

# Implementation of Semester Examinations in the Digital Age, Opportunities and Challenges

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## ABSTRACT

*The demand to apply digital technology is a must for all elements of education in higher education. Almost all higher education tri-dharma activities are carried out using digital technology. The implementation of semester exams both online and offline is carried out along with the use of online learning media such as E-Learning, Classroom, Whatsapp, etc. There is also a special application for final assessment so that student test scores are calculated using the application. The problem is how prepared the resources in higher education are in using digital technology. This research aims to analyse the opportunities and challenges in conducting semester exams using digital technology. The research method uses qualitative methods with a post-positivism paradigm. Data were obtained from direct observation and in-depth interviews with relevant informants. The results of the study show that the opportunities for conducting semester exams using digital technology are the ease of implementation and the achievement of effectiveness and efficiency. While the challenge is the fulfilment of the factors that support the readiness of all resources so that the implementation of the semester exams can run smoothly.*

**Keywords:** Semester exams, digital technology, opportunities, challenges, higher education, readiness

## 1. INTRODUCTION

Semester exams are something that is routinely carried out in tertiary institutions in the middle or at the end of the learning process in one semester. Semester exams are conducted to see the success of the learning process and at the same time to evaluate the results of the learning process during the current semester. The implementation of the semester exam can be carried out online or offline (face to face) depending on the terms and conditions at the time the semester exam will be carried out. After the Covid-19 pandemic, the implementation of education in Higher Education was still carried out in two ways, namely online and offline. Several universities define online learning as learning processes that are carried out at night, and offline in the morning and afternoon. Apart from that, online exams are also an option if certain conditions cause problems when taking offline exams (face-to-face).

Semester examinations both online and offline are carried out in line with the use of various online learning media such as E-Learning, Google Classroom, Whatsapp, Zoom, Google Meet, and YouTube. In addition, a special application is also provided for the final assessment so that student test scores are collected and calculated using the digital assessment application. This is done to make it easier for teachers to provide accurate and fair assessments to students based on student work during the current one-semester learning process.

From the results of previous research conducted by Suliono, et al regarding the quality of information systems in tertiary institutions, it was found that the use of information and communication technology in the form of the use of academic information systems played a role in enhancing the reputation of tertiary institutions and increasing satisfaction with the use of educational services. (Suliono et al., 2016) However, Fauziyah in her research on the effectiveness character of the teacher, and the character of the students. Online learning has several obstacles such as poor internet networks, unfulfilled facilities, and infrastructure, to educators who are not yet reliable in using information and communication technology as learning media. (Fauziyah, 2020) Meanwhile, the results of research by Dwi, et al (2020) on the effectiveness of online learning found that the lack of facilities and infrastructure and the unpreparedness of technology education were the reasons for the ineffectiveness of online learning (Dwi C et al., 2020).

Even though currently the use of digital media and communication technology is commonplace in the world of education, the problem is how prepared are resources in universities in using digital technology. For some tertiary institutions that can provide various facilities and infrastructure needed to be related to digital technology, it may not be that difficult, although they still have to prepare capable and competent human resources in using these digital technology devices. However, higher education institutions that have not been able to provide sufficient facilities and infrastructure to support the learning process, including the implementation of exams using digital devices, need to find solutions so they are not left behind in terms of using digital technology, which is now a necessity to improve the quality of education and quality college graduates. This research aims to analyze the opportunities and challenges in conducting semester exams using digital technology. With this research, we want to know what the actual conditions are in the implementation of semester exams in tertiary institutions. Does the use of digital technology improve the quality of education and the quality of university graduates?

## **2. LITERATURE REVIEW**

Today digital technology has entered various aspects of life, starting from aspects of education, health, economy, transportation, and other aspects of life. (Putra, 2018) The use of digital technology and communication is a habit that is now commonly practiced in all educational processes, especially in tertiary institutions. According to Suliono, et al (2016), to realize quality academic and governance services, tertiary institutions have used Information and Communication Technology (ICT) in carrying out academic activities, such as conducting semester exams, implementing teaching and learning activities, and implementing final assignment expand arms. The use of ICT in the form of the use of academic information systems serves to improve the reputation of tertiary institutions and also to increase the satisfaction of users of educational services. (Kartika et al., 2016)

Rapidly developing technology makes it easy to access information. Information technology can be used as an unlimited learning resource for students. Therefore, this technological progress must be addressed wisely and effectively so that it is beneficial to all users of this information technology. (Asmawati, 2021) Digital technology is a tool that no longer uses manual human power, but rather an automatic operating system with computerization or a format that can be read by a computer. (Stekom, 2022). While digital communication is often called online communication, namely personal computer-based communication to send and receive messages or exchange facts through platforms. Digital communication is a communication process that is dominated by written communication starting from SMS, Whats app, Facebook, Instagram, Line, and others. Even now it is developing into communication in online games or games and also online learning media. (UMA, 2021).

The Covid-19 pandemic period became a strong driving force in making digital communication reach a time when almost everyone uses digital communication in their daily lives. Until now, most people still use digital communication to make it easier to convey messages, exchange opinions, etc. Included in the learning process and the implementation of semester exams in tertiary institutions.

One of the biggest discoveries felt by all else of life in industrialization 4.0 includes the emergence of the existence of an android, this has a huge impact on every learning activity in the world of education (Nurhasanah Nasution, 2021). Smartphones are owned by almost everyone in all walks of life, from children to elderly people who already hold this telephone (Sinaga, 2019). The use of smartphones in the 4.0 era is no longer a luxury item. Because all people need this communication tool, including students and students. The use of a Smartphone or Android can be another alternative that can be used if a computer is not available. The demand to apply digital communication technology is a must for all elements of education in higher education. Almost all higher education tri-dharma activities are carried out using digital devices. Likewise, digital media is used to facilitate the tri-dharma activities of higher education.

Law No. 20 of 2003 concerning the National Education System has formulated the goals of national education, namely developing capabilities and forming dignified national character and civilization, in the context of educating the nation's life, aiming at developing the potential of students to become human beings who believe and fear God Almighty, have good morals noble, healthy, educated, capable, creative, independent and become a democratic and responsible citizen. (Indonesia, 2003) Based on the mandate of the National Education System Law mentioned above, all educational service institutions are obliged to develop education so that national education goals can be achieved. Various aspects of education which include the learning process, learning facilities and infrastructure, learning methods, strategies, and learning technology, as well as the competence of the teaching staff, need to keep up with educational developments that can meet national education standards and international standards to achieve these national education goals.

Dwi (2017), argues that in the current era of globalization, educators are required to be more active and creative in teaching and learning activities, for example in terms of taking grades and in conducting final semester exams. By using information and communication technology or digital technology, almost all learning activities can be carried out online or via a computer (digital device). Therefore, educators are required to be able to use technology related to education as it is today. (Ariyanti & Septiana, 2021) However, the learning process using ICT or digital technology is not implemented effectively if it is not supported by the necessary facilities and infrastructure. Ameli, et al (2020) stated that if the supporting facilities are inadequate, online learning will not be effectively carried out. In addition, Fauziyah (2020) and Sadikin & Hamidah (2020) demand the readiness of educators to prepare lessons so that the learning process can be effective (Syarifuddin et al., 2021).

The application of digital technology or information and communication technology in the world of education has given birth to a multimedia-based learning system. Multi-media-based learning can be carried out offline or online. Learning at this time is not only centered on teachers or educators but can use a variety of varied learning sources so that it is more attractive to students. The learning system that uses digital technology that has been implemented in tertiary institutions is electronic learning, which is abbreviated as E-Learning. There are several definitions of E Learning according to experts, including Allan J. Henderson (2003) argues that E-learning is distance learning using computer or internet technology. Then William Horton (2003) argued that E-learning is WEB-based learning that can be accessed from the internet. Meanwhile, Jaya Kumar C. (2002) explains E-learning is learning using electronic circuits (LAN, WAN, or internet) to convey learning content, guidance, or interaction (Setiawardhani, 2013).

E-learning is an innovation that has an important role in the learning process. The learning process in e-learning helps students to understand the material comprehensively in learning, as well as making learning fun and easier, namely by simply selecting a menu in the icon, learning material can be immediately displayed. Learning materials can be visualized in various formats and forms dynamically and interactively. Thus students become motivated to carry out the learning process using technology from the beginning to the end of learning. However, learning with E-learning has drawbacks due to a lack of control and mastery of using the E-learning application for educators and students, plus limited internet networks, lack of learning modules, and other supporting facilities. Therefore, the use of Blended Learning is the next step in the learning process.

Blended learning is learning that combines traditional learning in the classroom with online learning that uses information technology. Garrison & Vaughan (2008) argues that maximizing the integration of oral communication used in face-to-face learning with written communication in online learning is the basic concept of the Blended learning model (Usman, 2019). George-Walkera and Keeffeb (2010) argue that blended learning is an effective solution and strategy for meeting the learning needs of students and higher education as well as low risk. Students who have less time to study and who must be more committed to family, income, health, sports, technology, and other interests demand a range of access pathways to learning and information. The blended learning model is a learning model that is more effective and flexible and provides access to quality learning experiences for all students while meeting the requirements of efficiency and accountability in higher education institutions. The blended learning method shows that it can increase student learning interest. (Noervadila et al., 2021) In addition, the implementation of blended learning has a positive impact where lecturers and students are actively involved in learning activities, both online and face-to-face (Rini Ekayati, 2018).

Based on the various opinions above, we can conclude that the implementation of learning that is carried out by integrating face-to-face and online learning using digital technology is an effective learning strategy and generates interest in learning in students because it can interact intensely even though students and lecturers do not meet in class. This can also be applied to the implementation of semester exams and other tests such as college entrance exams and carrying out student assignments.

UAS or end-of-semester exams are a series of tests of lecture material given by lecturers to students at the end of the semester. Final exams are held every 6 months, at the end of odd and even semesters. (USM, 2014) Semester exams are conducted to determine graduation in the courses tested, as well as to measure the level of success of the learning process in the semester concerned. The value obtained by students can then be an illustration of whether students already have the expected learning output competencies or do not meet the expected achievements. Furthermore, corrective actions will be carried out on the deficiencies found in the previous study. Whether to improve learning methods, learning media, communication, or other deficiencies. So, the semester exam implementation is a mirror for us to see how a learning process has been carried out and what actions should be taken as a follow-up to the semester exam implementation activities.

The next most important thing in the implementation of the semester exam is to prepare for the implementation of the final semester exam as well as possible. Universities need to make good planning, implementation, supervision, and evaluation of the implementation of the end-of-semester exams, considering that the use of digital technology involves the ability of their resources to use applications related to the end-of-semester exams because most universities have prepared special applications to carry out the end of semester exams. So, the readiness of educators and students is a matter to be considered in carrying out the final semester exams using this special application. Especially the ability of teaching staff who will input student

scores into the assessment application that has been provided by the tertiary institution. As well as the readiness of students to upload answers and assignments given by educators or lecturers in learning applications using digital devices. This is in line with the research results which state that in designing the final semester exams several things must be considered, namely facilities related to question management, exam management, teacher management, and student management (Kurniadi, 2021).

So, in the implementation of the semester semester-end a, v the ability of the required facilities is very decisive for the smooth implementation of the exam, especially in this case the availability of digital device facilities and their applications. The readiness and ability to apply digital technology from students and students is an obligation that cannot be ignored. Thus, the implementation of the end of f send-of-semester takes place effectively and efficiently. It is necessary to supervise the implementation of the end-of-semester exams so that they end-of-semester exams run smoothly. Supervision activities are needed during the end-of-semester exams so that they can run smoothly as previously planned. Activities are also intended to anticipate possible obstacles that may arise in the implementation of the semester final exams. The concept of control (controlling) according to Siagian is the process of observing or monitoring the implementation of an organization's activities to ensure that all ongoing work is by a predetermined plan. In educational institutions, supervision is defined as an assessment related to an organization's efforts to improve its effectiveness and efficiency to achieve its goals. Assessment is carried out to assess whether the organization's activities are carried out properly or fail (Meriza, 2018). Supervision is also defined as a process to ensure that organizational and management objectives are achieved. This is related to ways to make activities according to plan (Iswandir, 2017).

The success of the educational process in achieving its goals can be measured by evaluating the output it produces. The evaluation carried out by the teaching staff is in the form of an evaluation of learning outcomes or an evaluation of learning. Evaluation of learning is an activity to control and guarantee the quality of learning, which is carried out as a form of accountability for the implementation of education. Assessments carried out in learning evaluations can use various methods and assessment tools to obtain information about learning outcomes and the extent to which student competencies are achieved (Razi, 2021).

Wand and Brown argue that educational evaluation is an action or a process to determine value in the educational process or anything related to education. Educational evaluation according to Shaleh has several functions, including:

1. Providing feedback to educators as a basis for improving the teaching and learning process.
2. Determine the number of students' learning abilities/outcomes needed to determine grade increases and determine whether students pass or not.
3. Determine students in appropriate teaching and learning situations, according to their level of ability.
4. Knowing the background (physical and environmental psychology) of students who have learning difficulties. (Syahril, 2007)

Learning evaluation carried out in tertiary institutions is carried out through end-of-semester exam activities which are held at the end of the current semester's learning. The final semester exams are carried out according to the plan and have been scheduled for implementation in the academic calendar of the academic year issued by the university. the purpose of learning evaluation is to measure and assess students' academic abilities, skills or expertise, and student character in accordance, nice with national education standards and in line with the vision and mission of the college.

### **3. METHODS**

The study employs qualitative methods within a post-positivist paradigm to explore the implementation of semester exams using digital technology. Qualitative methods are instrumental for gaining insights into social interactions, as they require researchers to engage deeply in these interactions to uncover clear patterns and relationships. The post-positivism paradigm emphasizes that understanding realistic truths involves interactive relationships between researchers and participants, necessitating the use of triangulation. This approach involves employing various methods, data sources, and analytical strategies to ensure a comprehensive understanding (Luthfiyah, 2020).

Data for this study were gathered through direct observation and in-depth interviews with relevant informants. The collected data were analyzed qualitatively to identify issues and provide an overview of the opportunities and challenges associated with implementing digital technology in semester exams. This analysis aims to assist universities in enhancing educational quality and improving graduate outcomes by aligning with advancements in digital technology.

### **4. RESULTS AND DISCUSSION**

This study investigates the implementation of semester exams in the digital age, focusing on the opportunities and challenges that universities encounter when integrating technological tools into the Tri Dharma of Higher Education. In today's educational environment, utilizing advanced and varied digital technologies is crucial for stakeholders, including both lecturers and students, who engage in the learning process from the beginning to the final evaluation. This includes the final semester exams, which assess students' academic abilities and determine their success in completing their courses.

In general, the end-of-semester exams are carried out in two ways, namely offline (face-to-face) and online (online). The use of digital technology is still carried out both in offline and online semester final exams, especially in conveying information regarding the implementation of exams and in the assessment, process carried out by lecturers or teaching staff. So even though the end of-semester exams are conducted offline or face-to-face in a class or place specified on campus, the use of digital technology is still used for the smooth implementation of the end-of-semester exams themselves. However, given the discovery of several obstacles in the implementation of the final semester exams related to the use of digital technology, the researchers conducted a discussion on the implementation of the final semester exams in the Digital Era, the opportunities and challenges by analyzing them based on several research categories, namely:

- i. Final semester exam planning
- ii. Implementation of end-of-semester exams
- iii. Supervision of end-of-semester exams
- iv. Final semester exam evaluation.

The following sections present the opportunities and challenges associated with semester exams in the context of modern digital technology, analyzed across these categories.

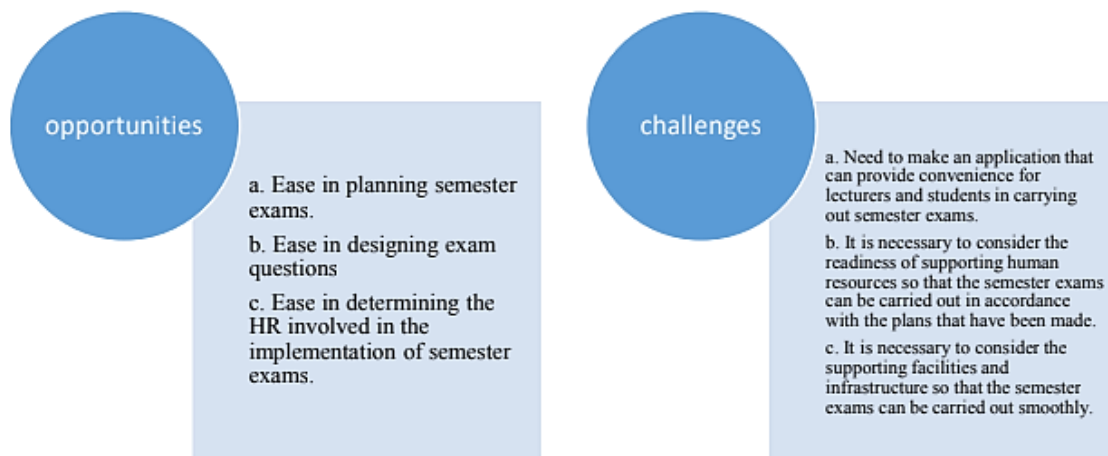
#### **4.1 Semester Examination Planning**

In the academic calendar, a semester exam schedule has been determined, whether it is the midterm exam (UTS) or the semester final exam (UAS). The faculty and Study Program (Prodi) prepare planning for the semester exam activities by determining whether to be held online or offline. Besides that, a semester exam schedule will also be determined which regulates

the time, date, and place where the exam will be, held and who will be involved as the coordinator and supervisor of the exam. The readiness of supporting facilities and infrastructure must also be ensured so that the exam can run smoothly.

Before the implementation of the final semester exams, the planning for the final semester exams must have been determined to be disseminated and informed to all students and lecturers as subject caretakers and supervisors appointed to oversee the course of the semester final exams, and also to the exam coordinator who is appointed as the person in charge of administering the exam. on the days determined for each exam coordinator. Information dissemination and delivery of end-of-semester exams to lecturers are conveyed in preparation meetings for final semester exams which are usually held by faculties before the end-of-semester exams are held, while for all students it is usually by using and utilizing the tertiary and faculty management information system in the form of delivery on the web. belonging to colleges and faculties and study programs, including on their social media accounts. In addition, lecturers are also obliged to forward information obtained from faculties and study programs to social media groups belonging to their respective subject classes. So that the information obtained by students related to the implementation of the end-of-semester exams can be ensured to all students who will take the end-of-semester exams.

From the data obtained in this study, several opportunities and challenges were found in the implementation of the semester final exams, which can be described as follows:



**Figure 1.** Semester Examination Planning, Opportunities, and Challenges Source: Research, Results.

In Figure 1 we can see that planning semester exams using digital technology provide opportunities, including:

- a. Ease of planning for semester exams: digital devices such as computers, laptops, and certain applications help facilitate planning for final semester exams, moreover the activities of implementing semester final exams are activities that are carried out repeatedly so that the colleges and faculties already have a standard concept. it only remains to fix if there are deficiencies that are deemed necessary to be corrected.
- b. Ease in designing exam questions: for lecturers designing the right exam questions that can measure all student competencies is very important. Digital devices are facilities that must be owned and used by lecturers so that they can design exam questions by the demands that course achievements and learning outputs can be fulfilled. In addition to exam questions, the design of student assignments is also intended to produce quality graduates who have expertise or skills that are appropriate to the subjects taught and are in line with the vision and mission of the study program and the faculty concerned.

- c. Ease in determining human resources involved in conducting semester exams: the faculty can easily arrange and determine who will be involved in conducting semester exams based on the needs and availability of human resources in the faculty. Such as test administrators, test coordinators, test supervisors, exam administration staff, and other officers assigned to carry out work during the final semester exams. This needs to be stipulated in the planning of the final semester exams to provide clear responsibilities as well as to regulate the rewards that will be given to each officer who has carried out their duties properly.

While the challenges that must be considered in planning the end-of-semester exams are:

- a. Need to make a special application that can make it easy for lecturers and students to carry out semester exams: Before the implementation of the final semester exams, universities or faculties need to make a special application that can be used to carry out semester final exams if you want to do them online, for example in E-Learning. It is also necessary to make a special assessment application that can be used by lecturers so that they can carry out the assessment process easily because, in the assessment application, all competencies will be assessed by the course caregiver. Thus the use of digital technology is expected to provide optimal benefits in the implementation of the semester-end exams.
- b. It is a new semester-insider the readiness of supporting human resources so that the semester exams can be carried out by the plans that all human resources involved in administering the exams need to be prepared especially those related to the use of digital technology and reliability in applying it. Before the implementation of the end of the semester before, it is necessary to carry out socialization and training, especially for lecturers if they are required to use a particular application. There should be no lecturers or students who are unable to use applications or digital devices that are required in the implementation of the semester's final exams.
- c. It is necessary to consider supporting facilities and infrastructure so that semester exams can be carried out smoothly: Facilities and infrastructure are supporting factors for the smooth implementation of semester exams. Lack of facilities and infrastructure can cause obstacles in the implementation of the exam. So, all parties must strive to provide these facilities and infrastructure before the end of the semester exams are held. Most of the facilities and infrastructure are required to be provided by faculties and tertiary institutions if the final semester exams are conducted offline. However, if it is done online, lecturers and students also need to provide their test facilities and infrastructure, such as digital devices that they will use during the exam. Digital devices commonly used by lecturers and students in carrying out the same semester-ends are computers, laptops, smart semester-end, and the like. So before the end end-of-semesters are carried out the obligated-of-semester digital devices must be conveyed to lecturers, especially students so that no one cannot take the exam due to the unavailability of the required digital devices.

## 4.2 Implementation of Semester Exams

Semester exams are usually conducted in the middle of each semester which is often referred to as UTS and carried out at the end of the current semester which is called UAS. Semester examinations are carried out in any predetermined plan semester carried out according to the schedule, in a place involving the specified supervisor. The implementation of online exams is different from the implementation of offline exams. The implementation of online exams is carried out using digital devices and digital media that have been provided by the university so that they can be controlled by institutions or officers who have also been assigned to do so. However, in terms of assessment, lecturers are still required to carry out the assessment process using an assessment application that is usually provided by the tertiary institution, where the



assessment application is intended to equalize the assessment techniques of all lecturers taking care of the course. Besides that, the assessment application has proven to be very helpful for lecturers in making good assessments.

If the end-of-semester exams are conducted online, then there are several opportunities and challenges which can be described as follows:

**Table 1** Implementation of Semester Examination, Opportunities, and Challenges Source: Research Results

Opportunities	Challenges
<ul style="list-style-type: none"> <li>a. Exams can be carried out from anywhere.</li> <li>b. The implementation of semester exams can be carried out more effectively because it allows students to take the exam under any conditions, as long as they can take the exam according to the exam schedule that has been determined in the semester exam planning.</li> <li>c. Examinations can be carried out efficiently, by saving both in terms of energy, time and resources involved in these activities.</li> </ul>	<ul style="list-style-type: none"> <li>a. Lack of supporting facilities and infrastructure, such as: not all students have laptops, computers, cell phones, wifi, data packages, and other technological tools needed in conducting exams.</li> <li>b. Not all students and lecturers have skills in using technological devices used as test facilities, so they experience difficulties in taking exams.</li> <li>c. There are external factors that interfere with exam activities, such as poor internet signal, power outages, and other factors.</li> </ul>

In Table 1 we can see that the implementation of semester exams online provides several opportunities, including:

- a. Exams can be carried out from anywhere: By using digital devices and certain learning applications, the end end-of-semesters can be carried out for any end-of-semesters there is a stable internet network, and can access these learning applications. Carrying out exams with digital devices such as computers, laptops, smartphones, and others allows lecturers and students to interact in a limited way in conveying exam questions, exam regulations, and other things needed so that the exam can take place smoothly.
- b. Semester exams can be carried out more effectively: Using digital devices makes it possible for students to take exams under any circumstances, as long as they can take the exams according to the exam schedule that has been set in the semester exam planning. Thus all students have the opportunity to take the exam and minimize the possibility of obstacles for students not taking the final semester exams.
- c. Exams can be carried out efficiently: Using digital devices makes the end-of-semester exams more efficient because it can save in terms of energy, time, and resources involved in these activities. Thus, the budget required for the implementation of the semester final exams can be reduced to a lower level.

While the challenges found are:

- a. Lack of supporting facilities and infrastructure: The fact is that not all tertiary institutions, lecturers, and students can provide facilities and infrastructure that meet the needs of holding end-of-semester exams using digital devices such as laptops, computers, cell phones, wifi, data packages, and other technological tools needed in the implementation of the exam. This needs to be a concern for the authorities to make policies that can provide solutions to educational problems so that all tri-dharma activities of higher education are not hampered because the need for information and communication technology and the digital devices that support it are not fulfilled. The education budget

should be directed towards fulfilling facilities and infrastructure so that the implementation of education in Indonesia is not left behind in the current digital era.

- b. Lack of skills in applying digital technology: In reality, not all students have skills in using technological devices used as exam tools, so they experience difficulties in taking exams. Some lecturers are not reliable in using digital devices and their applications, so the performance of lecturers is hampered, including in terms of carrying out semester final exams. Because of that, more socialization is needed for students to be able to use digital technology, especially the need for intensive training for lecturers so that they are capable and accustomed to using digital technology in higher education *tri dharma actri-dharmao* that they can improve their performance of lecturers after the training.
- c. There are external factors that interfere with exam activities: There may be several external factors that interfere with the implementation of the end-of-semester exams such as poor internet signal, power outages, and other factors. External factors like this can only be avoided by anticipating the possibility of disruption before the end-of-semester exams are held, for example by taking the exam in a place with a good internet connection, stable electricity, and if necessary providing a generator, a calm and conducive atmosphere so that you can take the exam smoothly.

### 4.3 Supervision of Semester Exam

Supervision is an activity that must be carried out if you want the implementation of the end-of-semester exams to run according to the previous plan. By supervising possible obstacles that occur during the final semester exams, they can be avoided or a solution can be found immediately during the exam. Semester examinations are carried out by involving several supervisors as needed. Usually, supervisors are determined according to the number of classes supervised by taking into account the ratio of students per class per supervisor. There is a supervisory coordinator whose job is to manage all supervisors on duty that day. All activities during the exam are managed by an exam coordinator who is responsible for that activity. In the implementation of online exams, supervision is carried out directly by the course caregivers in the classes each takes care of in the learning applications that are used as media for carrying out the end-of-semester exams. Therefore, the number of students tested is as many as students who take part in the class concerned and are not limited to the number per class.

There are several opportunities and challenges in exam supervision using digital devices or online, as described below:

**Table 2** Supervision of Semester Examinations, Opportunities, and Challenges Source: Research Results

Opportunities	Challenges
<ul style="list-style-type: none"> <li>a. Students are most likely to get good grades because exam supervisors cannot see students directly when working on exam questions, so the opportunity to dig up references for answers to questions or assignments is looser.</li> <li>b. Lecturers can supervise their own class, making it easier to provide directions that students need to pay attention to.</li> </ul>	<ul style="list-style-type: none"> <li>a. It is necessary to create an exam mechanism that makes it easier for supervisors to carry out supervision, so that the exam can take place smoothly and in an orderly manner following the provisions in the implementation of the semester exam.</li> <li>b. It is necessary to build intense communication with students through the use of digital communication media so that lecturers can convey information to students as well as monitor student progress in their respective classes.</li> </ul>

From Table 2 we can see that supervision of the implementation of online semester exams provides several opportunities, including:

- a. It's easier for students to get good grades: Students are more likely to get good grades because exam supervisors can't see students directly when working on exam questions, so the opportunity to dig up references for answers to questions or assignments is looser. The technological devices used can quickly provide information about the material being tested so that exam answers are better.
- b. Lecturers can supervise their classes: Lecturers become examiners who supervise their classes themselves during exams because the exams are carried out in learning media in their respective classes. This also makes it easier for supervisory lecturers to provide directions that need to be considered by students taking the exam.

While the challenges that need attention from the supervision of semester exams are:

- a. It is necessary to create an examination mechanism that makes it easier for supervisors to carry out supervision: An appropriate examination mechanism needs to be created so that it is easier for test supervisors to carry out supervision. Thus, the exam can take place smoothly and in an orderly manner following the provisions in the implementation of the semester exam.
- b. There is a need for class communication media: Lecturers need to build intense communication with students through the use of digital communication media so that lecturers can convey information to students as well as monitor student progress in their respective classes.

#### 4.4 Semester Examination Evaluation

In every activity carried out in the organization, an evaluation is always carried out after the activity has been completed. Evaluation is useful to know the extent of the success of the activities carried out as well as to see the advantages and disadvantages that appear from the results of the activities in question. Besides that, we can also estimate the opportunities and challenges that we might have to do in the future. Evaluation of the current semester exam usually uses an assessment application provided by the university or college concerned. This is done to answer the needs of today's digital era, where almost all higher education tri-dharma activities are carried out using digit digital dharma in the form of devices and digital media that support every activity in higher education.

The results of the analysis found several opportunities and challenges in the implementation of semester exam evaluations using digital digital applications which can be described as follows:

**Table 3** Semester Examination Evaluation, Opportunities, and Challenges. Source: Research Results

Opportunities	Challenges
a. Assessment can be done easily because all the answers are included in one application so they won't be scattered or lost.	a. Lecturers need to make appropriate learning methods so that all students get good grades and can work on all the questions and assignments assigned to them.
b. The assessment application allows students to get a high (good) score, as long as all the components requested contain the student's grade in question.	b. It is necessary to design a final evaluation by providing rewards for students who exceed a certain value (best achievement).
c. Lecturers can see student progress from test scores in the assessment application.	c. Need to make an assessment application that makes students more motivated to use all the potential that exists in them to

<p>d. Lecturers can consider whether the learning method used produces output in accordance with established standards or whether it is necessary to make improvements or changes to learning methods by looking at student values in the assessment application.</p>	<p>meet the assessment demands that exist in the assessment application.</p> <p>d. Need to provide a fair, just and accurate assessment, so that the assessment can describe the actual output of graduates so that they are motivated to make improvements and changes if the results of the assessment are not as expected.</p>
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From Table 3, we can see that several opportunities can be expected as a result of evaluating exams using digital applications, including:

- a. Easier assessment process: The assessment process can be carried out easily because all the answers are included in one application so they will not be scattered or lost. By entering student scores into the assessment form, the application will display student final grades which are a summary of test scores that students have worked on, such as attendance scores, attitude scores, independent assignment scores, structured assignment scores, grades midterm exams, and final exam scores.
- b. Get good grades: Asses, and sent applications to allow students to get high (good) grades, as long as all the requested components contain the grades of the student in question. Discipline towards student attendance and responsibilities in carrying out assignments and taking midterm exams (UTS) and final semester exams (UAS) is the main key to obtaining a good final grade for students. If all the components mentioned have values that are input in the assessment application, the final value that appears is usually good (good). So according to researchers, the use of the assessment application provides good opportunities for lecturers and students.
- c. Lecturers can see student progress from exam scores in the assessment application: Using an assessment application that summarizes and records all student scores allows lecturers to easily see student competency progress at any time so that it can be used as a basis for lecturers when they want to make a policy in their learning process.
- d. Basic considerations in improving learning methods: By looking at the lecturer's assessment application, they can consider whether the learning method used produces output by established standards or whether it is necessary to make improvements or changes to learning methods by looking at student values in the assessment application. Opportunities to create better learning methods arise by looking back at where the strengths and weaknesses of the learning process are based on the student's values.

While the challenges that come to the attention of the semester exam evaluation are:

- a. Lecturers need to make the right learning method: By using the right learning method, students can receive learning optimally, so that all students get good grades and can do all the questions and assignments assigned to them.
- b. Giving rewards for students: Lecturers should plan a final evaluation by giving rewards for students who exceed a certain value (best achievement). This is done to increase student motivation to be more active in participating in the learning process. Awards can take various forms, such as: giving certificates to those who get certain grades, being included in higher education tri dharma activities such as research and community service activities carried out by lecturers and study programs or faculties.
- c. Need to make challenging assessment applications: Assessment applications that are made should contain various forms of tests and assessments so that students are more motivated to use all the potential that exists in them to meet the assessment demands in the assessment application.
- d. It is necessary to make a fair, just, and accurate assessment: Lecturers need to provide assessments in the assessment application in a fair, fair, and accurate manner, so, that the

assessment given can reflect the actual output of graduates that they are motivated to make improvements and changes when the assessment results are not as expected.

## 5. CONCLUSION

Based on the results of our discussions, the implementation of semester exams using digital technology offers several advantages for students, lecturers, and universities, as outlined below:

- a. Planning: Digital technology facilitates the design of semester exam activities, enabling universities to accommodate various conditions effectively. It also encourages the development of user-friendly applications for seamless use by students and lecturers.
- b. Administration: The use of digital tools simplifies the technical aspects of exam administration, promoting efficiency and effectiveness. This necessitates universities to equip themselves with reliable resources to ensure smooth implementation.
- c. Supervision: While direct supervision remains ideal, digital solutions enhance monitoring capabilities, ensuring a fair examination environment. Universities must establish robust exam mechanisms to maintain accountability.
- d. Evaluation: Assessment applications streamline the grading process, providing an overview of learning outcomes. This allows lecturers and institutions to identify and address weaknesses in learning achievement promptly.

In conclusion, leveraging digital technology for semester exams enhances overall efficiency and effectiveness in higher education. It encourages continuous improvement in exam management and fosters better learning outcomes for students.

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