, & Ilwan Syafrinal. (2022). Inovasi Pendampingan Bimbingan Belajar Anak Sekolah Dasar untuk Meningkatkan Motivasi Belajar. *ABDIKAN: Jurnal Pengabdian Masyarakat Bidang Sains Dan Teknologi*, 1(1), 25–32. <https://doi.org/10.55123/abdikan.v1i1.91>
- Yuliani, Ramli, A., & Rakib, M. (2022). *Konsep Inovasi Usaha Untuk Meningkatkan Kinerja Usaha Mikro Kecil dan Menengah*. 4(1), 65–74.