The Implementation Of It-Based Learning Media At The State High School In Sidoarjo, East Java

Implementasi Media Pembelajaran Berbasis Teknologi Informasi dan Komunikasi (TIK) di Sekolah Menengah Atas Negeri (SMAN) di Sidoarjo, Jawa Timur

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Abstract. The study was done in a state senior high school in Sidoarjo, East Java. The tactics employed include observation and interviews. Researchers studied school culture, school management, and learning implementation in state high schools in Sidoarjo, East Java, as they used IT-based learning. Data from observations and interviews were evaluated to provide a full understanding of the school's teaching and learning processes. This study will watch and examine the teaching and learning process in state senior high schools in Sidoarjo, East Java. According to the findings of this study, the use of IT-based learning media in school is facilitated by the usage of laptops and projectors, the GDB Online application, and the E-Learning platform (Moodle). The findings indicate that technology makes learning engaging, efficient, and interactive. It is intended that this research will help to better understand school culture and management, as well as learning in the classroom.

Keywords - Information Technology, Learning Process, State High School in Sidoarjo, Laptop, Projector, GDB Online, E-Learning (Moodle), Case Study, Qualitative Method.

Abstrak. Penelitian ini dilakukan di Sekolah menengah atas Negeri yang berada di Sidoarjo, Jawa Timur. Metode yang digunakan adalah observasi dan wawancara. Peneliti mengamati praktik pembelajaran terkait budaya sekolah, manajemen sekolah, dan pemanfaatan pembelajaran berbasis IT di SMA Negeri di Sidoarjo, Jawa Timur.Data yang diperoleh dari observasi dan wawancara dianalisis untuk memahami proses belajar mengajar di sekolah tersebut secara komprehensif. penelitian ini bertujuan untuk mengamati dan menganalisis proses belajar mengajar di Sekolah menengah atas Negeri yang berada di Sidoarjo, Jawa Timur. Hasil penelitian ini ditemukan bahwa penggunaan IT-based learning media didiukung oleh penggunaan laptop dan proyektor, aplikasi GDB Online, dan platform E-Learning (Moodle) dalam pembelajaran di sekolah. Hasilnya menunjukkan bahwa teknologi tersebut membuat pembelajaran menarik, efisien, dan interaktif. Diharapkan, penelitian ini memberi kontribusi pada pemahaman kultur dan manajemen sekolah serta pembelajaran di lingkungan sekolah.

Kata Kunci - Teknologi Informasi, Proses Pembelajaran, Sekolah menengah atas Negeri yang berada di Sidoarjo, Laptop, Proyektor, GDB Online, E-Learning (Moodle), Studi Kasus, Metode Kualitatif.

I.INTRODUCTION

Education is a critical component in the growth of a country. Education can equip the next generation to tackle the difficulties and expectations of a rapidly changing world. Understudies within the Data Innovation Instruction Ponder Program are anticipated to comprehend and screen the teaching and learning handle within the classroom. One of the occasions planned to donate this involvement is Presentation to the School Field.

Internship activities at school are the first step of the Introduction to Schooling Field program, which takes place in the fourth semester. This exercise seeks to offer students with a knowledge, appreciation, and experience in observing school culture, school management, and the dynamics of schools as educational and learning institutions. It is intended that Internship Activities at School would provide students with a broader understanding of the world of education and the role of instructors in building an effective learning environment. [1]

This examination was carried out at a state tall school in Sidoarjo, East Java. The state tall school in Sidoarjo, East Java, was chosen as the inquire about location due to its notoriety for giving an viable and high-quality instructing and learning environment. Internship Exercises at Schools Understudies of the Data Innovation Instruction Think about Program are required to be able to watch and look at in profundity the instructing and learning prepare at the school. [2]

The methods used in this research are observation and interviews. Students made observations of school culture, school management, and implementation of learning at state senior high schools located in Sidoarjo, East Java. They too conducted interviews with guides and other school authorities to urge more in-depth data. Information gotten from perceptions and interviews will be analyzed to get it more comprehensively the instructing and learning handle at the school.[3]

The educating and learning handle is the center of instructive exercises. Instructors have an awfully critical part in making a conducive learning environment and spurring understudies to memorize. Through Internship Exercises at School, understudies are anticipated to gain a more profound understanding of the part of instructors within the educating and learning handle. Separated from that, understudies are too anticipated to get it the significance of great school administration in supporting an successful instructing and learning prepare.

Hence, this investigate points to watch and analyze the educating and learning prepare in State Senior Tall Schools in Sidoarjo, East Java through Internship Exercises in Schools. It is trusted that the comes about of this inquire about can contribute to the understanding of school culture, school administration, and the execution of learning within the school environment. Separated from that, this research is additionally anticipated to supply more profound knowledge for understudies of the Data Innovation Instruction Consider Program approximately the world of instruction and the part of instructors in making an compelling learning environment.

II.METHOD

This inquire about plan utilizes a subjective approach with a case think about strategy. A subjective strategy was chosen since it empowers analysts to induce a exhaustive information of the watched marvels, specifically the educating and learning prepare at state tall schools in Sidoarjo, East Java. The case study was chosen because the research focuses on a single example, the school, allowing for a thorough and comprehensive investigation. [4]

Location and Subjects of Research In Sidoarjo, East Java, there is a state high school that serves as the research site. The research participants were students enrolled in the school's Introduction to Schooling Field course for the Information Technology Education Study Program. Tutors and other educational personnel participating in the teaching and learning process are also research topics.

Information Collection Methods a. Perception: Understudies make coordinate perceptions of the instructing and learning handle in classes named by the school. They famous different perspectives such as teacher-student interaction, utilize of learning media, and classroom environment. b. Meet: Understudies conduct interviews with mentors and other school authorities to induce more in-depth data almost school culture, school administration, and the execution of learning at state tall schools found in Sidoarjo, East Java.

Information Examination Information gotten from perceptions and interviews will be analyzed subjectively. Information examination is carried out by summarizing, gathering and distinguishing designs that develop from the information. The comes about of the examination will be utilized to get it in more profundity the educating and learning prepare in State Senior Tall Schools in Sidoarjo, East Java.

Validity and Reliability to ensure the validity of the data, researchers will triangulate the data by comparing the results of observations and interviews. Apart from that, researchers will also carefully record every information obtained to ensure the accuracy of the data. To ensure data reliability, researchers will record each research step systematically and transparently.

By employing a subjective approach and case ponder strategies, it is trusted that this investigate can give an in-depth understanding of the instructing and learning prepare in state tall schools in Sidoarjo, East Java. The information examination carried out will give a comprehensive picture of school culture, school administration, and the implementation of learning within the school environment.

III.FINDING AND DISCUSSION

This investigate was conducted to decide the adequacy of utilizing IT (Data Technology)-based learning media in moving forward understudy learning results. IT-based learning media can incorporate different shapes, such as: Utilize of computerized introductions (introduction slides, recordings, movements) Utilize of online learning stages (e-learning, GDB Online learning applications) learning forms in State tall schools in Sidoarjo, East Java . This inquire about included course X understudies at the school. Based on the comes about of perceptions and interviews, it was found that the utilize of IT-based learning media in learning at state tall schools in Sidoarjo, East Java provides several benefits, including: Learning material can be presented in a more interesting and interactive manner, thus increasing interest and attention. students, teachers can easily display visual media such as images, videos or slide presentations to support the delivery of material. Students can focus more on learning because the material is presented clearly and structured. Learning becomes more efficient because the teacher does not need to write on the board, so learning time can be utilized more optimally.[5]

The use of IT-based learning media assisted by laptop and projector equipment in learning at State Senior High Schools in Sidoarjo, East Java has had a positive impact on the teaching and learning process. Learning material presented with the help of digital technology can attract students' attention and increase their understanding of the material being taught. However, to optimize the use of laptops and projectors, schools need to ensure that all classrooms are equipped with these facilities. Apart from that, there needs to be training for teachers and students to be able to use laptops and projectors effectively. [6] With the support of adequate facilities and infrastructure as well as increasing user competence, it is hoped that the use of laptops and projectors in learning at State Senior High Schools in Sidoarjo, East Java can make a more significant contribution to improving the quality of learning.

This research also found the use of the GDB Online application in informatics learning at state high schools in Sidoarjo, East Java. GDB Online is a web platform that provides an online programming environment for running and debugging C/C++ programs. This platform is very useful for programmers, both beginners and experienced, who want to practice, test, and develop C/C++ code without having to install software on their computers. One of the main features of GDB Online is its support for the GDB debugger (GNU Debugger). With this integration, users can check variable values, set breakpoints, and step-by-step through the execution of their programs online. This makes the process of debugging and troubleshooting code easier.[7] Based on the comes about of perceptions and interviews, it was found that the utilize of GDB Online in Informatics learning at State Senior Tall Schools in Sidoarjo, East Java gives a few benefits, including: Students can learn and practice programming interactively and collaboratively, Teachers can easily monitor and evaluate student learning progress, Students can quickly get feedback regarding the program code they write, Learning becomes more efficient because students do not need to install programming software on their respective computers. [8]

The use of the GDB Online application in informatics learning at state high schools in Sidoarjo, East Java has had a positive impact on the teaching and learning process. Students can learn and practice programming interactively and collaboratively, and get fast feedback regarding the program code they write.[8] However, to optimize the use of GDB Online, schools need to ensure that all students have stable internet access. Separated from that, there should be preparing for instructors and understudies to be able to utilize GDB Online viably. With the back of satisfactory offices and

framework as well as expanding client competency, it is trusted that the utilize of GDB Online in Informatics learning at State Senior Tall Schools in Sidoarjo, East Java can make a more noteworthy commitment to making strides the quality of learning.[9]

This investigate moreover found the utilize of the E-Learning stage (Moodle) in online and offline learning at state tall schools in Sidoarjo, East Java. Moodle may be a learning administration framework (Learning Administration System) that permits instructors and understudies to associated online.[10] Based on the comes about of perceptions and interviews, it was found that the utilize of Moodle in online and offline learning at State Senior Tall Schools in Sidoarjo, East Java gives a few benefits, including: Students can access learning materials, assignments and exams online at any time and anywhere. anywhere, Teachers can easily manage and monitor student learning activities, Learning can take place synchronously (real-time) or asynchronously (not real-time), Students can collaborate and discuss in the learning forums provided, Assessment and feedback systems can done automatically via Moodle.[11]

The educating and learning handle at State Senior Tall Schools in Sidoarjo, East Java, has profited from the selection of the e-learning stage (Moodle) in both online and offline learning. In addition to collaborating and having discussions in the offered learning forums, students have access to online learning resources, assignments, and tests at any time and from any location. But in order to make the most out of Moodle, educators must make sure that every student has reliable access to the internet. In addition, in order for instructors and students to utilize Moodle efficiently, training is required.[12]

IV.CONCLUSION

This inquire about looks at the viability of utilizing IT-based learning media which is backed by the utilize of tablets and projectors, the GDB Online application, and the E-Learning platform (Moodle) in learning at state high schools in Sidoarjo, East Java. The results show that the technology makes learning more interesting, efficient and interactive.

However, for optimal use, stable internet access and training for teachers and students are needed. This research contributes to the understanding of school culture and management as well as learning in the school environment. Education students also gain insight into the world of education and the role of teachers.[13] This research is the first step to improve the quality of learning in state senior high schools in Sidoarjo, East Java. There's still a part of research that ought to be done to create compelling learning models utilizing computerized innovation.

From the comes about of investigate conducted on the IT-based learning prepare in state tall schools in Sidoarjo, East Java, it can be concluded that a subjective approach utilizing the case ponder strategy gives an in-depth understanding of the viability of learning in these schools. Teachers at State Senior High Schools in Sidoarjo, East Java have succeeded in implementing learning models that are in accordance with curriculum standards and.[14]

The learning process at State Senior High Schools in Sidoarjo, East Java involves active interaction between teachers and students, by providing opportunities for students to be involved in experiments, presentations and reflections on learning. The use of various learning media also provides additional motivation for students to learn and participate actively in the learning process.[15]

Thus, it can be concluded that the implementation of IT-based learning in state high schools in Sidoarjo, East Java has provided an interesting, interactive and effective learning experience for students. The teachers involved in the learning process have succeeded in creating a conducive learning environment and motivating students to be active in learning. This inquire about contributes to understanding the significance of applying data innovation in moving forward the quality of learning in schools.

REFERENCES

[1] H. K. Bentriska and A. Suprijono, "Pengaruh Media Pembelajaran Educandy Terhadap Hasil Belajar Kognitif Sejarah Siswa Sekolah menengah atasN 3 Sidoarjo," *AVATARA, e-Journal Pendidikan Sejarah*, vol. 12, no. 4, 2022.

[2] S. Rahmadiyani, L. S. Hariani, and U. Yudiono, "Minat Menjadi Guru: Persepsi Profesi Guru, Pengenalan Lapangan Persekolahan (PLP) dan Efikasi Diri," *Jurnal Riset Pendidikan Ekonomi*, vol. 5, no. 1, pp. 10–23, 2020.

[3] E. F. Fahyuni, "Teknologi, Informasi, dan Komunikasi (Prinsip dan Aplikasi dalam Studi Pemikiran Islam)." Umsida press, 2017.

[4] D. A. Rokhim, N. I. Agustina, M. R. Asrori, M. Chesa, and N. Hidayat, "Profil Kebutuhan Dan Pemetaan Pemahaman Pelaku Pendidikan Sekolah menengah atasn 3 Sidoarjo Terhadap Asesmen Kompetensi Minimum," *Jurnal Administrasi Dan Manajemen Pendidikan*, 2022.

[5] M. Maryono, H. Susanto, and A. R. Syam, "Pengaruh penggunaan media pembelajaran LCD proyektor terhadap prestasi belajar Aqidah Akhlak di sekolah," *Journal of Islamic Education and Innovation*, pp. 106–115, 2022.

[6] N. Rohman, "EFEKTIFITAS PEMBELAJARAN BERBASIS LCD PROJECTOR DENGAN MODEL PEMBELAJARAN KONTEKSTUAL TERHADAP PRESTASI BELAJAR MAHASISW," *LPPM IKIP PGRI Bojonegoro*, 2019.

[7] M. Zambrano *et al.*, "Active learning of programming as a complex technology applying problem solving, programming case study and OnlineGDB Compiler," in *2021 10th International Conference on Educational and Information Technology (ICEIT)*, IEEE, 2021, pp. 120–129.

[8] L. Rai, *Programming in C++: Object Oriented Features (Online GDB)*, vol. 5. Walter de Gruyter GmbH & Co KG, 2019.

[9] A. R. I. Farizi and B. Sujatmiko, "Efektivitas Pemanfaatan Cloud Computing Berbasis Software As a Service (Onlinegdb Compiler) Untuk Meningkatkan Kompetensi Siswa Pada Mata Pelajaran Pemrograman Dasar Selama Pandemi Di Smkn 1 Surabaya," *IT-Edu: Jurnal Information Technology and Education*, vol. 6, no. 1, pp. 745–754, 2021.

[10] A. KuSekolah menengah atasna, "E-learning dalam Pembelajaran," *Jurnal Lentera Pendidikan*, vol. 14, no. 1, 2017.

[11] P. B. Herlandy and M. Novalia, "Penerapan e-Learning pada pembelajaran komunikasi dalam jaringan dengan metode blended learning bagi siswa SMK," *Journal of Education Informatic Technology and Science*, vol. 1, no. 1, pp. 24–33, 2019.

[12] S. R. Chandrawati, "Pemamfaatan E-learning dalam Pembelajaran," *Jurnal Cakrawala Kependidikan*, vol. 8, no. 2, 2010.

[13] D. A. Rokhim *et al.*, "Peningkatan Pemahaman Pelaku Pendidikan Sekolah menengah atasN 3 Sidoarjo Terhadap AKM Melalui Aplikasi Pintarin," *Jurnal Profesi Keguruan*, vol. 9, no. 1, pp. 44–51, 2023.

[14] D. Amalia, "Dasar Teknologi Informasi , GDB Online." Delta Pustaka, 2022.

[15] S. Hariadi, "Pengaruh Penggunaan Media Pembelajaran LCD Proyektor dan Motivasi Belajar Terhadap Prestasi Belajar Mata Pelajaran IPS," *Jurnal Penelitian dan Pendidikan IPS*, vol. 11, no. 1, pp. 100–110, 2017.

Conflict of Interest Statement:
The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.