



## Long Paper

# Online Examination vs. Written Examination Preferences by the Department of Technology Teacher Education Students

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## Abstract

This study's primary goal is to determine DTTE students' exam-taking preferences. Hopefully, this research paper will enlighten readers on how written and online exams affect learning. Two (2) groups of students enrolled in Educational Technology Class were used as the study's respondents. Most Educational Technology students who answered the written exam had better grades in this study. Students who answered the online exam questionnaire had higher GPAs. However, students' profiles and academic performance influence their online and written exam preferences. According to the respondents, online testing has many advantages over traditional paper-based testing. It saves money because it eliminates the need for paper and pencil. It also provides instant feedback like scores or grades. Because it is conducted online, it is flexible in timing and location. Reduces human errors in marking because machine marking is more reliable and error less than human marking because they can edit their answer by clicking the edit button. Based on the findings, the following is advised: It is also suggested to conduct a quasi-experimental research design to examine the effectiveness of online examination. It is also recommended to increase the number of respondents to the study to obtain reliable and valid data.

**Keywords** – online vs. written exam, student's preference, exam preferences



## INTRODUCTION

People are now able to specify their particular requirements in a manner that is both more efficient and effective due to the widespread use of computers, which are capable of delivering a diverse set of technological capabilities. Students' academic performance and the instructions given by teachers are improved throughout the various phases of the educational process. Online examinations of Educational Technology courses serve as a new means of enhancing the teaching and learning process. The fact that physical separation can, in some circumstances, broaden and improve the development and improvement of society between the relationships between students and teachers. Online learning has emerged as the primary mode of delivery for teaching and learning endeavors as a direct result of the pandemic that was caused by COVID-19. This is because the culture of education has been significantly altered due to the pandemic. Online education is becoming increasingly popular; it is of the utmost importance to determine whether or not students are prepared to take part in an online class. Lasaraiya et al. (2021), an online examination system (also known as an online testing system) is a software application that allows a specific company or institute to arrange, conduct, and manage any objective examination through the internet. To be a part of the fastest-growing world, most companies and educational institutions are now working their exams online. In the findings of Elsalem et al. (2021), it was discovered that students at medical faculties had a lower preference for remote E-exams than previously thought. The findings of this study will be instrumental in developing academic strategies to overcome the difficulties and challenges of remote E-exams in the future.

According to Khare and Lam (2008), online testing examinations as a new teaching alternative may impact students' performance after they have learned the material. Increasing the international competitiveness of universities has always been a difficult task. There is no doubt why there is such a high level of concern about the effectiveness of online examinations in students' learning process today. On the other hand, many teachers believe that using a computer is almost mandatory for future employment. Computers are now actually found everywhere.

On the other hand, written tests are tests administered through the use of paper. A test taker could respond to specific items by writing them down in a designated space on the test paper when taking a written test. According to Sun (2015), an examination is an essential tool for assessing people's abilities that has permeated all aspects of society. However, a formal assessment is rife with malpractice, making the online examination system under investigation in this study of practical significance and academic significance. Increasing the use of information and communication technology (ICT) in more schools across the country is helping to improve teaching competitiveness. In a survey, teachers who had access to computers in the classroom reported higher levels of skill in delivering instruction, planning lessons, managing paperwork, and word processing, as well as spending more time using computers for reading and writing instruction, compared to teachers who did not have access to computers.

The primary goal of this study is to determine the preferences of the Department of Technology Teacher Education (DTTE) students in taking the exam in the classroom setting. The researcher hopes that this research paper will provide readers with new insight into how written and online exams affect students' ability to learn effectively.

### **STATEMENT OF THE PROBLEM**

This study aimed to determine the preferences of DTTE students in the College of Education, MSU-Iligan Institute of Technology, when taking online and written examinations. Specifically, it seeks to answer the following questions:

1. What are the profile of the respondents in terms of their sex, grade in Ed Tech A, and overall GPA?
2. What is the preference of the respondents in taking examinations: online and written examinations?
3. Is there any significant relationship between the respondents' preference in an online and written examination?
4. What are the qualitative responses of the student in taking the written and online exams?

### **HYPOTHESIS**

In addition to the problem statement, the researchers would like to test the null hypothesis at a 0.05 level.

H<sub>0</sub>: There is no significant relationship between the students' perceptions in online testing and written examination.

### **RELATED LITERATURE**

#### **TEST (ASSESSMENT)**

A test or examination measures a person's knowledge, skill, aptitude, physical fitness, or classification (e.g., beliefs). You can take a test orally, on paper, on a computer, or in a confined space where you must physically perform a set of skills. An instructor, clinician, governing body, or test provider may create and administer a test. Sometimes the test creator is not directly responsible for administration (Linden et al., 2000). According to Cao et al. (2019), the role of assessment in student learning is complex. Reviews influence students' expectations and experiences. The so-called hidden curriculum dictates what students study and how much time they devote to it. Students usually maximize study efficiency by matching their study to perceived assessment needs.

#### **COMPUTERIZED ADAPTIVE TESTING**

Computerized adaptive testing (CAT) adapts to the examinee's ability level. So it's also called tailored testing. CAT selects questions to maximize exam precision based on previous questions' information about the examinee. The exam's difficulty seems to match the examinee's ability. If an examinee does well on an item of moderate difficulty, he will

be given a more difficult question. If he failed, he would be asked a more straightforward question. Computer-adaptive tests require fewer test items than static multiple-choice tests, which use a fixed set of items for all examinees (Gershon, 2005).

Adaptive tests can give most test-takers precise scores. The best precision for medium-ability test takers is provided by standard fixed tests, while extreme test takers provide the worst accuracy. An adaptive test can be 50% shorter than a fixed test while maintaining the same precision. This saves the test taker time. Test takers do not waste time on too tricky or trivial items. The testing organization also saves time, lowering the cost of examinee seat time. Because developing a CAT is costlier than creating a standard fixed-form test, a large population is required to make a CAT testing program financially viable. Adaptive testing may reduce exposure to some items because examinees receive different sets of things than the entire population receiving a single stage. But it may expose others (Linden et al., 2000).

Student Online Advising at AMA College – Again, both studies are online systems with a specific purpose. Our project submission was also made online so that the professor could check/update it at any time. This study is significant because it discusses a new paperless assessment system. It expresses opinions on the current research on the effectiveness of Online Examinations. The report also highlights recent results of using Online Examination and previous experiments that show how effective it is for students, teachers, and others who prefer its use (Sun, 2015).

#### **CASE STUDY OF A COMPUTER-BASED EXAMINATION SYSTEM**

The Computer-based Examination models used multiple-choice questions and restricted students' access to more sophisticated software tools. (Fluck et al., 2009). Three groups of pre-service teachers (N=270) used a customized version of an open-source live CD based on Ubuntu. Students were split on whether to use computers or paper for exams, but prior exposure to computer-based testing was significant. During the e-Examination, students found the noise of computer keyboards distracting and preferred fewer on-screen windows. The new system allowed students to take e-Examinations securely on their laptops while invigilators without IT expertise supervised them.

Taşci (2014) found that proper exam execution is critical in Learning Management Systems. Problems arising from human or technical errors may doubt the exam and thus the system's reliability and efficiency. According to Karaman (2014), online assessments are vital to online learning. The quality of online examinations is debated. Nonetheless, the study examined the effects of online exams on students' engagement with course goals. According to Younis and Hussein (2015), Online Examination is an essential component of electronic and interactive learning. However, most exams are still on paper due to a lack of resumption capability when power/network/physical computer component failures. Thus, adopting and developing an online examination system has become a recent research focus.

## **COMPUTER VERSUS PAPER EXAM**

Kilickaya (2007) compared reading tests on paper and computer. He discovered that paper or computer administration affected the test takers' performance. Dewhurst et al. (2000) compared traditional and computer-assisted instruction. Sixty-two undergraduate Physiotherapy students studying Human Physiology also did well. A similar study compared the performance of 60 students studying Land Surveying at Extremadura University in Spain. They discovered that students used computer-generated references more than printed references. Also, students were more motivated to access computer-based information than similar information in print-based relations.

Similarly, Furnham et al. (2008) found that surface learners preferred multiple choice and group work options, while essay type and dissertation options were less selected. Deep learners preferred essay exams, oral exams, and final dissertations. Males preferred oral exams while females preferred coursework. Openness was positively associated with essays and oral exams but negatively associated with multiple choice and group work. Struyven et al. (2005) found that students' perceptions of assessment significantly influence their learning and studying approaches.

Similarly, students' study habits influence their perceptions of evaluation and assessment. Students have strong opinions about various assessment and evaluation formats. Students prefer multiple-choice exams to essay questions. Students question the 'fairness' of these well-known evaluation modes compared to more innovative assessment methods.

Pedagogy, validity, reliability, affective factors, practicality, and security were surveyed online by 342 undergraduate students. The results show that online exams outperform traditional paper-based exams regarding grading reliability and efficiency in terms of time, effort, and money spent. However, participants identified many obstacles to implementing online exams, including security, validity, and fairness. The findings also show that e-exams are better suited for formative assessment than summative assessment. Online exams must be valid, reliable, secure, and flexible to be implemented successfully (Shraim, 2019).

## **RESEARCH METHODOLOGY**

This chapter presents the procedure employed in the conduct of the study. It includes the research design, research locale, study respondents, data gathering, research instrument, and statistical tools.

### **RESEARCH DESIGN**

A survey method was explicitly utilized the cross-sectional surveys. This was used to gather information on a population at a single time. A different cross-sectional survey questionnaire was used to determine the relationship between online testing and written examination evaluation.

## **THE POPULATION OF THE STUDY**

This study included forty (40) students from the Department of Teachers Technology Education who were enrolled in either the Educational Technology A or B courses offered by the College of Education. Responses from twenty (20) DTTE students enrolled in Edtech B who answered the Online Exam questionnaire and twenty (20) DTTE students enrolled in Edtech A who answered the written Exam questionnaire were used to compile the results of this study. These students' overall grade point average and performance in Educational Technology A subjects served as the intervening variables.

## **DATA GATHERING PROCEDURE**

The following procedure was followed to gather the necessary information. A request letter was forwarded to the Chairman of the DTTE for his consideration. An additional note of permission was issued to the instructors of the Educational Technology course after it had been approved. This study's researchers and EdTech instructor agreed that students would not be informed of this endeavor to ensure the accuracy of the results. The students are aware that the survey questions they answered are part of the requirements for the course they are taking at the moment. DTTE students in the College of Education evaluated the two (2) testing approaches and tabulated and interpreted the results to determine which of the two (2) testing approaches was the most effective.

## **RESEARCH INSTRUMENTS**

To acquire the essential information needed to answer the problems in this study, the researchers prepared a test questionnaire for Online and Written Exams adopted from Chen (2007) to evaluate their perceptions of the testing approaches. These are the criteria for evaluating the written exam: *"Overall, the written exam is excellent"; "Overall, the instructor was an excellent teacher in facilitating to us the written exam"; "I learned a great deal from taking the written exam"; "I gained a good understanding of concepts/principles in this field"; "The clarity of instruction in the written exam was good"; "I was motivated to answer all the questions in the written exam"; "I enjoyed answering the written exam"; and "The written exam was interesting."*

Similarly, also in evaluating the online exam: *"Overall, the online exam is excellent"; "Overall, the instructor was an excellent teacher in facilitating to us the online exam"; "I learned a great deal from taking the online exam"; "I gained a good understanding of concepts/principles in this field"; "The clarity of instruction in the online exam was good"; I was motivated to answer all the questions in the online exam"; "I enjoyed answering the online exam"; and "The online exam was interesting."*

The instrument was provided with directions on how to answer the questions. There were eight (8) questions or criteria to evaluate the respondent's perceptions of the two (2) approaches. These could be answered using the five (5) scale from strongly disagree (SD) to Strongly Agree (SA). The open-ended question was also provided to determine the students' qualitative responses to the two (2) testing approaches.

In interpreting the mean ranges using the 5 Likert scales on the level of agreement, the interval from 4.2 to 5.0 (strongly agree); 3.4 to 4.19 (agree); 2.60 to 3.39 (undecided); 1.80 to 2.59 (disagree); and 1.0 to 1.79 (strongly disagree).

### STATISTICAL TOOLS

The data collected were tabulated using the percentage, frequency, and mean to assess the students' overall perceptions of the present condition of the facilities. A paired t-test was also used to compare the significant relationship between the respondents' preferences in an online and written examination. The test statistic in the t-test is known as the t-statistic.

## RESULTS AND DISCUSSION

This interpretation focused on the survey of the preferred learning assessment of the DTTE students taking up Educational Technology courses in the Department of Technology Teacher Education (DTTE) College of Education, MSU-IIT on the preference of Online Exam and Written Examination.

Table 1. Profile of the DTTE students according to their Sex

Gender	Online Exam		Written Exam	
	F	%	F	%
Male	8	40.0	6	30.0
Female	12	60.0	14	70.0
Total	20	100.0	20	100.0

Table 1 depicts the DTTE students' profiles' distribution in terms of their gender, based on the survey results. There were eight (8) male respondents, accounting for 40% of the total, and twelve (12) female respondents, accounting for 60% of the total. Female respondents constituted fourteen (14) percent, with six (6) male respondents constituting thirty percent of those who took part in the survey to determine their preference for written exams.

The findings reveal that most DTTE students who took part in the study to assess the effectiveness of the online and written exams were female.

The performance of the DTTE students in the two (2) testing approaches was exhibited in table 2.

Table 2. Profile of the DTTE students according to their Grade in EdTech A

Grade in Ed Tech A	Online Exam		Written Exam	
	F	%	F	%
1.50 - 1.75	11	55.0	13	65.0
2.00 - 2.25	3	15.0	5	25.0
2.50-2.75	6	30.0	2	10.0
Total	20	100.0	20	100.0

As shown in Table 2, the distribution of respondents' grades on their EdTech A is broken down into two categories: frequency of responses and percentage of responses. Eleven (11) respondents, or 55 percent of those who took part in the perception of the effectiveness of online testing, received grades ranging from 1.50-to 1.75, three (3) respondents, or 15 percent, received grades ranging from 2.00-to 2.25, and six (6) respondents, or 25 percent, received grades ranging from 2.50-2.75. According to the results of the perception of the effectiveness of the written exam, thirteen (13) respondents or 65 percent received a grade between 1.50 and 1.75, five (5) or 25 percent received a grade between 2.00 and 2.25, and two (2) or 10 percent received a grade between 2.50 and 2.75.

The findings show that most respondents who received a better grade in EdTEch A are from the group who believed that the written exam was practical.

Table 3. Profile of the DTTE students according to their Overall GPA

GPA	Online Exam		Written Exam	
	F	%	F	%
1.50 - 1.75	1	5.0	1	5.0
2.00 - 2.25	14	70.0	10	50.0
2.50-2.75	5	25.0	9	45.0
Total	20	100.0	20	100.0

Based on their overall grade point average, the distribution of DTTE students' profiles is depicted in Table 3. (GPA). The survey participants who took part in evaluating the effectiveness of the online exam had an overall GPA ranging from 2.00 to 2.25. Five (5) respondents, or 25 percent, had an overall GPA ranging from 2.50 to 2.75, and only one (1) respondent, or 5 percent, had an overall GPA ranging between 1.50 and 1.75.

According to the results of the study to determine how practical the written exam was, ten (10) respondents, or 50% of those who participated in the study to determine how helpful the written exam was, had an overall GPA ranging from 2.00- 2.25, nine (9) respondents or 45 percent had 2.50-2.75 and only one (1) respondent or 5% had 1.50-1.75. The remaining respondents had an overall GPA ranging between 1.5 and 1.75 on a scale of 1.

As evidenced by the data, the vast majority of those who participated in the perception of the preference for online exams outperformed those who participated in the written exam in terms of their academic performance.

The distribution of frequency on the degree of responses to the perceptions of the students treated in the online examination is presented in table 4.



Table 4. Evaluations of the Students on the Online Examination

	Criteria	Scale					Mean	Remarks
		SA	A	U	D	SD		
1	Overall, online is excellent	2	13	3	2	0	3.75	Agree
2	Overall, the instructor was an excellent teacher in facilitating to us the online exam	4	12	4	0	0	4.00	Agree
3	I learned a great deal from taking online exam	2	14	4	0	0	3.90	Agree
4	I gained a good understanding of concepts/principles in this field	2	13	5	0	0	3.85	Agree
5	The correct answers provided for the questions I answered wrong in the online test are essential in learning online	3	15	2	0	0	4.05	Agree
6	The clarity of instruction in the online exam was good	2	15	3	0	0	3.95	Agree
7	I was motivated to answer all the questions in the online exam	6	8	6	0	0	4.00	Agree
8	I enjoyed answering the online exam	5	9	4	2	0	3.85	Agree
9	The links to the explanation of the correct answers tell me what I do not know and help me improve my understanding of online exam	3	13	4	0	0	3.95	Agree
10	The online exam was interesting	7	8	4	1	0	4.05	Agree
Overall Mean							3.95	Agree

As shown in Table 4, the following indicator has positive perceptions due to the outcome. Overall, online learning is excellent, as evidenced by a mean of 3.75; "Overall, the

instructor was an excellent teacher in facilitating to us the online exam," as evidenced by a mean of 4.00; "I learned a great deal from taking the online exam," as evidenced by a mean of 3.90; "I gained a good understanding of concepts/principles in this field," as evidenced by a mean of 3.85; "The correct answers provided for the questions I answered incorrectly in The overall weighted mean of 3.95 indicates that the students have positive perceptions of the Online Examinations in their comprehensive evaluation.

Several authors, including Widodo et al. as cited by Lasaraiya et al. (2021), have proposed that online learning readiness can be assessed based on a few factors, including equipment capability, technology skills, self-directed learning, motivation, and perceived usefulness. This finding was consistent with the study findings conducted by Anwar et al. (2020), which stated that students still require additional time to become acclimated to online learning and require more guidance from their teachers and lecturers. Computer devices and internet access are examples of equipment capability, and research has shown that these significantly impact students' readiness. Shraim (2019) said that students' perspectives on online exams have yet to be explored. As a result of the study, online exams were perceived to have significant advantages over traditional paper-based exams, including more excellent reliability in grading and greater efficiency in terms of time, effort, and money spent on the exam process.

Table 5. Perceptions of the Students Treated in Written Examination

	Criteria	Scale					Mean	Remarks	Quality Description
		SA	A	U	D	SD			
1	Overall, the written exam is excellent	2	15	1	1	1	3.80	Agree	Good Perception
2	Overall, the instructor was an excellent teacher in facilitating to us the written exam	4	14	1	1	0	4.05	Agree	Good Perception
3	I learned a great deal from taking the written exam	7	9	4	0	0	4.15	Agree	Good Perception
4	I gained a good understanding of concepts/principles in this field	5	13	2	0	0	4.15	Agree	Good Perception
5	The clarity of instruction in the written exam was good	7	11	1	1	0	4.20	Strongly Agree	Very Good perception
6	I was motivated to answer all the	7	10	2	1	0	4.15	Agree	Good Perception

	questions in the written exam								
7	I enjoyed answering the written exam	6	9	4	1	0	4.00	Agree	Good Perception
8	The written exam was interesting	6	11	3	0	0	4.15	Agree	Good Perception
Overall Mean							4.05	Agree	Good Perception

The majority of the items in this criteria have positive perceptions, except item 5, which describes that the "clarity of instruction in the written exam was good" and has a mean of 4.20 points. This result indicates that the student has an excellent perception of the clarity of the instructions in the written examination, as demonstrated by this result. On the other hand, the written test has favorable perceptions on the following indicators. The written exam received a mean score of 3.80; "Overall, the instructor was an excellent teacher in facilitating to us the written exam" received a mean score of 4.05; "I learned a great deal from taking the written exam" received a mean score of 4.15; "I gained a good understanding of concepts/principles in this field" received a mean score of 4.15; "I was motivated to answer all the questions in a written exam" received a mean score of 4.00; and "I enjoyed

It was revealed by the overall weighted mean of 4.05 that the students have positive perceptions about the written examinations. Garg et al. (2014) conclude that test blueprinting and a table of specifications should be used during the test construction process to ensure proper validation of our evaluation system. By aligning course objectives with assessment content, educators can ensure that all students receive a unified curriculum experience. This implies that the quality of the exam prepared by the teacher may impact students' preferences. According to the research conducted by Huxham et al. (2012), many students believed that oral assessments were more helpful than written evaluations. According to the authors, oral examinations may be more inclusive than written assessments, and they may also be more effective tools in assisting students in developing their own "professional identity.". Göçer (2014) added that the written examination questions used to determine students' cognitive/affective domain acquisitions are not uniformly distributed across Barrett's Taxonomy sublevels, consistent with previous research.

Table 6. Student's Overall Evaluations on the Online and Written Exam

Online Exam		Written Exam	
Overall Weighted Mean	Interpretation	Overall Weighted Mean	Interpretation
3.95	Agree	4.05	Agree

As shown in Table 6, the mean distributions of responses to the overall perceptions of respondents in terms of the effectiveness of the online and written exams are depicted. Examined in comparison to online testing, the written exam received seven (7) "strongly agree" responses, while online testing received six (6) such responses. (See table for a breakdown of reactions). On the other hand, both testing approaches have a frequency of eleven for the "agree" response (11). Meanwhile, more respondents in the online group than in the written group indicated that they were "uncertain." The written exam received a higher overall mean score of 4.05, while the online exam received a lower score of 3.95. The results revealed that DTTE students preferred the written exam over the online exam.

Table 7. Paired T-Test results on the distribution of mean on the Online and Written Exam

	Paired Differences		t	df	Sig. (2-tailed)
	Mean	Std. Deviation			
Online vs Written	.13500	.84427	.715	19	<b>0.483</b>

This section discusses how the perception of the online exam correlates with the perception of the written examination. With a p-value of 0.483, the results revealed no statistically significant contribution or relationship between how the students perceived the online and written examinations. The findings indicate no statistically significant relationship between the overall perceptions of the respondents about the effectiveness of the online and written reviews.

### **CONTENT ANALYSIS OF THE RESPONDENTS' EVALUATION OF THE WRITTEN EXAMINATION**

This section exhibits the qualitative responses of the twenty (20) respondents in terms of their perceptions of the effectiveness of written examination.

#### **A. Their best sections in Written Exam.**

Twenty (20) students were asked to write their best sections in taking the written exam. Their responses were categorized into three (3) areas: on-time aspect, advantages, and the type of test used. In terms of the benefits, two (2) students said that "If there is no internet or power, interruption still could be possible. It is easier to review," and "You don't need to pay for the internet."

However, four (4) of the students focused their responses on the type of test as their best sections in taking the written exam. One student said that "Multiple choice and essay part because choices are given, and all I have to do is choose out from the best. Another student also added that "the essay is also the best for I can express my point of view and the probability of mistakes." Similarly, to the third and fourth student "the best section in the written exam is the essay. I could easily answer it," and "The best section in written exam is the enumeration. I could easily memorize it".

Most of the respondents write their feedback on the role of time in taking the written exam. Fifteen of 20 students emphasized that when taking the written exam, they have enough time to think before answering, and the best is they still have more time to review and recheck the wrong ones. One student said that *"Written exam was best in the sense that we can analyze every question nor be able to choose the answer with the hint given from the questions."* Similarly, one student said, *"The best section in the written exam it's because we can analyze every question."* They will not be pressured because they were not aware of the time, and the best thing is that they could expound on their answer and express their understanding or opinion on the given questions. Two (2) students said that *"I like essays because we can explain the processes, and it challenges my mind to think and recall everything that has been discussed,"* and *"Your mind focuses only on the test proper."* For them, they felt motivated because they could write thoughts and feelings. In this instance, the role of time in taking the written exam has a significant impact on answering the exam. Students are motivated to answer the exam if the exam is outstandingly constructed. Test constructions considerably impact the learners' performance in answering the examination (Garcia & Arias, 2000).

### **Their worst section in Written Exam.**

Twenty (20) students were asked to write their worst sections in taking the written exam. Their responses were categorized into three (3) areas: the aspect of cheating, disadvantages, and the type of test used in the written exam. Three (3) students attest that taking the written exam is prone to infidelity. They said, *"Written exam can be worst in the sense that we can cheat and ask answers from our seatmates because we have the same questionnaires not can have leakage because it was written already."* Two (2) students also added that *"Written exam can be worst when you could get a different idea to your seatmate"* and *"It is prone to cheating."*

Other students also focused their responses on the type of test preparation in taking the written exam. The identification, multiple-choice, essay, and filling the blank type of tests are tense, especially in the written exam. They said, *"The worst section in the written exam is identification. The given sentences are sometimes confusing";* *"Multiple choice because it's too hard to think the best answer, especially if the choices are comparison. Maybe just because I love essays";* *"Identification because sometimes I cannot find it correctly,"* and *"Broad questions and application."*

Some students emphasized their responses on using paper in taking the written exam. They said that *"Sometimes written exams are why we waste a lot of papers,"* and *"what I don't like bout written exam is paper consuming."* Others also said, *"it is so tiring to write, especially the essay,"* and *"the worst thing is that it is very tiring to write your answers."* Only a few students said that they find it hard to combine ideas and comprehend the questions. A few students emphasize that *"it's when you see that time is running out, but you're not yet done answering because you have many ideas and don't know how to combine them"* and *"Homogeneous questions that have*

encountered.” The study conducted by Cuarto et al. 2021 pointed out that the level of classroom assessment practices across all factors is significantly influenced by the years of teaching experiences as well as the highest educational attainment of the faculty. Results also supported the impact of professional development on classroom assessment practices and reported a positive trend whereby a higher number of years of teaching experiences and higher educational attainment results in higher levels of classroom assessment practices.

## **CONTENT ANALYSIS OF THE RESPONDENT'S EVALUATION OF THE ONLINE EXAMINATION**

This section will exhibit the qualitative responses of the twenty (20) respondents in terms of their perceptions of the effectiveness of online examinations.

### **B. Their best sections in the online**

Various responses were exhibited when students were asked about their best sections in taking the online exam. Twenty (20) respondents provided feedback on which sections of the online exam they felt were the most effective. The majority of their responses state that taking an online exam is the best option because they will never have to write their answers on paper again. It is said by the student that *"It will not use pen or paper, and we can have all the references on the net if we don't have an idea about the exam. lastly, we can change answers without using correction fluid, so it will not lock dirty."*; *"We don't need a pen/pencil to answer the exam. It is effortless to click the answers, and you can easily edit your answer when you think it is wrong";* and *"It doesn't involve paper and ink. It is easy to access and effective, especially in changing errors and answering mistakes. Answering online exams is faster than written"*.

It is a hassle-free process for them; as stated by a student, *"It is a hassle-free exam."* Hassle-free to the point that they will no longer use a pen to write their answer and the good thing is that after taking the exam, they will immediately know their exam score. A student says that an online exam is *"Exciting because the exam result automatically results. It is also easy to answer because we only check or click the mouse to have an answer,"* and they can easily change their responses. They assert that taking an online exam will help them develop and improve their computer skills and make them more focused when answering the questions. They said that *"It will alert my mind on thinking the correct answers to the questions given because it has a time limit. Also, it will develop my capacity /skill in using the computer";* and *"It helps me be more interested in any online exams and improve my skills in using the computer."* Learners find the online environment a convenient way to fit education into their busy lives. The ability to access a course from any computer with Internet access, 24 hours a day, seven days a week is a tremendous incentive for many of today's students (Rivera & Tanghal, 2021).

However, one (1) student asserts, *"You can search the net for the answer. He said, "he still has time to search for the answer on the internet. But if there is a time limit, they said that "you can focus on answering the questions on your own"; "You don't have enough time to answer if the questions are critical.*

### **C. Their worst section in the online**

When asked to describe the sections of the online exam that were the most difficult, most respondents stated that the time constraints were the most difficult. They said that *"It is when the teacher limits the time, and that makes him panic to answer the questions"; "It has a time limit"; "The time limit to answer online exam is, so pressure and I can't think clearly because of the time"; and "Time limit because sometimes you can't answer the questions well esp. essay."* Students are complaining that taking the online exam has a time limit. They said, *"we have a time limit that we consider because of that time we cannot read correctly, and we read fastly than the written exam. "*

They also claim that the loss of internet connection caused them to feel jittery while taking an online exam. According to them, the internet connection made a significant contribution to integrating online exams to assess students' performance in classroom settings. These are their responses *"Poor Internet Connection"; "When the internet is not working, and the worse is that while you answer the questions quickly off the monitor, so it is wasting of time also, and chances to pass"; "I hate online exams when there's a time limit and when your computer suddenly turns off, you have to go back to the start"; "No internet connection, electricity and the time allotment in the exam because you cannot do the exam without it and the time you cannot deeply because you're thinking about the time. It destructs the students" and "Students will have difficulty submitting their answers when the internet access is unavailable. Another case is you cannot access the exam without electricity and internet connection."* Some said, *"It's practice for us to be lazy because of technology."* This is what Taşci et al. (2014) stated written and online have their unique features and their own worst section depending on how the user perceives their needs.

The study conducted by Balahadia (2022) gained a significant relationship between student profile in the device used in class, internet connectivity, student type of data connection, capability to attend online class, and their commitment to participate and submit class requirements. The study identifies different interrelated challenges such as the majority of the student only using smartphones in online learning and poor internet connection as they tried to adapt to online learning because they are committed to participating and submitting requirements.

This study's significant findings show that the majority of the DTTE students who participated in perceiving the online and written exam effectiveness were female. The majority of the respondents with good grades in EdTEch A come from the group who perceived a preference for the written exam. The majority of the respondents who participated in perceiving the effectiveness of the online exam performed better in their academe than the respondents in the written exam. With an overall mean of 4.05 (written exam) and 3.95 (online exam), results revealed that the DTTE students perceived the written exam better than the online exam. Results show that there is no significant relationship between the overall evaluation of the respondents on the taking online and written examination. Twenty (20) respondents shared their feedback on the best sections in the online exam. Most of their responses say that the online exam is best because it will no longer use pen and paper to write their answers. For them, it is hassle-free and can easily alter their responses. They insist that online exams could develop and enhance their computer skills and even make them focused on answering the answer. As to their responses describing the worst sections in the online exam, most respondents say the time limits made them foulest. They also insist that the loss of internet connection makes them feel stropy on using online exams. For them, the internet connection had a significant contribution in integrating online exams to assess students' performance.

## **CONCLUSIONS**

The profile of the student and their academic performance have an impact on their preferences for taking online and written exams. The DTTE students' preferences for taking online and written exams are influenced by their overall academic performance. The better one's academic performance, the greater the likelihood of being selected for an online exam. Students in the DTTE prefer the written exam over the oral exam.

## **RECOMMENDATIONS**

Based on the conclusions drawn, the following are recommended. A further study is recommended on qualitative research on "Live experiences among students taking the examinations." It is also suggested to conduct a quasi-experimental research design to examine the effectiveness of online examination. It is also recommended to increase the number of respondents to participate in the study to have reliable and valid data—further research will be conducted regarding the gender preference between males and females. It is also suggested a very close study to support or cross-reference study must be done and recommended.

## **REFERENCES**

- Anwar, K. I. S., Omar, N., Isa, M. N. S., & Shamsudin, S. M. (2020). Students' Acceptance and Readiness towards Distance Learning during COVID-19 Pandemic. *International Journal of Education and Pedagogy*, 2(4), 39-50.
- Balahadia, F. F. (2022). Challenges of Information Technology Education Student's Online Classes during the Covid-19 Pandemic in Selected Public Colleges and Universities in the Philippines. *International Journal of Computing Sciences Research*, 6, 877-892.



- Cao, Y., Porter, L., Liao, S. N., & Ord, R. (2019, July). Paper or online? A comparison of exam grading techniques. In *Proceedings of the 2019 ACM conference on innovation and technology in computer science education* (pp. 99-104). Retrieved from <https://dl.acm.org/doi/abs/10.1145/3304221.3319739>
- Dewhurst, D. G., Macleod, H. A., & Norris, T. A. M. (2000). Independent student learning aided by computers: An acceptable alternative to lectures? *Computers & Education*, 35, 223-241.
- Elsalem, L., Al-Azzam, N., Jum'ah, A. A., & Obeidat, N. (2021). Remote E-exams during Covid-19 pandemic: A cross-sectional study of students' preferences and academic dishonesty in faculties of medical sciences. *Annals of Medicine and Surgery*, 62, 326-333.
- Fluck, A., Pullen, D., & Harper, C. (2009). Case study of a computer-based examination system. *Australasian Journal of Educational Technology*, 25(4). Retrieved from <https://ajet.org.au/index.php/AJET/article/view/1126>
- Furnham, A., Christopher, A., Garwood, J., & Martin, N. G. (2008). Ability, demography, learning style, and personality traits correlate with student preference for assessment methods. *Educational Psychology*, 28(1), 15-27.
- Garcia, M. R. & Arias, F. V. (2000). A comparative study in motivation and learning through print-oriented and computer-oriented tests. *Learning*, 13(4-5), 457-465.
- Garg, R., Saxena, D., Shekhawat, S., & Daga, N. (2013). Analytical study of written examination papers of undergraduate anatomy: Focus on its content validity. *Indian Journal of Basic & Applied Medical Research*, 2(8), 1110-1116. Retrieved from <https://www.ijbamr.com/assets/images/issues/pdf/1110-1116.pdf.pdf>
- Gershon, R. C. (2005). Computer adaptive testing. *Journal of Applied Measurement*, 6(1), 109-127. Retrieved from <https://psycnet.apa.org/record/2005-01569-008>
- Göçer, A. (2014). The Assessment of Turkish Written Examination Questions Based on the Text in Accordance with the Barrett's Taxonomy. *International Journal of Languages' Education and Teaching*, 3, 1-16. Retrieved from <https://eric.ed.gov/?id=ED557158>
- Huxham, M., Campbell, F., & Westwood, J. (2012). Oral versus written assessments: A test of student performance and attitudes. *Assessment & Evaluation in Higher Education*, 37(1), 125-136.
- Karaman, S. (2011). Examining the effects of flexible online exams on students' engagement in e-learning. *Educational Research and Reviews*, 6(3), 259-264. Retrieved from <https://academicjournals.org/journal/ERR/article-abstract/05929BF4871>
- Kilickaya, F. (2007). The effect of computer assisted language learning on Turkish learners' achievement on the TOEFL Exam. *Online Submission*. Retrieved from <https://eric.ed.gov/?id=ED506354>
- Khare, A., & Lam, H. (2008). Assessing student achievement and progress with online examinations: Some pedagogical and technical issues. *International Journal on E-learning*, 7(3), 383-402. Retrieved from <https://www.learntechlib.org/p/23620/>
- Lasaraiya, S., Abd Rajak, M. A., Hussin, C. H. C., & Juhan, N. (2021). An assessment of ums pre-university students 'readiness on online examination. Retrieved from <http://www.jistm.com/PDF/JISTM-2021-23-11-13.pdf>

- Linden, W. J., van der Linden, W. J., & Glas, C. A. (Eds.). (2000). *Computerized adaptive testing: Theory and practice*. Springer Science & Business Media. Retrieved from <https://link.springer.com/book/10.1007/0-306-47531-6?noAccess=true>
- Rivera, A., & Tanghal, A. (2021). Student-based assessment on the utilization of innovative teaching methods in the new normal. *Puissant*, 2, 236-255. Retrieved from [//puissant.stepacademic.net/puissant/article/view/62](http://puissant.stepacademic.net/puissant/article/view/62)
- Shraim, K. (2019). Online examination practices in higher education institutions: learners' perspectives. *Turkish Online Journal of Distance Education*, 20(4), 185-196. Retrieved from <https://dergipark.org.tr/en/pub/tojde/issue/49972/640588>
- Struyven, K., Dochy, F., & Janssens, S. (2005). Students' perceptions about evaluation and assessment in higher education: A review. *Assessment & Evaluation in Higher Education*, 30(4), 325-341. Retrieved from <https://www.tandfonline.com/doi/abs/10.1080/02602930500099102>
- Taşci, T., Parlak, Z., Kibar, A., Taşbaşı, N., & Cebeci, H. İ. (2014). A novel agent-supported academic online examination system. *Journal of Educational Technology & Society*, 17(1), 154-168. Retrieved from <https://www.jstor.org/stable/jeductechsoci.17.1.154>
- Younis, M. I., & Hussein, M. S. (2015). Construction of an online examination system with resumption and randomization capabilities. *International Journal of Computing*, 4(2), 62-82.