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## University Students' Engagement and Satisfaction Level in On-Line and Face To Face Learning: A Comparative Analysis

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### ABSTRACT

*Purpose of the study was "Comparing engagement level and satisfaction level between University Learners in Face- to- Face and Online Classroom". Students of University of Sargodha were selected as population of the study. Four departments i.e Department of Social Work, Department of Education, Department of Mechanical Engineering and Department of Plant Pathology were selected for the sample conveniently. The sample consisted of 220 students from regular and self-support programs of B.S (semester 5<sup>th</sup> and 7<sup>th</sup>). Quantitative data were collected online by using Google form due to Pandemic situation of COVID-19. Two adapted instruments i.e. "Student Survey Instrument" SSI (May, 2019) and "Aman's Student Satisfaction Questionnaire" ASSQ (Simpson, 2012) were used. Academic achievement was measured through students (CGPA).SPSS was used to analyze the collected data. Wilcoxon signed rank test was used for analysis of data. The study concluded that there were significant engagement level and satisfaction level of face to face classroom as compare to online classroom among University learners. It is recommended that in future study; qualitative research may be conducted for better results. For improvement of online education training programs should be conducted.*

**Key words:** Engagement level, satisfaction level, face to face classroom, online classroom.

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### INTRODUCTION

Changes in society, technical improvements, and globalization all introduce new challenges that must be addressed. Individualization and social diversity are on the rise, as is economic and cultural homogeneity. It's a topic that's discussed not only at work or in the context of educational difficulties, but also in personal and societal settings. The necessity to deal with rising complexity and ambiguity is necessitated by the availability of an ever-increasing volume of data (Adomssent et al., 2007). Distance learning services are an important part of our new post-secondary education system in the United States. In the past, face-to-face learning took many various forms. However, the Internet contributed in the growth of online learning on college campuses. Online

education has replaced formal communication and independent study. Throughout the nineteenth century and into the late twentieth century, postal services were primarily employed to connect the teacher and the student in online education. Students receive assignments, notes, lectures, and other materials from their teachers. Students then finish the assignments and submit them to the instructor for evaluation and feedback (Brown, 2008).

After a successful run as the Mind Extension University, Jones International University became the first totally online university in 1993. Since 1987, Jones International University has provided online learning courses to more than 30,000 undergraduate students from 30 institutions and universities. They learned online using practical devices. Online classroom learning is unique in that it offers students from all around the country free access to full-time courses and less typically taught classes (Niu, 2014). The learners' attitude and trust have an impact on their course satisfaction. Online learning is not for everyone; in order to thrive; students must assume greater responsibility and make better learning decisions. Unlike face-to-face learning, online teaching and learning takes place in a simple environment via the Internet (Mucundanyi, 2019). In both teaching and learning, student engagement is critical. In an online classroom, students can contribute in a variety of ways. Students interact with their professors, peers, and course materials (Mucundanyi, 2019). This article will cover the factors that determine student engagement in online and face-to-face learning. The popularity of online classroom learning has grown, and it's only the beginning (Davis et al., 2019). Student involvement was one area of concern because it meets all of the above criteria that influence student outcomes. Student participation varies depending on the delivery system (Davis et al., 2019). The research's objective and goals were then compared to the students' involvement and satisfaction levels, as well as the precise questions to be answered. As more people acquire access to online learning, the number of persons enrolling in online courses is growing (Davis et al., 2019). This rise in online learning had a significant impact on education, particularly at the university level (Davis et al., 2019). According to Kentnor (2015), what students bring to Higher Education, or where they study, is less important in terms of their growth than what they do while they are students. If student engagement lives up to its billing, it could be the key to unlocking the door to success. The bulk of student involvement studies focused on increasing students' levels of engagement, either directly or indirectly. Student engagement, in essence, relates to how much students engage in a variety of educational activities that have been shown in research to help students learn more efficiently (Kentnor, 2015).

The current study looked at how student participation differed across face-to-face and online course delivery modalities. Undergraduates in online courses use the internet to access course content and resources at their leisure. These classes were becoming increasingly popular in university settings, with more than 70% of universities providing them (Cooper, 2018). Online lessons may be preferred by students because they are more convenient and decrease the demand for accessible classrooms. Traditional seminars and community initiatives provide course materials in face-to-face classes. Due to changes in contact and course content delivery, it's unclear whether face-to-face and online courses have different levels of student participation. The current study looks into this topic, as well as how student engagement and satisfaction levels influenced engagement variances (Basheer et al., 2021). In today's higher education world, most colleges and universities frequently monitor student happiness, with the results becoming increasingly significant as students' higher education options

have expanded (Wilson, 2012). Student satisfaction has played an essential part in determining the efficacy of face-to-face and online classroom learning (Wilson, 2012). According to a meta-analysis of twenty-four publications that showed student satisfaction with both face-to-face and online classroom education, there was a statistically significant difference in student satisfaction levels (So & Brush, 2008). This finding could indicate that students believe face-to-face classroom learning is just as good as online classroom learning. Students who engaged in online interactive activities were less happy with their learning process than those who engaged in task-oriented engagement in a face-to-face classroom, according to (So & Brush, 2008). Both students and teachers in online learning environments may struggle with the mechanics of introducing the first lesson (Paul & Jefferson, 2019). It has been established that the success and engagement of students in the instructional learning process differs from that of students in physical classes. The traditional face-to-face classroom is gradually being supplanted by online classrooms; the trend of more online courses has been continuously increasing and shows no signs of slowing down (Cavanaugh & Jacquemin, 2015). It is also determined to investigate the level of engagement and satisfaction among university students in both face-to-face and online courses. It also aims to compare learning disparities between students who use two different types of learning modalities (i.e. face-to-face and online).

## **LITERATURE REVIEW**

Instructors must be able to assess student performance in both face-to-face and online scenarios. Task submission, administration of assessments, examinations, and quizzes, and the granting of participation points all contribute to this. In an online learning environment, keeping track of participation and "attendance" is more difficult (Long et al., 2017). Participants said they could access their schoolwork at any time and from anywhere. Zhang and Kenny came to the same conclusion that I did (2010). Participants did not feel obligated to work entirely from home because they could attend a conference or travel for work and still have access to their learning management system, Blackboard Online Learning. Online courses are more flexible (Zhang & Kenny, 2010). Zhang and Kenny (2010) were overjoyed to learn about an online support network, a writing support centre, where they could seek help with her writing assignments. Students profit immensely from online writing because they can have their assignments checked and obtain detailed feedback within 24 hours (Basheer et al., 2019). They can send her papers for review at any time of day and get responses practically instantly. According to Zhang and Kenny (2010), "particularly the professor feedback," participants appreciated receiving written evaluation.

For decades, face-to-face learning has been the primary mode of instruction. While online learning is becoming more popular, for some people, in-person learning is still the best option. Instructors can better assess students' knowledge and interest in face-to-face learning, and it is easier to develop group enthusiasm for a topic. It is considerably easier to keep a student's attention. There are different advantages and disadvantages to both face-to-face and online learning. Face-to-face and online learning, according to several studies, can provide students with a better learning experience than traditional lectures. Lectures have been accused of not teaching anything and of only conveying the lecturer's notes to the student's notes without passing through the lecturer's mind (Turner, 2015). Lecture ability is slightly restricted. According to Turner (2015), the traditional informative lecture is supposed to increase passivity in the classroom by reinforcing its passive qualities, and passive listening and

the ability to transfer lectures to a virtual forum are encouraged to allow space for a different style of learning (2015). Face-to-face and online learning, according to Turner (2015), will facilitate a transition in teaching and learning from basic content transmission to the creation of processes and activities that allow for deep learning (Turner, 2015). In face-to-face learning, individuality is not encouraged in the same way that passivity is not encouraged. Instead, social contacts between peers and lecturers, as well as collaboration and cooperation, as well as discussion and debate, are highlighted (Turner, 2015).

Participation in educationally successful practices that contribute to a variety of quantitative results (Trawler, 2010), as well as "the ten extents to which students are involved in activities that higher education research has proven to be connected with high-quality learning outcomes" (Trawler, 2010). The amount of effort kids put forth in educationally purposeful behaviours that lead directly to desired goals, according to Trawler (2010). When learning or being taught, a student's level of focus, interest, excitement, optimism, and passion, as well as their willingness to learn and grow in their education, is referred to as student participation in education (Trawler 2010). Educators frequently declare that they wish to encourage student participation or engagement (Trawler, 2010). In contrast, student involvement can refer to how school administrators, educators, and other adults might "engage" students more completely in school governance and decision-making processes, curriculum and learning opportunity creation, or civic life of their community in a variety of situations. Many schools, for example, conduct student surveys to learn about their perspectives on a variety of topics, and then use the information to change policies or services in ways that respect or respond to student concerns (Trawler, 2010).

The phrase "engagement theory" was coined by Kearsley and Schneiderman in 1999. When they said this, they were plainly referring to technology-based teaching and learning. They believe that successful connections can be made without the use of technology, but that technology may help promote participation in remote learning scenarios that would otherwise be difficult to achieve. The interaction theory of Kearsley and Schneiderman (1999) is used as a paradigm for learning in technology-based environments. The underlying premise is that successful learning requires active participation from students in their studies. The theory suggests three fundamental strategies for obtaining participation in technology-based environments: (1) group efforts; (2) individual efforts; and (3) individual efforts. In both face-to-face and online learning, these three strategies are claimed to generate inventive, meaningful, and authentic learning (Kearsley & Schneiderman, 1999).

Student engagement is described as students' active involvement in their learning, which has been related to improved student outcomes (May, 2019). As a result, a clear, concise definition of student involvement is essential, and student engagement has become a hot topic in education (May, 2019). Because student engagement research is revealing increasingly complex issues and challenges, research on engagement in the context of online learning is more vital than ever. Student engagement is crucial regardless of how the course is delivered. The value of engagement and its whole function through delivery systems explained the value of engagement and its overall function through delivery systems. Student engagement is vital in all sorts of classes, whether face-to-face or online.

Napolitano (2017) describes student satisfaction as an assessment of many results as well as behaviours related to learning and student life on campus. It's also a mindset

borne out of their evaluation of the educational services they've received. Student satisfaction is crucial for higher education institutions, according to Napolitano (2017). Building relationships with students and developing outstanding student life programmes, according to research, will help institutions, all of which will lead to each student's own contentment levels (Basheera et al., 2019). Napolitano (2017) investigated student happiness in both online and traditional classroom settings, focusing on the delivery modalities that are associated with student satisfaction. According to student polls, online students were dissatisfied with their perceived self-awareness improvements, course content execution, and capacity to show personality (Napolitano, 2017). Intriguingly, Napolitano (2017) investigated graduate students' opinions of face-to-face, online, and mixed-mode courses and discovered that traditional students may be hesitant to satisfy their expectations. Moreover, despite having similar grades, online participants believe that face-to-face students had a greater overall learning advantage because they were given more opportunities for information application, critical thinking, and improved oral skills as a result of high levels of teacher and peer interaction (Napolitano, 2017). The data from Napolitano, (2017) and Burns (2013) revealed two main patterns in the face-to-face and online learning categories: Learning's social and discipline dimensions Students are growing increasingly diverse in terms of geography and ethnicities, allowing for collaborative instruction through modalities like eLearning and blended learning (Poon, 2013). High levels of student satisfaction are a sign of course validity. Delivery models, according to the findings of the studies mentioned above, have a significant impact on total learner performance and happiness.

In his study of university student satisfaction, Wilson (2018) identified three characteristics of student satisfaction: the student's personal cognitive feeling about the experience, the student's experience with the school's student services, and the student's preconceived expectations versus the reality of the university experience. Wilson (2018) looked at the elements that influence student happiness in a course and observed four themes: subject matter importance, faculty subject experience, faculty class management, and student workload. Wilson (2018) revealed that student satisfaction is the result of the student having a preconceived image of what their educational experience will be like and believing that as a result of that experience, they will be happy and effective in their possible activities. The importance of student satisfaction is magnified for university students. In their study of student satisfaction at a continuing education school, Wilson (2018) revealed a requirement for pragmatism and versatility in educating adult learners. Students' requirement for proper academic aid has been proved to be crucial in terms of adaptability.

Adult learners were taught courses through correspondence via the mail as early as the 1800s, and by the 1930s, distance learning had exploded as institutions began broadcasting educational programmes on television (Moore et al., 2003). The Carnegie Foundation then funded the AIM project in the 1960s, which was founded on the premise that students might take higher-quality, lower-cost courses online than they could in a typical face-to-face setting (Moore et al., 2003). Following the creation of the World Wide Web in 1992, instructional tendencies began to emerge (Harasim, 2000). The Internet's impact has resulted in the reemergence of remote learning (Kentnor, 2015). Many universities began offering web-based distant education programmes in the 1990s as a result of this invention, resulting in remarkable expansion, with roughly 84 percent of universities and 83 percent of 4-year public colleges offering some web-based courses by the end of the decade (Moore et al., 2003).

A non-traditional student, according to the National Center for Education Statistics, is a student in higher education who has family and employment obligations that may impede them from reaching their educational goals. However, unconventional students are no longer the only ones who use online learning; traditional students are increasingly turning to campus-based programmes (Kentnor, 2015).

## **RESEARCH METHODOLOGY**

According to Woody (1924), study design entails describing and redefining issues, establishing hypotheses or recommended solutions, gathering, organizing, and assessing data, as well as deducing and reaching conclusions. A robust research design will be generated if a research problem is well specified. The framework for data collection, measurement, and analysis is contained in the research design. A flexible research design that allows for the exploration of various aspects of a topic is useful if the research study's goal is to be obvious. According to (Mishra, & Alok, 2017), research design is chosen to arrange and plan the many aspects of the investigation. The study was descriptive in nature, and a quantitative method was employed. The population is the group of people who the researcher is interested in and who the researcher would like to apply the findings of a study to (SARONI, 2013). The participants in this study are all students at the University of Sargodha in Sargodha. A sampling methodology is the method for selecting the sample's constituents (Taherdoost, 2016). Before diving into the many sorts of sampling methodologies, it's important to understand what sampling entails and why researchers might choose a sample. The phrase "sampling" refers to the process of selecting people to take part in a research study; according to Wikipedia (SARONI, 2013). The 220 undergraduate students of 5<sup>th</sup> and 7<sup>th</sup> semester were selected through convenient sampling technique from University of Sargodha. The sample consisted of four departments from university of Sargodha i.e. Department of Social Work, Department of Education, Department of Mechanical Engineering and Department of Plant Pathology. In this study for the purpose of measuring learners learning difference in between face-to-face and online classroom learning two instruments were used (bin Hidthiir et al., 2019). Engagement level and satisfaction level were independent variables and face-to-face classroom environment and online classroom environment were dependent variables. The National Survey of Student Engagement Scale (May, 2019) was used to assess students' levels of engagement. Student survey instrument was consisted on 4 items and 5 point Likert scale. The level of student satisfaction in both face-to-face and online classroom learning was assessed using Aman's Student Satisfaction Questionnaire (Simpson, 2012). Aman's student satisfaction questionnaire consisted on 19 items and was based on 5 point Likert scale. Student's academic achievement was measured through their (CGPA). In this study, the participants provide demographics data through demographics information about their name, gender, age, department, semester, CGPA and courses taken in face-to-face and online classroom. The systematic process of obtaining and measuring information on variables of interest in order to answer research questions, test hypotheses, and evaluate outcomes is known as data collection (Kabir, 2016). Students provided information via the internet. The researcher created an online Google Form and shared the link with relevant personnel from several departments at the University of Sargodha. Data is automatically saved and entered into a Google Form. Due to the COVID-19 urgent circumstance, all educational institutions closed for physical mode of education and provided online education to pupils. As a result, internet data was gathered. Data analysis, according to Creswell (2012), is the

systematic use of statistical and logical methodologies to explain, illustrate, and evaluate data. Data analysis is the process of giving a huge amount of data order, structure, and significance. To determine the difference between face-to-face and online classroom learning, the Wilcoxon signed rank test was utilized.

## ANALYSIS OF THE DATA

### Wilcoxon Signed Rank Test

**Table 1:** Students' Engagement Level in Face-to-Face and Online Classroom (SEF-SEO)

Variable	N	Mean	Std.Deviation	Minimum	Maximum	Percentiles		
						25 <sup>th</sup>	50 <sup>th</sup> (Median)	75 <sup>th</sup>
SEF	220	14.3409	5.21214	.00	20.00	11.0000	16.0000	19.0000
SEO	220	10.4591	5.78324	.00	20.00	6.0000	10.5000	15.0000

The descriptive statistics of the student's engagement in face-to-face and online classroom survey data are shown in Table 1. Wilcoxon signed rank and descriptive statistics, which provided information about the students' face-to-face and online classroom generic competence. The means, SDs, and median were calculated to measure the central tendency of the face-to-face and online classroom. Given the sample size ( $n = 220$ ) on student's engagement in face-to-face and online classroom; comparing the mean score ( $M = 14.3409$ ) in face-to-face classroom engagement was increases as compare to the mean score ( $M = 10.4591$ ) in engagement online classroom. Overall, descriptive statistics reveals that student's engagement in face-to-face was considerably increases as compare to their engagement in online classroom.

**Table 2:** Students' Engagement Level in Face-to-Face and Online Classroom (SEF-SEO)

Variable	N	Mean Rank	Sum of Ranks	Z	P	
Negative Ranks	121 <sup>a</sup>	104.39	12631			
SEO- SEF	Positive Ranks	60 <sup>b</sup>	64.00	3840.00	-6.233 <sup>b</sup>	.000
	Ties	39 <sup>c</sup>				
	Total	220				

Table 2 Showed; that the negative ranks, positive rank, mean rank, sum of ranks, Z column and P value. The Z column reports the Z score, which can sometimes be referred to in Wilcoxon Signed Ranks Test. The P value for this test was reported as Sign. If the P value is over .05 then there is no significant difference in the between the two compared groups in face to face and online classroom. The results of non-parametric statistics of a Wilcoxon Signed Rank Test revealed a statistically significant difference on perceptions of this study,  $Z = -6.233$ ,  $P = .000$ . So this table showed that the significance testing value  $P < 0.01$ , quantifying the strength of the results. This is a probability confidence interval of the .00, thus the student's engagement in face-to-face and online classroom learning improves with Z score (-6.233). So there was difference in students' engagement level in face-to-face and online classroom.

**Table 3:** Students' Satisfaction Level in Face-to-Face and Online Classroom (SSF-SSO)

Variable	N	Mean	Std.Deviation	Minimum	Maximum	Percentiles		
						25 <sup>th</sup>	50th (Median)	75th
SSF	220	69.7045	23.29323	.00	95.00	57.0000	74.0000	91.00
SSO	220	50.1727	27.06811	.00	95.00	27.5000	52.0000	73.00

Descriptive statistics of student's satisfaction in face-to-face and online classroom survey data was showed in Table 3. Wilcoxon signed rank and descriptive statistics, which provided information about the students' face-to-face and online classroom generic competence. The means, SDs, and median were calculated to measure the central tendency of the face-to-face and online classroom. Given the sample size ( $n = 220$ ) on student's satisfaction face-to-face and online classroom; comparing the mean score ( $M = 69.7045$ ) in face to face classroom satisfaction level was higher as compare to the mean score ( $M = 50.1727$ ) in satisfaction online classroom. Overall, descriptive statistics revealed that student's satisfaction in face-to-face was considerably increases as compare to their satisfaction in online classroom.

**Table 4:** Students' Satisfaction Level in Face-to-Face and Online Classroom (SSF SSO)

Variable	N	Mean Rank	Sum of Ranks	Z	P
Negative Ranks	147 <sup>a</sup>	110.59	16256.50		
SSO- Positive Ranks	57 <sup>b</sup>	81.64	4653.50	-6.874 <sup>b</sup>	.000
Ties	16 <sup>c</sup>				
Total	220				

Table 4 Showed that the negative ranks, positive rank, mean rank, sum of ranks, Z column and P value. The Z column reports the Z score, which can sometimes be referred to in Wilcoxon Signed Ranks Test. P value for this test was reported as Sign. There is no significant difference in the between the two compared groups in the face-to-face and online classroom if the P value is greater than .05. The findings of a Wilcoxon Signed Rank Test using non-parametric statistics revealed a statistically significant difference on perceptions of this study,  $Z = -6.874$ ,  $P = .000$ . So this table showed that the significance testing value  $P < 0.01$ , quantifying the strength of the results. This is a probability confidence interval of the .00, thus the student's satisfaction improves in face-to-face and online classroom learning with Z score (-6.874). So there was difference in students' satisfaction level in face-to-face and online classroom.

## DISCUSSION

The major purpose of this research was to "Comparing engagement level and satisfaction level between University Learners in Face-to-Face and Online Classroom". The study examined the differences between engagement level, and satisfaction level in face-to-face and online classrooms between university learners. Students must still show up for class, study the content, turn in assignments and finish group projects. Teachers must still design curriculum, improve instructional quality, respond to class discussions, encourage students to learn and grade assignments in both



online and face to face classroom. According to the study's results there was a statistically significant difference between traditional face-to-face and online classrooms. Previous studies have compared traditional face-to-face classroom learning versus online classroom for other selected determinants (i.e. students' generic competence, learning experiences, engagement level and satisfaction level) (Paul & Jefferson, 2019). Analysis of Face-to-face and online classroom learning was quantitative in analyzing face-to-face and online classroom learning students' engagement level and satisfaction level was less in online classroom as compare to face-to-face classroom learning. Students' engagement refers to the active involvement of students in their learning, which has a positive between relationship students' engagement level and students' outcomes (Lei et al., 2018). Therefore, having a clear, concise understanding of student engagement is important, making student engagement a central topic of conversation in education. Students' engagement was important in all types of learning, whether face to face and online classroom (Veillard et al., 2017). Students require a more revised way of engaging successfully in the leaning process (Dean et al., 2016). Students' engagement level; increases in face to face classroom than online classroom. So the result of study shows that there was statistically significance difference in face-to-face and online classroom.

Student satisfaction and perception is an integral part of students' overall experience in higher education. It was a students' perception that affects both retention and performance as it was "influenced by personal attitudes, expectations, experiences and accomplishment in a specific setting and learning environment" (Davidson, 2016). In another study, Wang et al (2013) looked at how student satisfaction affected learning outcomes both in face-to-face and online learning environment. In both face-to-face and online classrooms, Lee (2010) argued that timely feedback from instructors was fundamental to student satisfaction. Student satisfaction, according to Lorenzo and Moore (2002), was a result of responsive, timely, personalized services and support as well as high-quality learning outcomes and teamwork (Simpson, 2012). Students' satisfaction level, increases in face-to-face classroom than online classroom. Many scholars claim that learners are more satisfied in face-to-face classrooms than in online classrooms when comparing satisfaction levels (Song et al., 2021). This study shows that there was statistical significance difference in face-to-face and online classroom. This study has added to a better understanding of student satisfaction through the finding from what they feel would improve this level (Simpson, 2012).

Clearly, in this study we examine the difference among engagement level and satisfaction level in face to face and online classroom among university learners. Norberg (2017) also points out that online classroom learning was not a new concept. The mode can be traced back to the medieval period, when textbook technology was introduced into the classroom, where the professor would usually read to the students from the document. So above discussion revealed about students' engagement level and satisfaction level in face-to-face classroom as compare to online classroom.

## **CONCLUSION**

This study was aimed to "Comparing engagement level and satisfaction level between University Learners in Face- to- Face and Online Classroom". The results of the study presented that there was significant difference in learner's engagement level in the face-to-face classroom and online classroom. The results of the study showed that there was significant difference in learner's satisfaction level in the face-to-face classroom and online classroom.

## RECOMMENDATIONS

Several recommendations for future research were derived from the findings.

- First recommendation was presented for the students' engagement level in face-to-face and online classroom. In face-to-face classroom students engagement level was greater than student engagement level in online. Institutions may increase activities in online classroom learning to fill the gap.
- Another recommendation was related to the satisfaction level between face-to-face and online classroom, using quantitative survey and result shows that the students' satisfaction level high in face-to-face classroom as compare to students' satisfaction level in online classroom learning. The satisfaction level may be increased in online classroom learning with using different techniques (i.e. online quiz, rewards, student to student dialogue).
- In future study, similar research may be conducted on the same phenomena by using qualitative analysis.
- To cope with the changing world situation educational institutions should conduct training programs for improvement of online education. In this way we may overcome the deficiencies related to online class room programs. \

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