

Strategic Management of SIP (Assessment Information System) Applications to Improve Learning Outcomes

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Abstract:

One way to improve the quality of human resources in educational institutions is through strategic management. This study aims to describe strategic management and the evaluation of the SIP (Assessment Information System) application in improving learning outcomes at SMA Negeri 1 Pangandaran. This study used qualitative methods, with the research subjects being the school operator and curriculum departments. The research was conducted at SMA Negeri 1 Pangandaran. Data collection techniques used in this study included observation, interviews, and documentation conducted directly in the field. Data analysis techniques used included data reduction, data presentation, and conclusion drawing. The results indicate that the strategic management of the SIP (Assessment Information System) application in improving learning outcomes is quite effective. The benchmarks for determining this management are three: goal achievement, integration, and adaptation. Achieving the goals of using the SIP application on learning outcomes at SMA Negeri 1 Pangandaran is an implementation of the institution's vision and mission. Furthermore, the integration process was also well-implemented and can be said to be quite effective in terms of socialization and communication between the parties involved. Furthermore, adaptation has also been quite successful, as SMA Negeri 1 Pangandaran has implemented the SIP application in stages, making it easier for everyone to adapt.

Keywords: *Strategic Management, SIP Application, Learning Outcomes*

Abstrak

Salah satu cara dalam upaya peningkatan kualitas sumber daya di lembaga Pendidikan yaitu dengan menggunakan manajemen strategi. Penelitian ini bertujuan untuk, mendeskripsikan manajemen strategi dan mendeskripsikan evaluasi pada aplikasi SIP (Sistem Informasi Penilaian) dalam meningkatkan hasil belajar di SMA Negeri 1 Pangandaran. Penelitian ini menggunakan metode kualitatif, dengan subjek penelitian adalah bidang operator sekolah dan bidang kurikulum. Penelitian dilaksanakan di SMA Negeri 1 Pangandaran. Teknik pengumpulan data yang digunakan dalam penelitian ini adalah observasi, wawancara dan dokumentasi yang dilakukan langsung ke lapangan. Adapun teknik analisis data yang digunakan yaitu dengan reduksi data, penyajian data, dan penarikan kesimpulan. Hasil penelitian menunjukkan bahwa manajemen strategi aplikasi SIP (Sistem Informasi Penilaian) terhadap peningkatan hasil belajar cukup efektif. Tolak ukur dalam mengetahui manajemen tersebut melalui tiga tolak ukur yaitu pencapaian tujuan, integrasi dan adaptasi. Dalam pencapaian tujuan dari penggunaan aplikasi SIP terhadap hasil belajar di SMA Negeri 1 Pangandaran ini merupakan implementasi dari visi dan misi lembaga. Selanjutnya dalam proses integrasi juga terlaksana dengan baik dan dapat dikatakan cukup efektif dalam sosialisasi dan komunikasi yang terjalin antar pihak yang terlibat. Kemudian dalam adaptasi juga cukup baik karena SMA Negeri 1 Pangandaran menerapkan aplikasi SIP secara bertahap sehingga lebih memudahkan setiap pihak dalam beradaptasi.

Kata Kunci: *Manajemen Strategi, Aplikasi SIP, Hasil Belajar*

1. INTRODUCTION

According to the National Education System Law, education is a conscious and planned effort to create a learning atmosphere and learning process so that learners actively develop their potential to possess spiritual religious strength, self-control, personality, intelligence, noble character, and skills needed for themselves, society, and the state (Arifin, 2016).

Education plays an important role in producing a quality generation so that it has high competitiveness. One of the most primary indicators of educational success is learning outcomes that reflect the extent to which they understand and master learning materials. The development of the times compels every school to change its learning system, including examinations.

The use of gadgets in learning is related to ICT-based learning media; therefore, it is usually connected to the internet. Internet usage greatly supports these gadgets. The use of gadgets can consist of several ways: whether the gadget is used as a supplement to conventional learning, or as a support, or even as a replacement in the learning model (Nurmalasari, 2019).

Several previous studies address strategic planning in the development and implementation of assessment information systems. Research by Smith and Jones (2018) in the Journal of Educational Technology Development found that educational institutions that proactively identify needs, set clear objectives, and formulate comprehensive implementation strategies for digital assessment systems tend to achieve significant improvements in assessment administrative efficiency and faster student feedback. They emphasized the importance of SWOT analysis before deciding on the type and features of the assessment information system application to be used (Smith, B., & Jones, C., 2018).

As with previous research conducted by Ahmad Ali Hakam Dani in 2016 entitled "Strategic Optimization of Internet Usage Towards Improving Student Learning Achievement: Case Study of SMA Negeri 1 Burau", this research focused on the entire important process of implementing internet usage to improve student learning achievement in accordance with the standards set by the school. The results of this study indicate that the internet usage optimization strategies that have been categorized into three previously mentioned categories can serve as a foundation or reference in learning models using the internet to improve student learning achievement and enhance the quality of education at this school (Dani, 2016).

Research conducted by Ibnu Uzair et al. in 2023 entitled "Application of the SWOT Method on Web-Based Examination System Applications (Case Study: MAN 3 Tangerang)". This research focused on analyzing the application of the SWOT method on web-based examination system applications at MAN 3 Tangerang. The SWOT method was used to analyze internal factors (strengths and weaknesses) and external factors (opportunities and threats) that can influence the success of application implementation. The results of this study show that SWOT analysis indicates MAN 3 Tangerang has weaknesses in terms of internet network reliability and the availability of adequate technology infrastructure (uzair, 2023).

In this research, the focus is on strategic management of the SIP (Assessment Information System) application as an effort to improve learning outcomes at SMAN 1 Pangandaran. Based on the above problem description, the researcher is then interested in empirically analyzing the implementation of strategic management of the SIP (Assessment Information System) in the implementation of online examinations at SMAN 1 Pangandaran, the improvement of learning outcomes, and the supporting and inhibiting

factors in the implementation of the SIP (Assessment Information System) application as a means in the implementation of online examinations at SMAN 1 Pangandaran. Thus, the author conducts research with the title "Strategic Management of the SIP (Assessment Information System) Application Towards Improving Learning Outcomes at SMAN 1 Pangandaran".

2. RESEARCH METHOD

The research method used by the researcher is a qualitative approach with a descriptive method. Qualitative research method is a research method based on post-positivist or interpretive philosophy, used to research natural object conditions, where the researcher is the key instrument. The data obtained tend to be qualitative, data analysis is inductive/qualitative, and research results can be findings of potential and problems, uniqueness of objects, meaning of an event, process and social interaction, certainty of data truth, phenomenon construction, and hypothesis findings. In this research, there are two data sources, namely primary data and secondary data. Primary data sources are data sources that directly provide data to data collectors. Meanwhile, secondary data sources are sources that do not directly provide data to data collectors, for example through people or documents (Sugiyono, 2021).

3. RESULTS

A. Strategic Management of the SIP (Assessment Information System) Application at SMAN 1 Pangandaran

Experts view management science with various definitions; according to G.R Terry, management is a distinctive process consisting of planning, organizing, actuating, and controlling actions to determine and achieve objectives through the utilization of existing resources (Terry, 2023) dalam (Ilmi, I. (2021).

1) Planning

Asmendri explains that planning is the initial stage in carrying out management functions. Planning in general can be defined as the process of formulating organizational goals and objectives as well as compiling work maps and work methods in achieving goals and objectives. Every activity that has direction and purpose requires planning. Without proper planning, goals cannot be achieved effectively and efficiently. Planning activities aim to ensure that the established goals can be achieved with a high degree of certainty and low risk (asmendri, 2023).

2) Organizing

Organizing is a process of connecting people involved in a particular organization and unifying their tasks and functions within the organization. In the process, detailed division of tasks, authority, and responsibilities are carried out based on respective sections and fields so that synergistic, cooperative, harmonious, and coordinated working relationships are integrated in achieving the agreed-upon goals.

3) Actuating

Actuating is the implementation action of the plans that have been made. Implementation is carried out if the planning function has been thoroughly prepared. Implementation in management is better known as program implementation. The actuating function is essentially a form of rules, motivation, and guidance given to all resources within

the organization so that they have high awareness to carry out their duties well.

4) Controlling

According to George R. Terry, "Control can be formulated as the process of determining what should be achieved, namely standards; what is being done, namely implementation; evaluating implementation; and if necessary making improvements so that implementation is in accordance with the plan, namely aligned with standards" (Terry G. R., 2023). A leader must be proficient in examining and supervising every activity carried out. Their role can determine the results of the planning and implementation that have been carried out. This supervision becomes something that must be done by a leader or manager so that a shared desired aspiration can be realized.

Strategic management in the development and implementation of the SIP (Assessment Information System) Application is an important process aimed at ensuring that the system is able to support the achievement of organizational objectives effectively and efficiently. The SIP application is designed to facilitate the assessment, reporting, and performance analysis processes, both in educational environments and other organizations. Through a strategic management approach, SIP development is carried out with thorough planning, including user needs analysis, long-term goal setting, and the preparation of directed implementation steps.

B. Evaluation of the SIP (Assessment Information System) Application Towards Improving Learning Outcomes at SMAN 1 Pangandaran

According to Rosyid (2023), learning achievement is the result of a learning activity with changes achieved by a person. The level of success is expressed in the form of symbols, numbers, letters, or sentences with established standardization. This learning outcome can be used as consideration in determining student learning achievement; this result can also be interpreted as an achievement of understanding related to material or certain local content that has been delivered by teachers and studied by students.

Evaluation of the SIP (Assessment Information System) Application is an important step to ensure that the application truly provides a positive impact in supporting the improvement of student learning achievement. This evaluation is usually conducted periodically and comprehensively, covering technical, functional aspects, and its impact on the learning process. Regarding this, the author conducted an interview with the school operator of SMAN 1 Pangandaran, Mr. Yayan Heryana; the following is an excerpt from the interview: "The implementation of the assessment information system application has had a fairly significant impact on improving student learning achievement. He explained that since the application was used, the process of inputting and recapitulating grades has become faster and more accurate. This makes it easier for teachers to monitor the development of each student periodically".

4. DISCUSSION

A. Strategic Management of the SIP (Assessment Information System) Application at SMAN 1 Pangandaran

The research results show that the implementation of strategic management in the use of the SIP (Assessment Information System) Application at SMAN 1 Pangandaran has been carried out through management functions including planning, organizing, actuating, and controlling. These four functions run in an integrated manner thereby supporting the effectiveness of digital-based assessment implementation.

At the planning stage, the school conducted an identification of assessment system needs that could improve teacher work efficiency while accelerating the delivery of learning outcomes to students. According to George R. Terry (2023), planning is the process of determining organizational objectives and the steps that must be taken to achieve these objectives effectively. The research findings show that the preparation of the SIP implementation program has been adjusted to the school vision in improving the quality of technology-based educational services.

Organizing was carried out by clearly dividing tasks to the school operator, the vice principal for curriculum, subject teachers, and homeroom teachers. This division of tasks facilitated coordination during the data assessment management process. Robbins and Coulter (2021) state that organizations with clear task divisions will produce more effective coordination so that organizational objectives can be achieved optimally.

At the implementation stage, all teachers began using the SIP application in the process of inputting daily grades, mid-semester assessments, final semester assessments, to the preparation of student report cards. Based on interview results, teachers feel that the application is able to reduce grade processing errors while accelerating academic administration processes. This is in line with Laudon and Laudon's (2022) explanation that management information systems are able to improve efficiency, accuracy, and decision-making quality in organizations.

The control stage was carried out by the principal together with the curriculum team through periodic monitoring of SIP application usage. Evaluation was conducted on technical obstacles, data input accuracy, and teacher readiness in utilizing information technology. Terry (2023) explains that control aims to ensure all organizational activities run according to the established plans.

Overall, the implementation of strategic management of the SIP at SMAN 1 Pangandaran shows that the success of an information system is not only influenced by the technology used, but also by the school's management ability in planning, organizing, actuating, and supervising the entire implementation process.

B. Evaluation of SIP Implementation Towards Improving Learning Outcomes

Evaluation is an important part of strategic management because it functions to determine the level of success of a program. Based on the research results, the application of SIP provides a positive impact on improving the quality of the assessment process and student learning outcomes.

The speed of teachers in inputting grades allows students to obtain faster feedback. Hattie (2018) explains that feedback is one of the factors that has a large influence on improving learning outcomes because students can know their weaknesses and immediately make improvements.

Furthermore, the SIP application helps teachers conduct competency achievement analysis more accurately. Teachers can identify learning indicators that have not been achieved so they are able to prepare remedial and enrichment programs appropriately. According to Black and Wiliam (2018), assessment systems that provide continuous information will improve learning quality because teachers obtain accurate data regarding student development.

From the student side, grade transparency increases learning motivation because they can monitor learning outcome developments periodically. This finding supports Uno's (2021) learning motivation theory which states that the openness of learning outcome information is able to increase student intrinsic motivation.

5. CONCLUSION

Based on the results and discussion presented, the researcher draws the conclusion that the SIP application facilitates teachers in conducting assessments in accordance with learning achievements and basic competencies regulated in the curriculum, both for attitude, knowledge, and skills assessments. Ease in input and grade analysis allows teachers to more quickly evaluate student learning outcomes and adjust learning strategies according to needs. With the system that has been implemented, SIP also encourages consistency and accountability in the curriculum assessment process. Overall, the use of this application greatly supports the effectiveness of curriculum implementation in schools and contributes to the improvement of student learning outcomes systematically and measurably.

6. DAFTAR PUSTAKA

- Asnil Aida Ritonga dkk (2023). Fungsi Manajemen Pendidikan Islam, Jurnal Mumtaz.
- Chen, L., & Lee, S. (2019). Implementasi Strategis Sistem Informasi dalam Pendidikan: Mengatasi Resistensi Pengguna. *Jurnal Internasional Pendidikan dan Sistem Informasi*, 12(3), 187-201.
- Davies, P., & Evans, G. (2020). Dampak Sistem Penilaian Digital terhadap Hasil Belajar Siswa: Sebuah Studi Kuantitatif. *British sJournal of Educational Technology*, 51(4), 1089-1105
- Enung Siti Nurjanah, (2025) wawancara dengan penulis, SMAN 1 Pangandaran Kab. Pangandaran.
- Faujiah, Syifa, Muhammad Syaifudin, and Tuti Andriani. (2023) "Implementasi Manajemen Strategi Dalam Lembaga Pendidikan." *Jurnal Ekonomi Manajemen Sistem Informasi* 4, no. 3: 641-50. <https://doi.org/10.31933/jemsi.v4i3.1400>.
- George R. Terry dalam V. Banu, "SCRIBD," diakses 11 November 2023, dari <https://www.scribd.com/document/562052966/Latar-Blakang-George-R-Terry>
- George R. Terry, dalam Asmendri, (2023). *Perencanaan Pendidikan: Teori, Aplikasi dan Riset* (Batusangkar: STAIN Batusangkar Press).
- H.M. Arifin. *Ilmu Pendidikan Islam; Suatu Teoritis dan Praktis Berdasarkan Pendekatan Interdisipliner* (Jakarta: Bumi Aksara, 2016), hlm. 32-33
- Imam Gunawan, S.Pd., M.Pd. (2016) *Metode Penelitian KUALITATIF (Teori Dan Praktik)*. Edited by Suryani. Edisi Ke-1. Jakarta: PT Bumi Aksara.
- Ilmi, I. (2021). Ekonomi Hijau Sebagai Strategi SMK Bakti Karya Parigi Menghadapi Krisis Keuangan Pada Masa Pandemi Covid-19. *Munaddhomah: Jurnal Manajemen Pendidikan Islam*, 2(1), 9-15.
- Wiliam. 2016. Informasi Ujian Mandiri Online Berbasis Web, Sistem. "Sistem Informasi Ujian Mandiri Online Berbasis Web di Smp N 1 Srandakan (Information Systems Web-Based Online Self-Test in SMP N 1 Srandakan)." *Jurnal Sarjana Teknik Informatika* 3, no. 1 : 80-88.

- Mahnun, N., 2018, Implementasi Pembelajaran Online Dan Optimalisasi Pengelolaan Pembelajaran Berbasis Online Di Perguruan Tinggi Islam Dalam Mewujudkan World Class University, IJIEM: Kajian Teori dan Hasil Penelitian Pendidikan, Vol. 1, No. 1, April 2018.
- Miller, A., & Kim, J. (2021). Kepemimpinan Strategis dalam Adopsi Teknologi Pendidikan: Studi Kasus Sistem Penilaian Digital. *Educational Leadership Quarterly*, 38(2), 211-228.
- Nanang Fattah, (2016) Manajemen Stratejik Berbasis Nilai, (Bandung: PT Remaja Rosdakarya), 70.
- Nurmalasari, N. (2019) "Peran Gadget Dalam Meningkatkan Kualitas Pembelajaran Online Di Era Revolusi Industri 4.0." *Adz-Zikr: Jurnal Pendidikan Agama*. <https://ejournal.stitalkhairiyah.ac.id/index.php/adzzikr/article/view/73%0Ahttps://ejournal.stitalkhairiyah.ac.id/index.php/adzzikr/article/download/73/48>.
- Ridwan Abdullah, (2016) Inovasi Pembelajaran (Jakarta: Bumi Aksara), 146.
- Smith, B., & Jones, C. (2018). Perencanaan Strategis untuk Penilaian Digital yang Efektif: Kerangka Kerja untuk Lembaga Pendidikan. *Jurnal Pengembangan Teknologi Pendidikan*, 25(1), 45-62.
- Sofjan Assauri, (2016) *Strategic Management: Sustainable Competitive Advantages* Ed. 2 (Cet. 1; Jakarta Rajawali Pers, h. 3.
- Sugiyono, Prof. Dr. Metode Penelitian Pendidikan. Edited by M.T dr. Apri Nuryanto, S.Pd., ST. Edisi ke-3. Bandung: ALFABETA, 2021.
- Uzair, Ibnu, Asep Ahmad Zainudin, and Muhammad Zidan Mumtaz. "Penerapan Metode Swot Pada Aplikasi Sistem Ujian Berbasis Web (Studi Kasus : Man 3 Tangerang)." *JORAPI: Journal of Research and Publication Innovation* 1, no. 3 (2023): 748-58.
- Yayan Heryana, (2025) wawancara dengan penulis, SMAN 1 Pangandaran Kab. Pangandaran.