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Analysis of differential interests: A quantitative approach to learning method preferences between religious-nonreligious and institutes-universities

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Abstract: This study endeavors to scrutinize student contentment levels regarding pedagogical approaches utilized by educators amidst the backdrop of the Fourth Industrial Revolution, with a particular emphasis on students categorized by their fields of study and institutional affiliations. Data were collated from 123 student participants drawn from diverse universities within the Province of Jambi. This research used a structured online questionnaire to acquire data in employing a quantitative methodology. Data analysis involved the utilization of a Likert scale to gauge the degree of student satisfaction. Assumption testing was used to analyze the Likert scale. In this study, assumption testing using independent sample t-tests, also viewed through the acquisition of proportion values, was used to determine how differences in satisfaction levels were found. Findings reveal noteworthy student satisfaction concerning instructional methodologies, notably in punctuality, subject matter proficiency, instructional delivery, and assessment and evaluation procedures. Moreover, evaluating instructor performance, as perceived by students vis-à-vis their respective majors and institutional statuses, substantially impacts satisfaction levels with pedagogical strategies across various facets of the learning process. The cumulative average significance of overall satisfaction with instructional methodologies among students enrolled in universities within Jambi. Nonetheless, areas necessitating enhancement, such as evaluation and assessment practices, alongside fostering emotional rapport between students and instructors, are underscored as imperative for promoting an optimal learning environment.

Keywords: education revolution; higher education; students satisfaction; teaching methods.

A. Introduction

The educational landscape has experienced a profound metamorphosis propelled by the ubiquitous integration of digital technology and the burgeoning accessibility of the Internet (Abdel-Basset et al., 2019; Terzieva et al., 2022). The strides made in

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information and communication technology have heralded many prospects and obstacles within the realm of learning (Escueta et al., 2020; Ngoc et al., 2020). Within this dynamic evolution, online, traditional face-to-face, and hybrid instructional modalities have emerged as focal points within the educational arena (Hehir et al., 2021; Pattier & Ferreira, 2023; Petchamé et al., 2023). The global upheaval wrought by the Covid-19 pandemic stands as a catalyzing force behind this paradigm shift, compelling numerous institutions of higher learning to pivot towards online or hybrid instructional methodologies to ensure the uninterrupted provision of education (Ausat, 2022; Dennis, 2020; Rulandari, 2020).

Face-to-face instruction epitomizes a conventional educational modality predicated upon direct, interpersonal engagement between instructors and students within a tangible classroom environment (Bali & Liu, 2018; Gherheș et al., 2021). This pedagogical approach underscores the immediacy and richness of real-time interaction, facilitating nuanced exchanges of knowledge, feedback, and discourse. Within this traditional framework, the physical proximity between educators and learners engenders a conducive atmosphere for dynamic intellectual exploration, fostering not only the dissemination of subject matter expertise but also the cultivation of critical thinking skills and collaborative learning experiences. Moreover, the face-to-face learning paradigm embodies a holistic educational ethos, encompassing not only the transmission of information but also the cultivation of socio-emotional competencies and the establishment of mentorship relationships, thereby enriching the educational journey beyond the mere conveyance of content (Li, 2018). In this environment, lecturers can deliver material directly, explain concepts, and ask students questions. Students can ask the lecturers questions directly and discuss with fellow students in real time.

Face-to-face instruction serves as a conduit for the vibrant exchange of ideas, facilitating comprehensive elucidation and immediate assistance from educators, thereby bolstering students' comprehension and mastery of academic concepts (Chan & Wong, 2023; Louis-Jean & Cenat, 2020). This traditional instructional approach allows students to engage in real-time discussions, seek clarifications, and receive zpersonalized guidance from lecturers, fostering a dynamic learning environment conducive to deepened understanding and enhanced cognitive engagement. By harnessing the immediacy of direct interaction, face-to-face learning empowers students to actively participate in scholarly dialogues actively, thereby fortifying their

grasp of subject matter intricacies and promoting the cultivation of critical thinking skills. Moreover, the personalized support afforded by face-to-face instruction cultivates a sense of academic rapport and trust between students and educators, fostering a collaborative ethos that augments the educational experience and nurtures holistic intellectual development.

E-learning or online learning is a learning model conducted through digital platforms (Al-Fraihat et al., 2020; Almaiah et al., 2020; Djeki et al., 2022). Students can access learning materials, assignments, and other online supporting resources. Professors and students communicate via email, discussion forums, or online teaching platforms. There are many Types of Interaction in education, such as the interaction between students and content (Flensner, 2020), students and instructors (Adiyono et al., 2022; Susilawati et al., 2022), and students with each other (El Refae et al., 2021; Muzammil et al., 2020). Those are critical to achieving effective online learning. The use of technology in online learning enables access to diverse materials and resources that can be tailored to individual learning needs.

Hybrid learning, also known as blended learning, combines both previous approaches by leveraging digital technology to integrate online and face-to-face learning (Ahmed et al., 2021; Ayhan & Seki Öz, 2021; de Lima et al., 2022; Romaniuk & Łukasiewicz-Wieleba, 2022). In this instructional model, there is direct interaction in the classroom, but it is also supplemented with online learning components accessible outside the classroom. Robert Picciano, an education professor who has conducted extensive research on the effectiveness of online and hybrid learning, states that the hybrid learning model can combine the advantages of face-to-face and online learning, resulting in better learning outcomes. Integrating technology and social interaction, the hybrid model can enhance student participation and create a more flexible learning experience.

Education experts have conducted several studies to determine student satisfaction regarding the effectiveness of these three learning models. A previous study concluded that online learning can improve student learning outcomes, motivation, and satisfaction (Baber, 2020). However, it was also found that the more limited social interaction in online learning can be challenging, especially for students who require direct interaction with professors and classmates. Meanwhile, according to other studies, online learning is more cost-effective and efficient in resource utilization, providing access to various learning resources unrestricted by geographic

location (Nur et al., 2020). However, the challenges faced by this model include a high dropout rate and difficulties in managing independent learning time for some students. Then, one study on learning models highlighted the advantages of the hybrid learning model, including the flexibility of study time and the maintenance of social interaction through face-to-face sessions (Priess-Buchheit, 2020). However, challenges in scheduling classes and creating a consistent learning experience also need attention.

This article analyzes student satisfaction with learning models applied in higher education in the digital era. While some previous studies have compared the effectiveness of these learning models, research within Indonesia's higher education context remains limited. Moreover, a holistic study on student satisfaction with these three learning models has not yet been conducted. This article provides a comprehensive overview of the impact of time discipline, mastery of material, material delivery, evaluation, and assessment on students in the digital era. Additionally, it discusses the functional impact of these learning models and the policy implications for the future of education.

Through a deep understanding of the level of student satisfaction with the differences and advantages of each model through the prepared indicators, it is hoped that this article can contribute to decision-making in educational institutions to design more adaptive, innovative, and responsive learning strategies to adapt to the changing times. In addition, this article can also serve as a guide for teachers and professors in choosing the most suitable learning model for the needs and characteristics of students in this dynamic digital era.

B. Method

This methodology encompasses quantitative descriptive research, which aims to elucidate and document prevailing conditions within the educational landscape (Hodge, 2020; Rodgers, 2020). This research approach employs systematic data collection techniques to analyze and interpret phenomena quantitatively, comprehensively portraying the status quo. Through meticulous observation and measurement, quantitative descriptive research endeavors to delineate the intricacies of contemporary educational paradigms, shedding light on prevailing trends, patterns, and phenomena (Roni et al., 2020). By elucidating the current state of affairs through empirical data analysis, this methodological framework facilitates a nuanced

understanding of educational dynamics, informing evidence-based decision-making and fostering continuous improvement within pedagogy (Ardiansyah & Nugraha, 2021).

This study endeavors to examine the extent of student contentment with the educational paradigm in the digital epoch, contextualized through the lens of student satisfaction metrics aligned with Marpaung's theoretical framework. Marpaung's theory delineates student satisfaction into four dimensions: punctuality, subject proficiency, instructional delivery, and assessment practices. According to Marpaung's theory, time discipline is important in increasing student satisfaction levels. Students with good time discipline tend to be more focused and productive in their studies. Teachers who can manage time well and provide well-scheduled assignments can also increase student satisfaction.

Based on this theory, dimensional division tends to be used as an objective type of research because it is not concentrated on just one subject. It is because the Marpaung theory can provide insights that can help us understand that in the world of education, we should not only focus on material or grades. In this case, time discipline and instructional delivery methods are also considered benchmarks in research.

The research population comprises students from diverse academic disciplines and institutional affiliations, with 123 respondents drawn from multiple universities in Jambi. Through systematic data collection and analysis, this study seeks to elucidate the efficacy of contemporary learning models in meeting students' diverse needs and expectations in the digital age, thereby informing pedagogical practices and educational policy formulation.

The research design adopted for this study is a survey research design (Brasel et al., 2020; Kent, 2020), explicitly employing a cross-sectional approach. Cross-sectional studies entail collecting data from a diverse cohort of individuals at a particular time, enabling the researcher to examine variables without exerting influence over them (Wang & Cheng, 2020). This methodological framework aligns with the tenets of ex-post facto research, wherein researchers do not intervene to manipulate existing variables but rather observe and analyze them as they naturally occur. This research design is used to obtain a sufficient research sample without limiting the scope of the research. In fact, by using a research design like this, researchers can save research time that can be used to analyze the data obtained. Thus, the research can provide a comprehensive overview of how satisfied students are with the learning method.

By leveraging the cross-sectional survey method, this study endeavors to capture a snapshot of student satisfaction levels with the prevailing learning model, providing valuable insights into education dynamics in the digital era. A cross-sectional study is zed by exploring the relationships between risk factors and their outcomes through a singular approach, observation, or data collection session with research subjects. This method is considered an observational research type. It entails the analysis of data variables gathered at a designated moment in time across the entirety of the sample population or a predefined subset. Thus, it can be inferred that the cross-sectional method constitutes a research design that leverages data obtained from subjects at a particular juncture to observe and analyze one or more variables of interest.

The data collection phase spanned three weeks throughout January 2024. Within this timeframe, a cohort of 123 students from three distinct universities within the province of Jambi actively participated in completing an online distributed scale. Adhering to ethical principles, stringent measures were employed to safeguard the confidentiality of the respondents' identities and the research locale, a directive stipulated by the university administration. Moreover, the sampling technique adopted for this study entailed proportional random sampling to ensure representative participant inclusion (Berndt, 2020). The online dissemination of the research scale was facilitated through Google Forms, wherein respondents were initially solicited for their willingness to participate before proceeding to furnish personal details, demographic information, and responses to the questionnaire statements. The survey questionnaire comprised a total of 13 inquiries, with responses gauged on a Likert scale encompassing five gradations: Strongly Disagree (1), Disagree (2), Neutral (3), Agree (4), and Strongly Agree (5). A detailed depiction of the respondents' characteristics is presented in Figures 1.

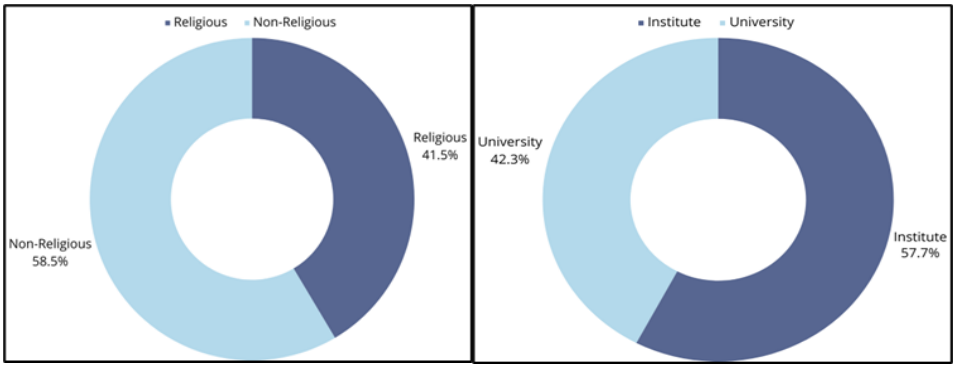

Figure 1. Characteristics of research respondents based on department and university status

Figure 1 delineates the stratification of demographic variables into different dimensions, primarily categorized by religious affiliation and non-affiliation among majors and institutional status encompassing institutes and universities. Assumption testing using independent sample t-test is employed to analyze the obtained data. The independent sample t-test is a method used to compare the means of two different independent groups to determine if there is a significant difference between the two groups. An independent sample t-test was used to determine how differences in satisfaction levels were found. Thus, the independent sample t-test analyzes data involving Likert scales to measure student satisfaction levels. The table above also indicates that this stratification allows for examining significant disparities manifesting across these dimensions. The distribution of participating respondents is as follows: within the realm of majors, 41.5% identified with religious affiliations, while 58.5% identified as non-religious. Regarding the institutional affiliation dimension, 57.7% of respondents hail from institutes, while 42.3% are affiliated with universities.

C. Result and Discussion

1. Students satisfaction level towards time discipline factor

The data processing methodology in this study begins with a detailed descriptive statistical analysis focusing on the factor of time discipline. This process involves collecting and analyzing data to understand how time discipline is distributed among different student groups. To ensure a comprehensive understanding, the study segments the data into various categories, specifically departmental clusters and university status. Departmental clusters are divided into two groups: Religious and Non-Religious students. In parallel, university status is categorized into Institute and University groups. The study aims to identify patterns and differences in time discipline across different educational contexts by examining these categories.

Firstly, Table 1 presents the descriptive statistics for time discipline, categorized by departmental clusters and university status. The data reveals that religious students achieved a mean score of 15.353, with a minimum value of 9.000 and a maximum of 18.000. On the other hand, non-religious students attained a slightly lower mean score of 15.069, with a minimum value of 11.000 and a maximum value of 19.000. These findings suggest a slight variation in time discipline scores between religious and non-religious students.

Additionally, the analysis categorized students based on their university status into Institute and University groups. Institute students garnered a mean score of 15.183, with a minimum value of 10.000 and a maximum value of 19.000. Conversely, University students attained a mean score of 15.192, with a minimum value of 9.000 and a maximum value of 19.000. The close mean scores between Institute and University students indicate a negligible difference in time discipline across these two categories.

The descriptive statistics are further validated by inferential statistics using Independent Sample T-tests. These tests were conducted to determine if there are any statistically significant differences in satisfaction levels regarding time discipline between the groups studied. The results, illustrated in Table 2, indicate no statistically significant difference between religious and non-religious students (p-value = 0.406) and between Institute and University students (p-value = 0.978). It suggests that time discipline is perceived similarly across these groups.

Moreover, the data indicates a prevailing consensus among respondents on the importance of time discipline. Most students agreed or strongly agreed with the importance of maintaining time discipline. Additionally, the findings reveal a tendency among students to disapprove of instructors who are perceived as neglectful of student discipline. It highlights the critical role of instructors in fostering and upholding time discipline within educational settings.

Overall, these findings underscore the importance of time discipline among the student body, with little variation across different categories of students. The data suggests that maintaining time discipline is a universally valued attribute, and instructors generally disapprove of neglectful behavior. These insights provide valuable information for further research into improving time discipline practices and addressing student perceptions in educational environments.

Table 1. Time discipline satisfaction level

	Time Discipline			
	Religious	**Non-Religious**	**Institute**	**University**
Valid	51	72	71	52
Missing	0	0	0	0
Mean	15.353	15.069	15.183	15.192
Std. Deviation	2.048	1.714	1.877	1.848
Minimum	9.000	11.000	10.000	9.000
Maximum	18.000	19.000	19.000	19.000

Table 2. Measurement of significance

	t	df	p
Departments	0.833	21	0.406
University Status	-0.027	121	0.978

Note. Student's t-test.

Time discipline is a critical factor influencing students' academic success and overall well-being across various educational levels and categories. Effective time management is essential for self-regulated learning, particularly in digital learning environments where students must allocate their time efficiently to perform well academically (Hsu et al., 2023). Poor time management has been identified as a significant antecedent to academic misbehavior, suggesting that students who fail to manage their time effectively are more likely to engage in dishonest practices to avoid work (Kapoor et al., 2021). Additionally, deviations in sleep patterns, such as inconsistent bed and wake times, have been linked to poorer cognitive functioning and metacognition, which are crucial for academic performance (Costa et al., 2023). This misalignment between biological rhythms and school schedules can result in higher odds of grade retention, particularly for late chronotype students attending early morning classes (Ferrante et al., 2023).

Furthermore, students with attention-deficit/hyperactivity disorder (ADHD) are more likely to have an evening chronotype, exacerbating their difficulties with time management and academic performance (Becker et al., 2023). The school environment is a crucial factor in developing self-control and time discipline among students, highlighting the need for supportive educational settings that foster these skills (Li et al., 2021). Racial disparities in discipline also underscore the importance of equitable time management interventions, as Black students face more severe disciplinary actions, which can escalate throughout the school year (Darling-Hammond et al., 2023). Gender differences in time discipline have been observed, with men showing more variability in daily rhythms, which negatively correlates with academic performance (Smarr et al., 2021). Macro-level changes in higher education further influence how time is experienced and perceived, affecting everyday university practices and student outcomes (Nielsen & Ulriksen, 2021). These findings underscore the multifaceted importance of time discipline across different student categories, emphasizing the need for tailored interventions that consider individual differences in chronotype, cognitive functioning, and environmental factors to enhance academic success and well-being

2. Students Satisfaction Level Towards Mastery Of Subjects

Furthermore, the researcher conducted a descriptive statistical analysis of the factor under investigation, namely subject mastery. Firstly, Table 3 indicates that the descriptive analysis based on the field of study shows that religious students obtained a mean value of 12.529 with a minimum value of 9.000 and a maximum value of 15.000. In contrast, non-religious students obtained a mean value of 12.542 with a minimum value of 8.000 and a maximum value of 15.000. Furthermore, based on the originating institution status, the Institute obtained a mean value of 12.648 with a minimum value of 8.000 and a maximum value of 15.000. In contrast, the University obtained a mean value of 12.385 with a minimum value of 9.000 and a maximum value of 15.000. Subsequently, based on the significance measurement, no significant differences were found as each category obtained proportions of 0.968 and 0.387 (see Table 4).

The empirical findings derived from the study underscore a remarkable coherence in student perspectives concerning the attainment of subject mastery, a trend that transcends delineated categorisations. This pervasive uniformity signifies respondents' tendency to align with or strongly endorse the concept.

The prevailing unanimity among students accentuates the robustness of consensus and signifies a deeply ingrained recognition of subject mastery's pivotal role within the educational domain. This collective alignment underscores the inherent value students place on instructors' comprehensive grasp of academic content and highlights the pedagogical imperative for educators to navigate the intricate nuances embedded within each learning material adeptly.

In contemporary times, students are not merely concerned with issues of injustice, such as bullying, but are also increasingly expanding their scope of concern to encompass discipline enforced by educators (Gasser et al., 2018). Within this context, awareness of the importance of discipline and justice in the academic environment becomes increasingly pervasive, where students are expected to evaluate not only the behavior of their peers but also compliance with the regulations and norms enforced by educational institutions. Indeed, consistently implementing discipline and policies oriented towards justice by teachers and educational institutions can positively impact student well-being, creating a more conducive learning environment and fostering a harmonious and inclusive academic atmosphere.

Furthermore, the study reveals a prevailing sentiment of gratitude among students towards educators who exhibit versatility in their pedagogical methods,

embracing diverse teaching approaches. This discernment of pedagogical flexibility underscores the nuanced appreciation among students for instructional strategies tailored to accommodate diverse learning styles and preferences.

The education world nowadays mostly utilizes varied methods of teaching and learning besides the computer world (Martin et al., 2020). This is useful to adjust learning materials and teaching approaches individually according to each student's needs and level of understanding. Adaptive learning allows the delivery of material tailored to each student's strengths, weaknesses, interests, and learning styles. It helps students maximize their potential and feel personally engaged in the learning process.

Adaptive learning can enhance student engagement in the learning process by providing materials that are suitable for individual understanding levels. Students tend to be more motivated to learn when they feel the material is relevant and meets their needs. By focusing on students' individual needs, adaptive learning can save time in achieving deep understanding. Students do not need to spend time learning material they already master; instead, they can focus on areas requiring more attention.

Table 3. Level of satisfaction in mastering subjects

	Mastery of Subjects			
	Religious	**Non-Religious**	**Institute**	**University**
Valid	51	72	71	52
Missing	0	0	0	0
Mean	12.529	12.542	12.648	12.385
Std. Deviation	1.592	1.719	1.741	1.549
Minimum	9.000	8.000	8.000	9.000
Maximum	15.000	15.000	15.000	15.000

Table 4. Measurement of significance

	t	**df**	**p**
Departments	-0.040	121	0.968
University Status	0.868	121	0.387

3. Students Satisfaction Level In The Delivery Of Subjects

The study's descriptive statistical analysis focused on evaluating students' satisfaction levels with the delivery of subjects. Table 5 illustrates that students in religious studies departments obtained a mean satisfaction score of 9.804, with scores ranging from a minimum of 7.000 to a maximum of 14.000. In contrast, students in non-religious studies departments achieved a slightly higher mean score of 10.014, with a minimum of 6.000 and a maximum of 14.000. These results suggest a marginal difference in satisfaction levels between students in religious and non-religious studies.

Additionally, when analyzed based on university status, Institute students reported a mean satisfaction score of 9.887, with values spanning from 7.000 to 14.000. Meanwhile, University students had a mean score of 9.981, with scores ranging from 6.000 to 14.000. Although the mean scores between Institute and University students appear similar, further analysis was conducted to assess the significance of these differences.

Significance measurements using the Brown-Forsythe test revealed notable differences in satisfaction levels. The test results in Table 6 show proportion values of 0.547[a] and 0.788[a], indicating statistically significant differences based on departmental categories. These findings underscore the varying perspectives of students on subject delivery methods across different educational contexts.

The analysis further revealed distinct preferences among students concerning the delivery of subjects. Religious studies students strongly preferred to utilize media and technology in every subject delivery, reflecting a desire for modernized teaching methods. In contrast, non-religious studies students exhibited a more neutral stance towards the style of subject delivery. Despite these differences, most students expressed a clear disapproval of monotonous or traditional learning models.

Overall, the results indicate a widespread preference among students for subject delivery methods that align with the advancements of the 4.0 industrial revolution. Students emphasized the importance of incorporating media and technology into the learning process and strongly desired lecturers who can foster active, creative, communicative, and critical thinking. These findings highlight the need for educational institutions to adapt and innovate their teaching strategies to meet students' evolving expectations and needs.

Table 5. Level of satisfaction in delivering subjects

	Delivery of Subjects			
	Religious	**Non-Religious**	**Institute**	**University**
Valid	51	72	71	52
Missing	0	0	0	0
Mean	9.804	10.014	9.887	9.981
Std. Deviation	1.637	2.066	1.777	2.063
Minimum	7.000	6.000	7.000	6.000
Maximum	14.000	14.000	14.000	14.000

Table 6. Measurement of significance

	t	**df**	**p**
Departments	-0.604	121	0.547[a]
University Status	-0.269	121	0.788[a]

Note. Student's t-test.

[a] Brown-Forsythe test is significant ($p < 0.05$), suggesting a violation of the equal variance assumption

Incorporating media and technology into the learning process is crucial for fostering active, creative, communicative, and critical thinking among students. The Mobile technology Decision, Reflection, and Exercise (MDRE) model, for instance, has significantly improved students' learning achievement, critical thinking, and satisfaction by enabling them to acquire up-to-date information and think from diverse perspectives (Hwang et al., 2022). Similarly, the use of social media tools in higher education has been shown to enhance students' academic performance by promoting active learning and efficient knowledge exchange, as evidenced by the positive correlation between task-technology fit and behavioral intention to use social media for academic purposes (Al-Rahmi et al., 2022). The shift to online teaching during the Covid-19 pandemic highlighted the challenges of engaging students in critical debate and discussion. Still, tools like Padlet have proven effective in fostering interactive and meaningful student interactions in an asynchronous learning environment (Pownall, 2021). Active learning strategies, such as video lecture production by students, have also been shown to significantly improve learning outcomes compared to traditional lecture-based approaches, as students reported enhanced academic performance and engagement (Nascimento et al., 2019). Furthermore, the flipped classroom model, which reverses the traditional order of lectures and assignments, has promoted critical thinking skills by encouraging student autonomy and active participation in virtual learning environments (Tomesko et al., 2022). The Community of Inquiry (CoI) framework supports the effectiveness of active learning and flipped classroom approaches, resulting in higher teaching, social, and cognitive presence compared to lecture-based methods (Kay et al., 2019).

Additionally, using digital media platforms for educational purposes has been shown to positively impact students' satisfaction and academic performance by enhancing their ability to exchange knowledge and engage in discussions (Al-Rahmi et al., 2023). Despite concerns about the potential negative impact of lecture capture on attendance and interactivity, evidence suggests that instructors who value active learning are more likely to view lecture recordings as a beneficial educational support tool (Nordmann et al., 2021). The hybrid educational model (HyFlex + Tec) used during the Covid-19 pandemic further underscores the importance of technology-mediated education in ensuring continuity of learning and supporting the emotional well-being of students and teachers (Okoye et al., 2021). Overall, integrating media and technology in education not only enhances learning outcomes but also fosters an environment

where students can develop critical thinking, creativity, and effective communication skills, making it an indispensable component of modern teaching practices.

4. Students Satisfaction Level Towards Evaluation And Assessment

The last is a descriptive statistical analysis of student satisfaction with evaluation and assessment. First, Table 7 shows that based on the department category, religious studies obtained a mean value of 11.000 with a minimum value of 7.000 and a maximum value of 15.000. In contrast, non-religious studies obtained a mean value of 11.000 with a minimum value of 7.000 and a maximum value of 15.000. Furthermore, based on the university status, the Institute obtained a mean value of 10.944 with a minimum value of 7.000 and a maximum value of 14.000. In contrast, the University obtained a mean value of 7.000 with a minimum value of 7.000 and a maximum value of 15.000. These descriptive statistical results are consistent with the significance measurements, which show no significant differences as they obtained proportion values of 1.000 and 0.704 (see Table 8). It means that overall, students want evaluation and assessment types that have feedback, align with the learning topics during lectures, and can announce grades on time.

Table 7. Level of satisfaction in evaluation and assessment

	Evaluation and Assessment			
	Religious	**Non-Religious**	**Institute**	**University**
Mean	11.000	11.000	10.944	11.077
Std. Deviation	1.844	1.964	1.820	2.037
Minimum	7.000	7.000	7.000	7.000
Maximum	15.000	15.000	14.000	15.000

Table 8. Measurement of significance

	t	**df**	**p**
Departments	0.000	121	1.000
University Status	-0.381	121	0.704

Note. Student's t-test.

Table 9. Level of satisfaction for each indicator

	Religious	**Non-Religious**	**Institute**	**University**
Mean	48.686	48.625	48.662	48.635
Std. Deviation	4.585	4.737	4.893	4.357
Minimum	36.000	40.000	36.000	40.000
Maximum	58.000	59.000	59.000	56.000

Table 10. Measurement of significance

	t	**df**	**p**
Departments	0.072	121	0.943
University Status	0.032	121	0.974

Note. Student's t-test.

Based on each indicator studied, the researcher attempts to reanalyze the indicators to see the average level of student satisfaction with the learning methods. Based on the department, students in religious studies obtained a mean value of 48.686 with a minimum value of 36.000 and a maximum value of 58.000. In contrast, students in non-religious studies obtained a mean value of 48.625 with a minimum value of 40.000 and a maximum value of 59.000. Furthermore, based on the originating university status, students from the Institute obtained a mean value of 48.662 with a minimum value of 36.000 and a maximum value of 59.000. In contrast, University students obtained a mean value of 48.635 with a minimum value of 40.000 and a maximum value of 56.000 (see Table 9).

Based on Table 10, significant value equality was obtained, supported by significance measurements with proportion values of 0.943 and 0.974. The study reveals prevailing student satisfaction with various learning modalities, reflecting an adaptive response to contemporary challenges, particularly the integration of media and technology-based instructional approaches. It is inferred that student satisfaction levels are influenced by several critical factors, including adherence to disciplinary standards, instructors' mastery of course content, and the efficacy of pedagogical delivery methods. These factors collectively impact student contentment and motivation to engage in the learning process. Additionally, the study highlights the importance of instructor performance and the development of emotional rapport within the lecture environment as key determinants of student satisfaction. This underscores the complex interplay between instructional strategies, educator-student interactions, and the overall learning environment in fostering positive student outcomes and a conducive academic experience.

In overarching terms, while the lecture-based learning process exhibits commendable aspects, there remains an imperative for ongoing refinement and evolution, particularly in evaluation and assessment, to bolster the UUniversity's standing and efficacy. Broad-spectrum adjustments are requisite to align the University with the imperatives of the Fourth Industrial Revolution era, encompassing initiatives such as digitizing the dissemination of grades and assignments by lecturers, leveraging collaborative software and applications to facilitate group assignments, and empowering students to engage in collaborative endeavors utilizing diverse media and technology platforms to optimize the learning ecosystem. Such transformative initiatives not only serve to enhance the efficiency and effectiveness of academic

operations but also position the institution as an agile and adaptive entity, responsive to the demands of contemporary education paradigms and poised for sustained advancement.

The integration of media and technology, instructor performance, and effective pedagogical methods significantly influence student satisfaction in higher education. Digital media and technology interfaces play a crucial role in enhancing student engagement and satisfaction. For instance, the technology interface, including cyber infrastructure, quality of e-content, and technology-assisted facilities, positively impacts student engagement and satisfaction by fostering new skills development, active involvement, and academic achievements (Pandita & Kiran, 2023). Additionally, the Task-Technology Fit (TTF) and Communication Theory (CT) models highlight that the effective use of digital media for academic purposes enhances students' active learning and satisfaction by enabling efficient knowledge exchange and discussions (Al-Rahmi et al., 2023).

However, the preference for physical learning over e-learning during the Covid-19 pandemic indicates that while technology is essential, it must be complemented by other factors to boost e-learner satisfaction (Islam et al., 2023). Integrating Online Teaching Video Cases (OTVCs) has also been shown to affect pre-service preschool teachers' learning performance and satisfaction significantly, emphasizing the importance of expectation confirmation and learning performance in achieving satisfaction (Bautista & Yang, 2023). Furthermore, the use of social media in education, when aligned with constructivist learning principles and task-technology fit, enhances student satisfaction and performance by facilitating collaboration and easy access to learning resources (Al-Rahmi et al., 2022). Instructor performance and the design of educational materials are also critical, as they significantly influence e-learner satisfaction by meeting students' psychological needs and expectations (Islam et al., 2023). Therefore, a holistic approach that integrates media and technology, effective instructor performance, and pedagogical methods is essential for achieving high levels of student satisfaction in higher education.

D. Conclusion

The analysis of data derived from a student satisfaction questionnaire, disseminated among 123 respondents from three universities in the province of Jambi

and further stratified into various dimensions, reveals that student contentment is intricately linked to several key factors. Primarily, student satisfaction levels are contingent upon the rigor of disciplinary standards, the proficiency of lecturers in mastering course content, and the efficacy of instructional delivery methodologies. In light of the transformative impact of technological advancements and the Covid-19 pandemic on students' learning inclinations, a pressing imperative emerges for educators to foster a collaborative learning environment tailored to the imperatives of the Fourth Industrial Revolution era. Moreover, instructors' adept utilization of evaluation and assessment processes is pivotal in shaping student satisfaction levels. However, it is essential to underscore the enduring significance of nurturing emotional rapport between students and lecturers to foster conducive learning outcomes. Continued efforts to maintain emotional connectedness while embracing innovative pedagogical approaches are paramount to optimizing the learning experience and ensuring student satisfaction in the evolving educational landscape.

References

Abdel-Basset, M., Manogaran, G., Mohamed, M., & Rushdy, E. (2019). Internet of things in smart education environment: Supportive framework in the decision-making process. *Concurrency and Computation: Practice and Experience*, *31*(10), 1–38. https://doi.org/10.1002/cpe.4515

Adiyono, A., Fadhilatunnisa, A., Rahmat, N. A., & Munawarroh, N. (2022). Skills of Islamic Religious Education Teachers in Class Management. *Al-Hayat: Journal of Islamic Education*, *6*(1), 104–115. https://doi.org/10.35723/ajie.v6i1.229

Ahmed, K. K., Al-Jumaili, A. A., Salman, S. S., & Kathem, S. H. (2021). The 'Students' Experience of Hybrid- Education Model at the University of Baghdad College of Pharmacy: Lessons and Future Directions. *Iraqi Journal of Pharmaceutical Sciences, 30*(2), 269-277. https://doi.org/10.31351/vol30iss2pp269-277

Al-Fraihat, D., Joy, M., Masa'deh, R., & Sinclair, J. (2020). Evaluating E-learning systems success: An empirical study. *Computers in Human Behavior, 102*, 67-86. https://doi.org/10.1016/j.chb.2019.08.004

Al-Rahmi, A. M., Shamsuddin, A., Wahab, E., Al-Rahmi, W. M., Alturki, U., Aldraiweesh, A., & Almutairy, S. A. (2022). Integrating the Role of UTAUT and TTF Model to Evaluate Social Media Use for Teaching and Learning in Higher Education. *Frontiers in Public Health*, *10*. https://doi.org/10.3389/fpubh.2022.905968

Al-Rahmi, A. M., Shamsuddin, A., Wahab, E., Al-Rahmi, W. M., Alyoussef, I. Y., &

Crawford, J. (2022). Social media use in higher education: Building a structural equation model for student satisfaction and performance. *Frontiers in Public Health*, *10,* 1-13. https://doi.org/10.3389/fpubh.2022.1003007

Al-Rahmi, W. M., Al-Adwan, A. S., Al-Maatouk, Q., Othman, M. S., Almogren, A. S., & Al-Rahmi, A. M. (2023). Integrating Communication and Task–Technology Fit Theories: The Adoption of Digital Media in Learning. *Sustainability*, *15*(10), 8144. https://doi.org/10.3390/su15108144

Almaiah, M. A., Al-Khasawneh, A., & Althunibat, A. (2020). Exploring the critical challenges and factors influencing the E-learning system usage during Covid-19 pandemic. *Education and Information Technologies, 25*, 5261-5280. https://doi.org/10.1007/s10639-020-10219-y

Ausat, A. M. A. (2022). Positive Impact of The Covid-19 Pandemic on The World of Education. *Jurnal Pendidikan, 23*(2), 107-117. https://doi.org/10.33830/jp.v23i2.3048.2022

Ardiansyah, M., & Nugraha, M. L. (2021). Analisis Empiris: Solusi Perkuliahan Di Era Normal Baru. *Research and Development Journal of Education*, *7*(1), 182-192. https://doi.org/10.30998/rdje.v7i1.7965

Ayhan, D., & Seki Öz, H. (2021). Effect of assertiveness training on the nursing 'students' assertiveness and self-esteem levels: Application of hybrid education in COVID-19 pandemic. *Nurs Forum, 56*(4), 807-815. https://doi.org/10.1111/nuf.12610

Baber, H. (2020). Determinants of 'students' perceived learning outcome and satisfaction in online learning during the pandemic of COVID19. *Journal of Education and E-Learning Research*, *7*(3), 285–292. https://doi.org/10.20448/JOURNAL.509.2020.73.285.292

Bali, S., & Liu, M. C. (2018). 'Students' perceptions toward online learning and face-to-face learning courses. *Journal of Physics: Conference Series*, *1108*, 12094. https://doi.org/10.1088/1742-6596/1108/1/012094

Bautista, A., & Yang, W. (2023). Learning Satisfaction with Online Teaching Video Cases Among Pre-Service Preschool Teachers in China. *Early Education and Development*, 1–19. https://doi.org/10.1080/10409289.2023.2214163

Becker, S. P., Luebbe, A. M., Kofler, M. J., Burns, G. L., & Jarrett, M. A. (2023). ADHD, chronotype, and circadian preference in a multi-site sample of college students. *Journal of Sleep Research*, e13994–e13994. https://doi.org/10.1111/jsr.13994

Berndt, A. E. (2020). Sampling methods. *Journal of Human Lactation*, *36*(2), 224–226. https://doi.org/10.1177/0890334420906

Brasel, K., Haider, A., & Haukoos, J. (2020). Practical guide to survey research. *JAMA Surgery*, *155*(4), 351–352. https://doi.org/10.1001/jamasurg.2019.4401

Chan, C. K. Y., & Wong, H. Y. H. (2023). 'Students' perception of written, audio, video

and face-to-face reflective approaches for holistic competency development. *Active Learning in Higher Education*, *24*(3), 239–256. https://doi.org/10.1177/14697874211054449

Costa, A. N., McGovney, K., Rzeppa, C., McCrae, C. S., & Curtis, A. F. (2023). 0054 Does the Early Bird Get the Worm? Associations of Waketime Variability and Metacognition in College Students. *Sleep*, *46*(Supplement_1), A26–A26. https://doi.org/10.1093/sleep/zsad077.0054

Darling-Hammond, S., Ruiz, M., Eberhardt, J. L., & Okonofua, J. A. (2023). The dynamic nature of student discipline and discipline disparities. *Proceedings of the National Academy of Sciences of the United States of America*, *120*(17), 1-10. https://doi.org/10.1073/pnas.2120417120

de Lima, A. C. B., dos Santos, D. C. M., de Almeida, S. L., da Silva, E. L., & e Pereira, E. B. F. (2022). Hybrid education in healthcare education : a systematic review. *Revista Cuidarte, 13*(1), 1-17. https://doi.org/10.15649/cuidarte.2051

Dennis, M. J. (2020). The impact of COVID -19 on the world economy and higher education . *Enrollment Management Report*. https://doi.org/10.1002/emt.30720

Djeki, E., Dégila, J., Bondiombouy, C., & Alhassan, M. H. (2022). E-learning bibliometric analysis from 2015 to 2020. *Journal of Computers in Education, 9*, 727-754. https://doi.org/10.1007/s40692-021-00218-4

El Refae, G. A., Kaba, A., & Eletter, S. (2021). Distance learning during COVID-19 pandemic: satisfaction, opportunities and challenges as perceived by faculty members and students. *Interactive Technology and Smart Education*, *18*(3), 298–318. https://doi.org/10.1108/ITSE-08-2020-0128

Escueta, M., Nickow, A. J., Oreopoulos, P., & Quan, V. (2020). Upgrading education with technology: Insights from experimental research. In *Journal of Economic Literature, 58*, 4, 897–996. https://doi.org/10.1257/JEL.20191507

Ferrante, G. R., Goldin, A. P., Sigman, M., & Leone, M. J. (2023). A better alignment between chronotype and school timing is associated with lower grade retention in adolescents. *Npj Science of Learning*, *8*(1), 1-10. https://doi.org/10.1038/s41539-023-00171-0

Flensner, K. K. (2020). Teaching Controversial Issues in Diverse Religious Education Classrooms. *Religions*, *11*(9), 465. https://doi.org/10.3390/rel11090465

Gasser, L., Grütter, J., Buholzer, A., & Wettstein, A. (2018). Emotionally supportive classroom interactions and 'students' perceptions of their teachers as caring and just. *Learning and Instruction*, *54*, 82–92. https://doi.org/10.1016/j.learninstruc.2017.08.003

Gherheș, V., Stoian, C. E., Fărcașiu, M. A., & Stanici, M. (2021). E-learning vs. face-to-face learning: Analyzing 'students' preferences and behaviors. *Sustainability*, *13*(8),

4381. https://doi.org/10.3390/su13084381

Hehir, E., Zeller, M., Luckhurst, J., & Chandler, T. (2021). Developing student connectedness under remote learning using digital resources: A systematic review. *Education and Information Technologies*, *26*(5), 6531–6548. https://doi.org/10.1007/s10639-021-10577-1

Hodge, S. R. (2020). Quantitative research. In *Routledge Handbook of Adapted Physical Education* (pp. 147–162). Routledge.

Hsu, C.-Y., Horikoshi, I., Li, H., Majumdar, R., & Ogata, H. (2023). Supporting time awarenessin self-regulated learning: How do students allocate time during exam preparation? *Smart Learning Environments*, *10*(1), 1–15. https://doi.org/10.1186/s40561-023-00243-z

Hwang, G.-J., Yang, C.-L., Chou, K. R., & Chang, C. Y. (2022). An MDRE approach to promoting 'students' learning performances in the era of the pandemic: A quasi-experimental design. *British Journal of Educational Technology*, *53*(6), 1706–1723. https://doi.org/10.1111/bjet.13208

Islam, M. R., Sarker, R., Sultana, R., Faisal-E-Alam, M., Castanho, R. A., & Meyer, D. (2023). Understanding the COVID-19 ' 'Pandemic's Impact on E-Learner Satisfaction at the Tertiary Level. *Sustainability*, *15*(8), 6694. https://doi.org/10.3390/su15086694

Kapoor, H., Inamdar, V., & Kaufman, J. C. (2021). I 'Didn't Have Time! A Qualitative Exploration of Misbehaviors in Academic Contexts. *Journal of Academic Ethics*, 1–18. https://doi.org/10.1007/S10805-021-09407-3

Kay, R., MacDonald, T., & DiGiuseppe, M. (2019). A comparison of lecture-based, active, and flipped classroom teaching approaches in higher education. *Journal of Computing in Higher Education*, *31*(3), 449–471. https://doi.org/10.1007/S12528-018-9197-X

Kent, R. (2020). *Data construction and data analysis for survey research*. Bloomsbury Publishing. https://doi.org/10.1007/978-1-137-08944-1

Li, F. (2018). The expansion of higher education and the returns of distance education in China. *International Review of Research in Open and Distance Learning, 19*(4), 242-256. https://doi.org/10.19173/irrodl.v19i4.2881

Li, J.-B., Bi, S. S., Willems, Y. E., Willems, Y. E., & Finkenauer, C. (2021). The Association Between School Discipline and Self-Control From Preschoolers to High School Students: A Three-Level Meta-Analysis: *Review of Educational Research*, *91*(1), 73–111. https://doi.org/10.3102/0034654320979160

Louis-Jean, J., & Cenat, K. (2020). Beyond the face-to-face learning: a contextual analysis. *Pedagogical Research*, *5*(4), 1-4. https://doi.org/10.29333/pr/8466

Martin, F., Chen, Y., Moore, R. L., & Westine, C. D. (2020). Systematic review of adaptive

learning research designs, context, strategies, and technologies from 2009 to 2018. *Educational Technology Research and Development*, *68*(4), 1903–1929. https://doi.org/10.1007/s11423-020-09793-2

Muzammil, M., Sutawijaya, A., & Harsasi, M. (2020). Investigating student satisfaction in online learning: the role of student interaction and engagement in distance learning university. *Turkish Online Journal of Distance Education*, *21*(Special Issue-IODL), 88–96. https://doi.org/10.17718/tojde.770928

Nascimento, G. P. V, Moreira, D. C., & Welker, A. F. (2019). A controlled study on an instrument that couples active learning with technology: student video creation. *F1000Research*, *8*, 1107. https://doi.org/10.12688/F1000RESEARCH.19645.1

Ngoc, H. D., Hoang, L. H., & Hung, V. X. (2020). Transforming education with emerging technologies in higher education: A systematic literature review. *International Journal of Higher Education*, *9*(5), 252-258. https://doi.org/10.5430/ijhe.v9n5p252

Nielsen, K. B., & Ulriksen, L. (2021). Following rhythms and changing pace–'Students' strategies in relation to time in higher education. *Teaching in Higher Education*, 1–15. https://doi.org/10.1080/13562517.2021.1940926

Nordmann, E., Clark, A. M., Spaeth, E., & MacKay, J. R. D. (2021). Lights, camera, active! appreciation of active learning predicts positive attitudes towards lecture capture. *Higher Education*, 1–22. https://doi.org/10.1007/S10734-020-00674-4

Nur, M., Utomo, Y., Sudaryanto, M., & Saddhono, K. (2020). Ingénierie des Systèmes d' Information Tools and Strategy for Distance Learning to Respond COVID-19 Pandemic in Indonesia. *International Information and Engineering Technology Associaton*, *25*(3), 383–390. https://doi.org/10.18280/isi.250314

Okoye, K., Rodriguez-Tort, J. A., Escamilla, J., & Hosseini, S. (2021). Technology-mediated teaching and learning process: A conceptual study of 'educators' response amidst the Covid-19 pandemic. *Education and Information Technologies*, *26*(6), 1–33. https://doi.org/10.1007/S10639-021-10527-X

Pandita, A., & Kiran, R. (2023). The Technology Interface and Student Engagement Are Significant Stimuli in Sustainable Student Satisfaction. *Sustainability*, *15*(10), 7923. https://doi.org/10.3390/su15107923

Pattier, D., & Ferreira, P. D. (2023). Face-to-face, online or hybrid?: Perceptions and preferences by higher education teachers and students. *Revista Complutense de Educacion, 34*(1), 69-79. https://doi.org/10.5209/rced.76766

Petchamé, J., Iriondo, I., Korres, O., & Paños-Castro, J. (2023). Digital transformation in higher education: A qualitative evaluative study of a hybrid virtual format using a smart classroom system. *Heliyon*, *9*(6), 1-15. https://doi.org/10.1016/j.heliyon.2023.e16675

Pownall, M. (2021). Encouraging Feminist Discussion in Asynchronous Online Teaching. *Psychology of Women Quarterly, 46*(1), 111-117. https://doi.org/10.1177/03616843211027479

Priess-Buchheit, J. (2020). Synchronous hybrid learning in times of social distancing A report and case study on benefits, ' 'trainer's challenges, and guidelines. *International Journal for Innovation Education and Research*, *8*(10), 356–364. https://doi.org/10.31686/ijier.vol8.iss10.2689

Rodgers, J. L. (2020). *Teaching Statistics and Quantitative Methods in the 21st Century*. Routledge.

Romaniuk, M. W., & Łukasiewicz-Wieleba, J. (2022). Hybrid Education in Higher Education on the Example of 'Students' Experiences in Post-pandemic Reality. *International Journal of Electronics and Telecommunications, 68*(3), 497-504. https://doi.org/10.24425/ijet.2022.141266

Roni, S. M., Merga, M. K., & Morris, J. E. (2020). *Conducting quantitative research in education*. Springer. https://doi.org/10.1007/978-981-13-9132-3

Rulandari, N. (2020). The Impact of the Covid-19 Pandemic on the World of Education in Indonesia. *Ilomata International Journal of Social Science, 1(4),* 242-250. https://doi.org/10.52728/ijss.v1i4.174

Smarr, B. L., Ishami, A. L., & Schirmer, A. E. (2021). Lower variability in female students than male students at multiple timescales supports the use of sex as a biological variable in human studies. *Biology of Sex Differences*, *12*(1), 1–7. https://doi.org/10.1186/S13293-021-00375-2

Susilawati, S., Aprilianti, D., & Asbari, M. (2022). The Role of Islamic Religious Education in Forming the Religious Character of Students. *Journal of Information Systems and Management (JISMA)*, *1*(1), 1–5. https://doi.org/10.4444/jisma.v1i1.1

Terzieva, V., Ilchev, S., & Todorova, K. (2022). The Role of Internet of Things in Smart Education. *IFAC-PapersOnLine*, *55*(11), 108–113. https://doi.org/10.1016/j.ifacol.2022.08.057

Tomesko, J., Cohen, D., & Bridenbaugh, J. R. (2022). Using a virtual flipped classroom model to promote critical thinking in online graduate courses in the United States: a case presentation. *Journal of Educational Evaluation for Health Professions*, *19*, 5. https://doi.org/10.3352/jeehp.2022.19.5

Wang, X., & Cheng, Z. (2020). Cross-sectional studies: strengths, weaknesses, and recommendations. *Chest*, *158*(1), S65–S71. https://doi.org/10.1016/j.chest.2020.03.012