

The Principal's Strategy in Implementing Computer Based Testing School Assessment at *SMPIT Anak Sholeh* Mataram

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Abstract: This case study research aims to examine and analyze the condition of information and communication technology facilities for implementing Computer Based Testing School Assessment exams, school principal strategies in implementing Computer Based Testing School Assessments, as well as obstacles in implementing School Assessments Computer Based Testing in one of the junior high schools in Mataram City, Nusa Tenggara Barat, Indonesia. Data was collected through interviews, observation and documentation. The results of data analysis show that the condition of computer facilities for implementing Computer-based National Exam in schools is inadequate. The principal's strategy in implementing the Computer Based Testing School Assessment includes strategies in the areas of facilities and infrastructure, human resources and student affairs. There are two obstacles in implementing the Computer Based Testing School Assessment that have emerged, namely technical and non-technical obstacles. This highlights the importance of the principal's strategy in ensuring the successful implementation of Computer Based Testing-Based School Assessment.

Keywords: School Principals; Strategy; Management; Implementing Computer Based Testing; School Assessments.

INTRODUCTION

Education is one of the media for creating quality human resources (Zurriyati & Mudjiran, 2021). Good human resources will be able to build a nation so that it can realize the quality of a country in the era of globalization. One of the challenges of education in this century is realizing skills in the field of information and computer technology (Harsono, 2022). This technology is very important because it is able to realize and develop logical skills starting from the basic level to the level of critical thinking skills (Halim, 2022). Therefore, in modern education, education is required to be able to collaborate with information technology and computers in every educational space (Japar et al., 2019).

In the 2014/2015 academic year, the Ministry of Education and Culture issued a new policy regarding the implementation of national examinations (UN) (Reza, 2022). This policy outlines two options for administering national exams. The first option is a traditional paper-based test (PBT), where students write their answers on paper. The second option is a computer-based test (CBT), where students take the exam using a computer (Sari et al., 2022). The only difference between the two methods is the technical aspects of the exam, such as how the government duplicates and distributes exam questions and how students prepare for the exam. Since this policy was implemented by the government, computer-based national exams (Mugiarto et al., 2023) Computer-Based National Exam have begun to be used. The implementation of these benchmarks in schools is very important because they serve as a measure of student achievement in certain subjects (Salassa et al., 2023). This process is carried out within a specified time period, using computer technology and information sources (Harsono, 2022). However, not all schools hold Computer-Based National Exam because the schools do not meet the requirements that have been set.

A number of studies have been conducted to examine the implementation of Computer-Based National Exam, focusing on various aspects such as readiness, strategy, benefits, challenges and evaluation (Aden, Basir, & Kusdaniyama, 2020; Firmansyah, 2018; Harmiyuni & Sailan, 2016; Hartina, 2018; Meita & Fatoni, 2020; Murtdallo, Jazuli, & Catur Murti, 2019; school and student readiness, strategies used by school principals, different models, and the exploration of principals' strategies in implementing Computer-Based National Exam in schools is still limited, this is indicated by the lack of research in this area (Tamala, 2019). The aim of this research is to bridge this gap by placing a strong emphasis on studying the strategies used by school principals during the implementation of Computer-Based National Exam in schools located in Mataram City, West Nusa Tenggara.

RESEARCH METHODOLOGY

This research uses a case study approach with the aim of understanding events that occur to a group of subjects in a place that has a unique and different existence (Assyakurrohim et al., 2022). In this research, researchers collected data through observation techniques, interviews, and documentation studies. The location of this research is at the SMPIT Anak Sholeh Mataram school, which is one of the schools under the auspices of the Integrated Islamic School Network (*JSII*) in Mataram City, NTB, Indonesia. Sholeh Matara Mini Children's SMPIT School is one of the *SIT* schools with quite high quality and quantity of students. Of the many students who registered to take the test

during the *PPDB* implementation. On supervision activities carried out by the Mataram City Education Office and giving appreciation to the school it was stated that it had been able to make a new breakthrough in implementing Computer Based Testing (CBT) School Assessment for the first time. Therefore, this school is one of the private schools that is a pioneer in implementing Computer Based Testing (CBT)-based School Assessments at the public and private junior high school levels in 2024.

The main data in this research are the principal, deputy principal for infrastructure, student affairs, curriculum, IT Team and students. The researcher collected this data through observation, interviews and documentation, then the researcher analyzed it using the stages of data reduction, data display and then drawing conclusions (Qadrianti et al., n.d.). Data triangulation was carried out using triangulation techniques over time and data sources.

RESULTS AND DISCUSSION

Condition of IT Infrastructure for Implementing Computer Based Testing (CBT) School Assessments

The results of the researcher's analysis in this case study show that in implementing the Computer Based Testing (CBT) School Assessment, *SMPIT* Anak Sholeh Mataram school has prepared and fulfilled the infrastructure needs so that the School Assessment can be carried out well and smoothly (Yuniarti et al., 2022). In implementing this School Assessment, the school tells all students to use their cell phones, and students who do not use cell phones can bring laptops from home and the school also prepares several laptops for students who need them (Pasaribu, 2017). However, the readiness of this school's infrastructure still needs to be improved in terms of wifi networks (Larassati et al., 2024). The implementation of a Computer Based Testing (CBT) school assessment for the first time gave rise to positive and negative responses from students (Rahayu et al., 2023).

School Principal's Strategy in Implementing Computer Based Testing (CBT) School Assessment

The results of data analysis in this research show that in implementing the CBT-based School Assessment, the school principal has made several preparations. The school principal implements several strategies, namely infrastructure and facilities strategy, student education strategy, human resources strategy (Nur Efendi & Muh Ibnu Sholeh, 2023).

Strategy for Facilities and Infrastructure

The process of planning facilities and infrastructure for CBT-based school assessments is the fulfillment of CBT infrastructure requirements by schools. In implementing the CBT-based School Assessment, schools prepare facilities and infrastructure, including preparing laptops, WiFi networks, exam rooms (Selim et al., 2023).

The strategy used to overcome the shortage of laptops and cellphones in this school is to ask students to bring their respective cellphones and laptops when carrying out CBT-based school assessments. The school currently has 10 laptops and 15 teacher laptops and the rest use cellphones and student laptops. The arrangement of facilities and infrastructure for CBT-based school assessments uses four rooms with 25 students in each room (Rambung et al., 2023).

Strategy for the Field of Student Affairs

Efforts have been made by schools to prepare students to face CBT-based School Assessments (Metode et al., 2024). In preparation for the exam, the school carries out enrichment for class IX students. The enrichment will be carried out from March-April 2024. The aim of carrying out this enrichment is to strengthen and improve students' competence, their readiness to face the CBT-based School Assessment exam both in terms of mental readiness and mastery of the material. Enrichment material is provided by increasing the number of questions worked on. This material enrichment applies to all subjects including subjects in the School Assessment (Suherman, 2014).

In addition, students are also given simulation preparation in facing the CBT-based School Assessment in two stages, namely in the first stage students are given knowledge enrichment related to the exam application that will be used, namely CBT. In the second stage, students are given how to use CBT in the exam process. Implementation of pre-AS simulations with the aim of providing guidance and understanding for implementing CBT-based School Assessments to students. Apart from that, it is hoped that the simulation will be able to provide psychological preparation for students in facing CBT-based school assessments.

Human Resources Strategy

For CBT-based School Assessments, the IT technician recruitment process still refers to the requirement that they must have knowledge or competence in information technology and networks. In carrying out the CBT-based School Assessment at this school, the main IT team is assisted by the

School Assessment committee. In each room, there is a room supervisor who assists the proctor in the process of working on CBT questions by students.

Obstacles in Facing Computer Based Testing (CBT) School Assessments

In implementing CBT at this school, the school always responds quickly so that there are no unwanted obstacles, both technical and non-technical. Even though *SMPIT* Anak Sholeh Mataram has implemented the CBT-based School Assessment for the last 1 year, there are still several obstacles in its implementation. The results of the researchers' data analysis showed that at the beginning of implementing the CBT-based school assessment with the number of computers and other facilities and infrastructure, many students still did not understand how to log in to the CBT application. Second, the lack of CBT technical guidance tutorials. Third, technical problems in the form of network problems, so that the implementation of the CBT-based School Assessment was hampered.

To overcome these various obstacles, there are several things that schools must do as a solution. To overcome the lack of computers, schools must ask parents and students for help to lend laptops or bring cellphones according to school needs. In addition, schools must provide other equipment using school BOS funds. To overcome the problem of technical guidance for students in using CBT, the school makes tutorials on using CBT as often as possible. Regarding internet problems, the school must make efforts to increase and improve the quality of the network in each exam room. With this, the implementation of the 2023/2024 CBT-based school assessment will run well and smoothly.

This research shows that the principal's strategy is very important in implementing CBT-based school assessments. This is inseparable from what happens in the field, in carrying out CBT-based school assessments, it cannot be separated from the requirements that must be fulfilled by the school. CBT-based school assessments are only carried out for schools that are ready in terms of infrastructure, human resources, exam participants, and facilities and infrastructure.

In general, the condition of the school's facilities and infrastructure is quite adequate for carrying out education and teaching, including the availability of classrooms, laboratory rooms, library rooms, teachers' rooms, principal's rooms, mosques, sports areas and guidance and counseling rooms. However, if we look at the aspect of implementing the CBT-Based School Assessment for the first time in the 2023/2024 academic year, the facilities that schools have are still minimal considering the number of computers compared to the number of CBT-Based School Assessment participants.(Santoso, n.d.). Another obstacle is

that the internet network is unstable so that the implementation of CBT-based school assessments occurs. On the other hand, one of the supporting aspects in the successful implementation of CBT-Based School Assessment is its implementation in accordance with the indicators for implementing CBT-Based School Assessment starting from the preparation stage, management stage and implementation stage.

The principal's strategy is one of the supporting factors that is able to encourage the institution to realize the school's vision, mission, goals and objectives through programs that are carried out in a planned manner and according to the stages. In implementing a CBT-based school assessment, a school principal is very important in making preparations. In this case, the school principal plays a very important role in education management strategies, both in relation to management and teaching in schools (Santoso, n.d.). In educational management the school principal plays a very important role as leader, managerial, supervisory, administrative, on the other hand in teaching or learning the principal plays an important role as the main actor who is able to educate, therefore managing education, the principal also carries out learning duties and functions (Manora & Bumi Silampari Lubuklinggau Abstract, n.d.).

The results of this research show that the principal's strategy in implementing CBT-based school assessments consists of various things, including strategies in the field of facilities and infrastructure, strategies in the field of student affairs and strategies in the field of human resources. The strategy carried out by the school principal in implementing the CBT-based School Assessment in the school where the researcher is located is implementing a pre-School Assessment simulation by providing increased competency to students. This is also in line with research from (>>>>) which was conducted at one school by increasing ICT competency for a CBT-based school assessment simulation which took place in two stages. This aims to provide reinforcement to students in carrying out CBT applications. By carrying out this activity, students are able to understand the function of each feature in the CBT application, namely the login feature, question bank feature, exam schedule feature and workmanship feature as well as see the results of the test work so that students begin to get used to using the CBT application (Laksmiati, 2014).

In terms of student aspects, the results of this research show that the school always provides motivation and direction before and after taking lessons. The results of this research are also supported by research conducted by (>>>) in one of the Tsanawiyah madrasas which shows that all the efforts made by the school principal in preparing additional facilities in the form of learning guidance in the form of enrichment in each subject (Santosa et al., 2019).

The implementation of the CBT-based school assessment is still very new in this school, so of course there will be obstacles in its implementation. This research shows that the implementation of the initial School Assessment is certainly not free from technical and non-technical obstacles. The implementation of the CBT-based school assessment this year went well and smoothly without any significant obstacles, except for the unstable internet network. The only problem that occurred during stage 2 of the simulation was because a server was damaged as a result of which the school bought a new server. In stage 3 of the simulation, there was a power outage which was resolved by the school by writing to PLN that this school was one of the organizers of the CBT-Based School Assessment, to which the PLN responded well and provided a guarantee that there would be no power outages during the Computer-Based National Exam. The same thing was found in Harmiyuni and Sailan's (2016) research on schools that implemented CBT-based school assessments. They found that schools also experienced technical problems such as using slow network speeds, network disruptions during bad weather such as rain, power outages, and serial numbers that changed when the local server was updated. but the school is making efforts to overcome these technical obstacles by collaborating with PLN, Lintas Arta and Telkom as well as providing a local server (Harmiyuni & Sailan, 2016). Thus, CBT-based school assessments can be implemented at the school. In order for computer-based exams to run smoothly, educational units must prepare adequate hardware and internet networks (Sechandini et al., 2023).

CONCLUSION

Based on the findings of this study, schools should take early steps to ensure that they have the necessary electronic equipment when transitioning to computer-based national exams. The successful implementation of this exam is hampered by problems related to internet access and electricity, as well as students' lack of understanding of technology. To overcome these challenges, schools must adopt various strategies, such as partnering with parents to secure electronic equipment, incorporating information technology into the curriculum, and organizing activities to improve students' ICT skills. The research conducted in this study highlights the diverse approaches used by school administrators. The strategy for implementing CBT-based school assessments, including facilities and infrastructure, human resource programs, and student readiness is emphasized in this research. This highlights the importance of the principal's strategy in ensuring the successful implementation of CBT-Based School Assessment.

REFERENCES

- Bahrin, B., Maulana, R., Muslem, A., & Yulianti, Y. (2023). Assessment design, learning strategies and obstacles in facing Computer-Based Madrasah Exam on the English subject. *Studies in English Language and Education*, 10(2), 884-906.
- Halim, A. (2022). The Significance and Implementation of Critical Thinking in Projections of the World of Education for the 21st Century at the Elementary School Level. *Indonesian Journal of Social Technology*, 3(3), 404–418. <https://doi.org/10.36418/jist.v3i3.385>
- Handoko, H., Tola, B., Supriyati, Y., & Rangka, I. B. (2019, March). The Change of National Exam System from Paper-Based Test into Computer-Based Test. In *Proceedings of the First International Conference on Technology and Educational Science, ICSTES 2018, November 21-22 2018, Bali, Indonesia*.
- Harsono, H. (2022). Factors That Influence Computer-Based Information Systems: Operating Systems, Servers, and Programmers (Literature Review Executive Support Systems for Business). *Journal of Educational Management and Social Sciences*, 3(2), 583–593. <https://doi.org/10.38035/jmpis.v3i2.1121>
- Japar, M., Sahid, K., & Fadhillah, D. N. (2019). Social tolerance in multi-religious states: A case study in Cigugur society, Indonesia. *International Journal of Innovation, Creativity and Change*, 7(7), 371–392.
- Junaedi, D., Sa'diah, T., Zumailah, E., Zaqiah, Q. Y., & Qomaruzzaman, B. (2024). Computer-Based National Assessment Policy (ANBK) at SD IT Qordova Bandung as An Alternative to The National Examination. *Ta dib Jurnal Pendidikan Islam*, 13(2), 385-392.
- Laksmiati, H. (2014). The relationship between Self Efficacy and Self Regulated Learning and Mathematics Academic Achievement of SMAN 2 Bangkalan Students. *Character*, 3(2), 1–7.
- Larassati, R., Hanoum Nurifai, S., & Hanifa Azzahra, S. Kafa. (2024). Telemedicine as a Communication Portal for Remote Health Consultations. *Action Research Literate*, 8(1), 139–144. <https://doi.org/10.46799/ar.v8i1.231>
- Method, O., Guided, D., Competence, M., & Creative, B. (2024). *Journal creativity*. 2(1), 110–120.

- Mugiarto, M., Agustina, I., & Suryaman, W. (2023). Adoption Of Asset Application Technology And Employee Competence In Improving Employee Performance Of State-Owned Asset Management In Sopa Cimahi City. *Management Studies and Entrepreneurship Journal*, 4(5), 4823–4835. <http://journal.yrpiiku.com/index.php/msej>
- Nur Efendi, & Muh Ibnu Sholeh. (2023). Education Management in Improving the Quality of Learning. *Academicus: Journal of Teaching and Learning*, 2(2), 68–85. <https://doi.org/10.59373/academicus.v2i2.25>
- Pasaribu, A. (2017). Implementation of School-Based Management in Achieving National Education Goals in Madrasas. *EduTech: Journal of Education and Social Sciences*, 3(1), 12–34. <http://jurnal.umsu.ac.id/index.php/edutech/article/view/984>
- Rahayu, I. T., Pramuswari, M. F., Santya, M., Oktariani, R., & Fatimah, S. (2023). ON LEARNING OUTCOMES OF PRIMARY / MI STUDENTS. 01, 97–110.
- Rambung, O. S., Sion, Bungamawelona, Puang, Y. B., & Salenda, S. (2023). Transformation of Education Policy Through the Implementation of the Independent Learning Curriculum. *Journal of Educational Sciences*, 1(3), 598–612.
- Reza, V. (2022). ISLAMIC ENTREPRENEURSHIP: Building the Character of Muslim Entrepreneurs with Economic-based Knowledge. *Journal Annabl*, 9(1), 1–10. <https://doi.org/10.54576/annabl.v9i1.42>
- Salassa, A., Rombe, R., & Fani Parinding, J. (2023). Differentiated Learning in the Independent Learning Curriculum According to Ki Hajar Dewantara in Christian Religious Education Subjects. *Journal of Education and Teacher Training*, 1(6), 541–554.
- Santosa, E., Nugroho, P. J., & Siram, R. (2019). Implementation of the School Literacy Movement. *Equity In Education Journal*, 1(1), 56–61. <https://doi.org/10.37304/eej.v1i1.1553>
- Sari, M., Rachman, H., Juli Astuti, N., Win Afgani, M., & Abdullah Siroj, R. (2022). Explanatory Survey in Quantitative Descriptive Research Methods. *Journal of Science and Computer Education*, 3(01), 10–16. <https://doi.org/10.47709/jpsk.v3i01.1953>
- Sechandini, R. A., Ratna, R. D., Zakariyah, Z., & Na'imah, F. U. (2023). Multicultural-Based Learning of Islamic Religious Education for the Development of Students' Social Attitudes. *At-Tadzkiir: Islamic Education Journal*, 2(2), 106–117. <https://doi.org/10.59373/attadzkiir.v2i2.27>

- Selim, A., Uliyah, T., Iqbal, R., Islam, U., & Nur, A. (2023). *TEACHER IN IMPROVING*. 02(04), 54–61.
- Suherman, A. (2014). Implementation of the New Curriculum in 2013 for Physical Education Subjects. *Elementary School Pulpit*, 1(1), 71–76. <http://jurnal.upi.edu/mimbar-sekolah-dasar/> ~
- Tseng, W. Y., Lai, E. H. H., Wang, T. M., Wang, C. Y., Lin, T. F., Lin, L. D., & Tsai, Y. L. (2023). The multi-factor analysis of computer-based test scores in objective structured clinical examination of clerkship in school of dentistry, National Taiwan University. *Journal of Dental Sciences*, 18(2), 754-760.
- Yuniarti, I., Khodijah, N., & Suryana, E. (2022). Analysis of Islamic Religious Education Policy in Schools and Madrasas. *MODELING: Journal of the PGMI Study Program*, 9(1), 182–207. <http://jurnal.stitnualhikmah.ac.id/index.php/modeling/article/view/1162>
- Zurriyati, E., & Mudjiran, M. (2021). Contribution of Parental Attention and Learning Motivation to Student Engagement in Elementary Schools. *Jurnal Basicedu*, 5(3), 1555–1563. <https://jbasic.org/index.php/basicedu/article/view/889679488>