Processes and Effects of Mediated Communication on University Students

Amara Zafar*¹

¹* M.Phil. Scholar, Faculty of Media and Mass Communication, University of Central Lahore, Punjab, Pakistan.

Corresponding author: amaramudasser1122@gmail.com

The aim of this study is to explore the perceptions of students on the mediated process and face-to-face communicative learning and how mediated communication affects the individuals – learners and employers. The research employs the qualitative method in the form of semi-structured interview questions to explore the perception of the students. The population of this study consisted of University students. The study's data have been analyzed thematically. It is a technique for descriptive statistics, but when codes are chosen and subjects are created from those patterns, interpretation is also involved. The results highlight how critical it is to learn from individuals who will be enrolled in distance learning, particularly at a time when several institutions are looking at innovative strategies to involve learners simultaneously on and off campus, discusses the significance of using facts to guide such choices instead of assuming what students will think or what they will desire. In contrast to the common assumption, individuals do not believe that online programs are simpler even though they do not yet believe that they are similar to face-to-face sessions. The bulk of enrollees are new to attending e-learning. Significant aspects of reported learning outcomes and contentment include communication in the elementary program, individual enthusiasm to engage in the sessions, course content, and instructional assistance and expertise. Online individuals' participation is a better indicator of reported early education results since there is less opportunity for physical interaction during sessions.

1. Introduction

The focus of this study is to critically analyze the various similarities and differences between face-to-face learning which shall henceforth be called physical learning and the mediated process of communicative learning which shall henceforth be called online learning in order to better understand which is better. Communication relies on technology as the channel to transmit messages between sources and receivers (Holmes, 2019). The concept of 'mediated communication' refers to a variety of methods of communication using networked computers. These machines are often low-cost personal computers built for logically centralized management, where data or records are kept and modified on a server computer. For example, videoconferencing, phone calls, email messages, network communication, text messaging, distance learning, hypertext, internet forums, instant messaging, and online shopping. Mediated communication emphasizes how important it is for entities to communicate with one another via mediated communication channels (Rafaeli at el., 2007). Instead of focusing on the quantity, substance, regularity, or timing of the data transmission, mediated communication places more emphasis on how new messages relate to older ones. Interactivity, which emphasizes the response between communicators, is found in both face-to-face and mediated communication. Interactivity encourages contemplation, sociability, and attentiveness while also bringing tolerance and pleasure (Rizaldi at el,. 2022). By shifting communication from a point-to-point communication like that observed in face-to-face interpersonal communication to a network whose interaction is enabled by the organized nature of technology, digital entertainment (technology) improves the way wherein interactivity happens (Holmes, 2009). Individuals become willing to participate in the process of mediated communication when they reply to other individual's companies are striving rather than merely being passive receivers of messages.

Allen and Seaman (2016), have stated that over the past couple of years, online education has not only become more prevalent, but rather easier to acquire, this trend is mostly seen in higher education, and one of the reasons why this is so is because, in the absence of online educations, a vast majority of students in underdeveloped countries had to shift abroad in order to acquire higher education, this burden has been significantly reduced by the internet, using which, students can remain in their home countries whilst acquiring a good quality education from the other side of the globe. Allen and Seaman (2016), stated that in 2014 around 5.8 million students worldwide participated in online education either asynchronously (learners studying the materials completely on their own time) or synchronously (learners meet in real-time via an online platform) and this number has only grown since then, primarily due to the pandemic which forced universities and other educational institutes to close their doors to physical face to face classes. Venkatesh and Davis (2000) has explained that online education also adds flexibility and convenience to the lives of both students and teachers which is a luxury not previously available to those in the education sector. Furthermore, online education also enables students to revisit lectures and study at their own pace, this is especially beneficial to students who tend to absorb information at a slower pace and can then attend these lectures at their own convenience.

Physical face-to-face classes also have their demerits, Primarily the fact that the students only have a limited amount of interaction with a teacher in any given class, and due to the fact that the classes are not being recorded, a student cannot go back and revisit the class in order to clear concepts or revise the topic, and where the option is available, extra revision classes can cost a lot of money. Furthermore, although physical classes do enable teacher-student interactions, time constraints often present a huge problem as a teacher cannot answer the questions and attend to the queries of each student individually. Furthermore, as illustrated above, physical classes can sometimes require the student to shift abroad, these additional costs of acquiring an education physically can be enormous compared to online classes where, theoretically speaking, all that is needed is an internet connection and an electronic device such as a smartphone, tablet, laptop, or computer. This study helps policymakers, instructors, and students to prefer whether face to face learning or mediated process communicative learning according to the needs of the learners and situation. The first contribution. Firstly, it will fill the literature gap to explain how mediatized communication impacts individuals, which is less investigated in the existing literature. Secondly, it will examine face-to-face learning and the mediated process of communicative learning. Lastly, it will investigate online learning, physical learning, blended learning, contents in mediated communication, and interactivity. Although mediatized communication tools are increasingly being used in classrooms, there is a clear lack of research on the complex psychological and social effects that these technologies have on college students. Few research go deeper into particular areas, including focusing ability, interpersonal skills, and students' for a long time academic and professional success, even if several studies touch on the broad implications. Furthermore, there is still a dearth of research comparing mediatized communication to conventional face-to-face techniques in the academic setting, which leaves a large gap in our knowledge of how these various communication modalities affect students' learning experiences. The objective of the study are given below.

- To identify the process and effects of mediatized communication on university students.
- To measure the perception of the students regarding face-to-face and mediated processes of communicative learning.

The urgent need to thoroughly investigate the impacts and mechanisms of mediatized communications on college students an area where there are glaring gaps in the literature motivates this study. The world of education is changing dramatically as a result of the fast evolution of communication technology, and it is critical to comprehend how these changes affect pupils. The objective of this study is to offer a comprehensive knowledge of the effects of mediatized communication on students' interpersonal and cognitive abilities by looking at the psychological and social aspects that are frequently disregarded in the literature currently in publication. Furthermore, by comparing conventional in-person and mediated communication methods, the comparative analysis seeks to shed light on student preferences and perceptions, providing information that can guide the creation of pedagogical strategies that are effective and appropriate for the modern learning environment. The results of this study might have a big impact on

educational practices by helping educators and institutions adjust to the changing nature of collaborative learning in the age of digital technology.

2. Literature Review

2.1 Mediated Communication's Effect on Education

Despite a growth in the proportion of businesses employing online learning, most are discovering that these courses frequently have inadequate retention and graduation levels (Collins & Callahan, 2011). The Ontario public Service and Employees Union and the Ontario collages of Applied Arts and Technology have conducted large scale research on online education (MacKay, 2014) and have arrived at the conclusion that online education is quite beneficial. Dutton, Dutton and Perry (2002), explains how these factors provide the opportunity to students to acquire an education to those students who could previously not afford one due to financial, family or other socio-economic reasons. Students who have to balance childcare alongside their education are now enabled to pursue their goals by space-shifting their timetables to adjust their education in an otherwise committed routine, an emphasis is placed on the opportunities online education offers to be disabled individuals and even pregnant women who can now aim towards a better future as a result of online education.

Furthermore, online education has enabled students to pursue a wide variety of diplomas and degrees which is otherwise impossible in a world where the physical presence in a classroom often proves to be a difficult task to manage multiple degrees simultaneously. Research has also shown that online education has inspired a more mature age group of students now attending community colleges, which now stands at an average of 28 years (Castillo, 2013) this is because of the psychological ease online education offers to the older section of students who feel less exposed to judgment when acquiring an education from the comfort of their own home. Diaz, (2000) has also shown how students with more academic and life experiences tend to be better students when it comes to online learning. This does not mean, however, that the younger generation is less suited to online education as a study (Coleman, 2009) showed that the millennial generation, being brought into a world of technology finds it easier to navigate the challenges of online education.

2.1 Situational and cultural Factors

Wentz et al. (2011) explore where students with disabilities the study stated that 40% of the students in post-secondary education in the United States of America suffer from various disabilities. Initially, it states that individuals with disabilities use the internet far less than other individuals due to the number of barriers they have to cross, however, this number has seen a generous rise due to the availability as a result of online education being made widely available. The Ontario Human Rights Commission in 2018 gave individuals the right to navigate their academic pursuits with much more ease as a result of online learning. Although online learning is very beneficial and offers much flexibility which has in turn allowed a class of individuals who

previously did not have access to the opportunity of acquiring a higher education, it has some disadvantages too. Sturges (2013) focuses on the interaction of students with their teachers and peers, interactions which are severely limited as a result of online classes. These interactions can be beneficial to the students in ways that are primarily focused on education as peer consultancy is proven to have multiple benefits which include but are not limited to concept clarity, and the ability to interact socially and with others. While online education does enable students to focus more, the lack of companionship may prove detrimental to the entire experience. (Grosso, Teresa & Grosso, 2012) state that an alternate approach to minimize this lack of interaction is to promote interactive education rather than posting lecture slides on the internet, this way, students will have to interact with the teacher which will complement not only their experience but also encourage greater understanding. Interactive learning coupled with both online discussions and various assessments has proven to be a very ideal alternative to physical classes as it takes away the greatest hurdle to online education (O'Neil, Scott & Conboy, 2011)

2.2 Social and Psychological Impacts

Furthermore, studies examining the effectiveness of blended learning have underlined its significance from a sociological standpoint. Interpretation, according to Kant and Lenka (2017), is the act of comprehending and comprehending a specific phenomenon. In a thorough meta-analysis, Ginns and Ellis (2007) concluded that experts using cooperative learning should consider students' attitudes toward web-based learning and how much they engage in learning throughout the whole session. They also found a correlation between favorable perceptions of blended learning and considerably higher levels. With respect to motivation and learning possibilities, Pollard (2015) discovered that Korean EFL learners benefited from digital learning when using an Internet platform. According to Swartz (2014), the adaptability and ease of e-learning promote a variety of instructional possibilities. According to Paul and Cochran (2013), individuals with strong subject knowledge are best adapted for the autonomous learning that goes along with using mediated forms of communication.

Shedletsky and Aitken (2001) fewer opportunities for contact with practitioners and classmates exist in face-to-face sessions compared to online training. Agung et al. (2020) evaluated how the participants believed web-based learning during the COVID-19 global epidemic, 38 English students provided their perspectives, which revealed that only 54.5 percent of the students seemed to have been capable of understanding the content if they were not prepared for the new form of learning and their gadgets did not endorse the unexpected high technological modifications. Several of them have been happier in offline classes. Web-based learning is a subfield of e-learning, Fitri et al. (2019) claim that one of its key features is the use of technological resources like computers and servers for education. From all this, it is obvious that the main e-learning encompasses all educational processes that require the use of digital communication. On the other hand, Sahin and Shelly (2008), the requirements and perspectives of the students must be taken into consideration when creating, producing, and presenting any specific online program.

Interactive web having to learn models are supported as learning systems that integrate internet connections with teaching and learning activities (Bentley et al.,2012).

Furthermore, Nguyen (2015), online learning refers to the provision of online educational programs. Bakerson et al. (2015) E-learning provides learners with special options for a dynamic learning environment. The impression of e-learning creation and execution was the target of research done by the University of Jordan utilizing the Technology Acceptance Model analysis grid. The respondents' indications that they grasped the material and that their navigational attempts were little demonstrated how beneficial and simple the e-learning encounter was. Online learning increases the students' independence and improves self-discipline for their students' progress (Zaya,2020). Therefore, depending on the knowledge, individual participation, instructional involvement, and learning motivation can all be considered relevant characteristics of online learning, (Gray & DiLoreto 2016). Furthermore, Nissa and Haryanto (2020) have shown how physical classes are possible if the virus is taken into consideration and proper measures are taken to ensure a safe environment where physical learning can take place, it is the view of this study that online learning is the new way of acquiring education and if more research and development is done, there is potential to unlock and develop education in ways which simply cannot be done by physical classes. Bakerson (2015) leaders must take additional time during web-based learning to the mentoring session. Other kinds of visual data, such as common knowledge regarding physical phenomena, are accessible in face-to-face communication because individuals have access to given external surroundings. By concluding the collection of things and happenings that individuals in similar surroundings are likely to be aware of and want to discuss, individuals can co-ordinate communicative material when they are in identical external surroundings (Cooper 1974; Argyle & Graham, 1976; Keysar et al. 1998; Whittaker et al. 1993; Egeth & Kahneman 1975).

Moreover, a comprehensive study conducted by Heo and Han (2018) in terms of providing quantifiable proof that the participant's type of pressure in online learning indicated that the individual experienced difficulties in e-learning. Nissa and Haryanto (2020), have stated that face-to-face learning, throughout the COVID-19 season should be carried out by planning lesson plans adapted to pandemic conditions; implementing learning with an emphasis on the delivery of material; assessment/evaluation carried out following existing conditions; and adhering to health protocols.

Panapto (2019) explains blended learning as a hybrid mode of learning incorporating the benefits of both technology and traditional instructor-based modes of learning. This allows both the students and the instructors to take full advantage of both modes of education to ensure that optimal results are obtained. Michael and Tagoe (2014), explored how students perceive blended education and how they favor it in comparison to the other two extremes Noticeable behaviors, including eye contact, hand gestures, and mannerisms, let people communicate with one another. An individual's gaze can reveal a lot about their behavioral tone or impact. Several gazes endure

for more than a few seconds in most gaze styles, which typically have certain patterns. As a result, any departure from this pattern indicates a particular type of interaction. When a spokesperson has been more convincing, deceptive, trying to ingratiate, or authoritative, they aim to search more towards the listener's expression (Kleinke, 1986). Additionally, individuals favor conversant they like Krause et al. (2017) individuals often assess others based on their gaze structures. Some who stare at their speaker just a portion of the moment are perceived as defensive/evasive, while those who stare a majority of the time are perceived as mature, sincere, and friendly (Kleck & Nuessle, 2006).

2.3 Facial Gestures and Learning

Furthermore, the perception of the individuals involved in the discussion and their ongoing interactions are very discernible from their facial gestures. The face is quite noticeable, and people in a country may learn a lot about one another just by looking at them. Individuals from many nations (Shapiro, 2010) are capable of distinguishing seven different facial emotions in set images (delight, sorrow, surprise, bitterness, nervousness, and curiosity). It can be necessary to use emotive language when speaking and listening. They enable communicators to gauge their listener's response to their speech while still allowing listeners to deduce the communicators' emotional attitude from their speech. Research indicating that when visual data conflicts with auditory communication, individuals prefer to trust visual data illustrates the importance of non-verbal expressive data (if it is communicated by facial gestures or gazing) (Parker et al., 1978). A distinct and contentious collection of discussions surrounds "flaming," which is characterized as unsuitable and overly emotional outbursts. Preliminary research (Sproull, & Kiesler 1986; Kiesler et al., 1985; Siegel et al., 1986) suggested that these behavior patterns are more common in mediated communication even though social practices like responses as well as availability of interpersonal knowledge that would ordinarily modify such exhibits are inactivated. An early exhibition of unacceptable impact may elicit exceptionally powerful reactions, resulting in prolonged encounters with extremely emotional interactions (sometimes known as 'flame-wars'), which is another way that unsuitable expressions of impact can reinforce themselves. Such tendencies are far more prevalent throughout mediated communication than in face-to-face communication (Sproull & Kiesler 1986; Kiesler et al. 1985; Sproull & Kiesler 2000), approximately 12 flaming comments were made in 24 face-to-face conversations contrasted to 102 in 24 digital conversations. Elmwood (2020) discovered that quips, taunts, sexual material, sports, tales, and private details made up 29 and 39 percent of the networks' subject matter, correspondingly. The social and economic richness of email and instant messaging, in compared to face-to-face communication, is not, nevertheless, found to be overly prevalent in other more recent publications (Lea & Spears (1991); Hiltz, Johnson & Agle (1978); Rice & Love (1987)). Additionally, in several of this research, mediated communication had less flam than face-to-face communication. For instance, "The Network Nation. Human Communication via Computer," (1980) discovered that when individuals were aiming to come to a consensus, there was an average

of 14% social and economic richness in 8 mediated communication areas, in contrast to 33% in face-to-face communication factions.

2.4 Impact Of Eliminating Conversational

The literature explored that investigating the impact of eliminating conversational review in face-to-face, voice/video, or speech communication seems to be another way to measure interactivity. Numerous research investigations have demonstrated that the lack of continuous response also results in excessively detailed and extremely repetitive communications as well as impaired common cooperation Research on postponed or interrupted speech communication is just another piece of support for the significance of interaction. Interactivity can be disrupted by the communication network's unidirectional nature, which prevents simultaneous input, closure, and interrupts, or by communication delays, which allow responses or interventions to arrive later than expected. Because interactive occurrences like communications channels, fixes, and outages typically need highly specific scheduling, even little changes to the modulation schemes can have a significant impact. Therefore, the central focus of this study is organizations ought to look into the preferences of the learners and how they see face-to-face and mediated communication. This informational vacuum should be addressed for employees' public debates to be supported by reliable data and the study contributed to help policymakers, instructors, and participants to prefer whether face to face learning or the process of mediated communicative learning according to the needs of the learners and situation

2.5 Theoretical Frameworks

Theoretical frameworks for mediated communication vary widely. This study used collective term of these ideas' forms and the broad range of statements they make here instead of going into great depth about each one. Explaining the connection between the capabilities of various mediated devices and the communication that arises from being used them has been the central aim of mediated communication theories (Oster & Gibson, 1968; Norman, 2000). The majority of views are contrasting, explaining why and how face-to-face communication differs from mediated communication. Such concepts categorize how advancements vary widely in terms of their communication capabilities, illustrate how a provided technology's attributes vary from those of face-to-face communication, and then clarify how such various capabilities result in distinctions among mediated communication and face-to-face communication in accordance with the methods, subject matter, or consequence of communication. For instance, mail has distinct attributes from face-to-face communication, according to the interpersonal dissociation hypothesis (Kiesler et al., 1984; Sproull & Kiesler, 1986). Mail is asynchronous; thus, presenters cannot receive active response right away about whether or not their communication has indeed been understood. Additionally, nonverbal cues like head nods, movements, facial gestures, and posture signals are not included in mail, which has been claimed to be crucial for the transfer of socio - affective knowledge (Meadow & Argyle, 1976; Parker et al., 1978). The hypothesis contends that the lack of response and behavioral – emotional knowledge has two consequences: (a) it hinders

social practices like agreement development; and (b) it encourages more emotionally intense representation in mails.

The aspects of various mediated communication technologies as suggested by such theories are discussed in Figure 1. The variety of modalities that new tech supports is a key technological impressive net worth. The basic distinction between the linguistic and sensory modalities is present here. For instance, although videoconferencing combines a linguistic speaking route with a visual modality that shows users' faces, emails, telephone conversations, and voicemail all send only verbal information. Shared Workspaces are another kind of solution that enables verbal and visual data. They blend synchronous communication channels with accessible video elements like reports or illustrations (Tang, 1991; McCarthy et al., 1993; Stefik et al., 1987; Tatar et al., 1991; Cook et al., 1991; Whittaker, Geelhoed & Robinson, 1993).

Due to the absence of message receivers at the time the message is issued, non-interactive methods must be everlasting. Conversely, interactive ones might be either enduring like the phone, or transitory like instant messaging and chat. Method and interactivity can explain the majority of the data we discuss here, despite the fact that certain approaches (Dunlop, Wakefield & Kashima, 2009) offer more sophisticated sets of capabilities.

The approaches emphasize how various capabilities affect communication patterns after identifying technology and its attributes. Mediated concepts make predictions about the consequences of such actions on important communicative variables such as communication materials, procedures, and consequences by analyzing how various factors can influence communication practices. Research on the function that different communication actions perform in face-to-face communication has led to an understanding of the interaction among intuitive interfaces, actions, and their communicative impacts. The concepts anticipate how communication processes, materials, and outcomes will change in devices that do not allow visual modalities or interactivity by analyzing how visual actions and interactivity impact such actions. For instance, face-to-face research has proved how actions like head nods, eye contact, and gestures influence turn-taking (Benthall et al., 1976; Argyle et al., 1968; Argyle et al., 1974; Beattie, 1978; Duncan, 1972; Kendon, 1967). All of these actions, though, are audible and are dependent on the availability of visual data. Thus, one may anticipate that turn-taking would be hindered by devices which do not enable visual data (Jackson et al., 2000; O'Conaill et al., 1993; Sellen, 1992; 1995; Whittaker & O'Conaill, 1993; 1997).

Figure No 1: Connections Between Capabilities, Communication Patterns, and Related Impacts on Fundamental Mediated Communicative Processes

AFFORDANCE		INTERACTIVITY	
		INTERACTIVE	NON-INTERACTIVE
MODE	LINGUISTIC	Phone, Audioconference, Chat Instant Messaging	Email, answerphone, voicemail, FAX, letter, Usenet.
	LINGUISTIC AND VISUAL	Videoconference, Video Phone, Shared Workspace	Video Mail

Figure 1 illustrates such connections between capabilities, communication patterns, and related impacts on fundamental mediated communicative processes. For instance, the table illustrates how well the visual mode influences a variety of communication behaviors, such as head nods, attention, gestures, and turn-taking, among others. The table does not display the attributes of linguistic modalities since all concepts expect distinctions among various modes of communication. These details would have been superfluous because all devices share the same language style. Regarding such two tables, we will now discuss three main subtypes of mediated communication theory. We go into greater depth about how various factors can influence behaviors and, in turn, the method, substance, and results of communication. The bandwidth theory, cognitive cueing, and societal cueing will serve as the framework for the remaining sections of the study.

Figure No 2: The effects of different affordances on communication behaviors and processes

AFFORDANCE TYPE	COMMUNICATION BEHAVIOURS AFFECTED BY AFFORDANCE	CORE COMMUNICATIVE PHENOMENA AFFECTED
VISUAL MODE	Facial expressions	Attention, understanding, agreement. Conveying affect, attitude.
	Head nods	Signal attention, understanding, agreement. Turn-taking.
	Gaze	Attention. Turn-taking, reference. Conveying affect, attitude.
	Gesture	Attention. Turn-taking, reference.
	Visual access to objects in a shared physical environment	Reference and attention.
	Physical presence	Availability and initiation of impromptu conversation.
	Feedback via backchannels, completions, interruptions	Attention, understanding, agreement. Turn-taking, reference, repairs. Socio-emotional feedback.

The bandwidth theory was an early concept that looked at how modalities affected mediated communication. According to the bandwidth theory, a tech's supported communication methods and the communication that occurs from employing that technique are directly related. The idea is that, regardless of profession, the more closely a tech's allowed range of modalities resembles face-to-face communication, the more effective communication with that device will be. Consequently, we must anticipate that technologies that enable both visual and language modes will always function better than infrastructure that facilitates just the linguistic method.

We investigate whether techniques that do not provide visual data interfere with turn-taking (O'Conaill et al., 1993; Sellen, 1995; Whittaker, 1995; Bordia, 1997) or citation (Bly, 1988), as well as starting spontaneous discussions. These forecasts, which can be derived from Figure 2, relate the relationships between the visual mode (Fish et al., 1993; Kim, 2006; Nemchenko, 2018). We also examine how non-interactive gadgets influence cognitive activities, including turn-taking, referencing, and comprehension (Kraut et al., 1982; Oviatt & Cohen, 1991).

The use of social cues in mediated communication has been a second focus of discussion. The significance of visual input in facilitating the conveyance of subjective and interpersonal data, and the relevance of interactivity in delivering social input, are the main points of discussion in this instance. We analyze the data for various ideas that contend that the lack of visual information alters the presentation of impact and its function in communication, likewise reflecting expectations deducible from Figure 2. (Morley & Stephenson, 1969; Sproull & Kiesler, 1986; James et al., 1999; Parker et al., 1978). We also investigate how diminished social–emotional input and the lack of such visible interpersonal data impact higher-order social practices including argumentation (Morley & Stephenson, 1969; 1970) and building consensus (Kiesler et al., 1984).

3. Methodology

This study used the qualitative approach and used semi-structured interviews as the method for data collection, the population of the study was the university students of Punjab, Pakistan. The sample of the study was selected through the purposive sampling technique, and a sample of 60 students was selected as the sample of the study. Semi-structured interviews were used to gather data for this study from a carefully chosen sample of university students. The participants were selected to reflect a range of genders, academic specialties, and exposure levels to mediatized communication. Participants gave their informed permission before to the interviews after being fully informed about the project. A pilot test was conducted to ensure the clarity and usefulness of an interview guide that included important subjects about the processes and outcomes of mediatized communication. Depending on the interests of the participants, the interviews were held in a private location, either physically in person or electronically. Interviews were audio recorded and verbatim transcribed with consent, using pseudonyms to protect participant identity. The process of thematic analysis was used to find themes and patterns in the data. The study's legitimacy was increased via member verification, and data was gathered until saturation was reached. The validity and reliability of the results of the research were guaranteed by the careful observance of ethical principles, such as participant respect and confidentiality, throughout the whole procedure.

4. Data Analysis

Interviewers serve as the means of gathering information for collecting data in qualitative research. The respondent data from the interview was taken into account and compiled during the data analysis process. The research's data have been analyzed thematically. It is a technique for data description, but when patterns are chosen and concepts are created from those patterns,

perception is also involved. The researcher was able to learn about the participants' perspectives through the subjective analysis of quantitative evidence that had been acquired.

4.1 Themes Formation

The themes of this study were formulated manually by the researcher after setting a label for each question and then developing on the basis of the main aspect of the questions, and later sub-themes were formed from those labels. Thematic analysis can be conducted in 6 stages, according to Braun and Clarke (2006). They pointed out how the stages didn't have to be followed in order because the investigator could have switched back and forth through them. The stages for the qualitative approach according to Braun and Clarke (2006), are as follows: (a) The investigator becomes accustomed to the knowledge by reviewing it frequently and becoming comfortable with its contextual interpretations. Additionally, the investigator can record broad observations that could subsequently help with formulating a strategy. (b) Next, patterns are created to record important analytical concepts found in the data that might be related to the study issue. To make sure that crucial variables are not overlooked. (c) Patterns that are related to a specific subject are grouped to create themes. The motifs reveal common features of significance in the material. (d) Evaluation of the concepts is done in light of both the data collected and the total volume of material. The research can be organized and the connections between the concepts can be identified using a classification model. (e) The topics have names and definitions. In an attempt to elucidate what is occurring in the facts, how it pertains to the proposed study, and also why the audience must engage, the researchers designed an analytical narrative herein. (f) A report that presents the analysis is drafted.

The result highlights the observed input/output as reflected in the surveys, as well as the respondents' estimated preparation for having to learn in contemporary advanced learning depending on data collected from the respondents. If a participant had a poor range of previous knowledge, English fluency, or technological expertise for engaging in mediated communication, individuals were classified as being at the potential of input/output. According to survey results, 25 percent of respondents were at the potential of input/output. The interview results showed that 75 percent of individuals experienced input/output.

The results of the interviews were categorized into six major groups based on the challenges that were identified as contributing to the perception of Input/ output among the participants.

i. **Possibilities to Make**

Individuals who missed the technological know-how to engage in mediated communication were more likely to experience connectivity issues.

ii. **Navigational Challenges**

Even professional technology practitioners, who made up more than half of the participants, had difficulty navigating. These issues comprised confusion when using

computer conferences and the internet, as well as trouble connecting conversation communication.

Figure No 3: Determining the background information and interviewees' competence.

Section	Construct	Criteria	Level
I	Previous knowledge	Previous undergraduate or graduate major was relevant to that individual's current major Had taken at least one session relevant to the current session	Low: satisfied non-Medium: satisfied either one High: satisfied both
II	English fluency	A native English speaker Indicated either fluency or possessing a good level of English proficiency	Low: satisfied none Medium: satisfied either one High: satisfied both
III	Expertise with e-learning (communicative learning)	Had not taken any online session previously Had taken more than two online sessions previously	Novice: satisfied first Moderate: satisfied none Experienced: satisfied second
IV	Familiarity with technology	Indicated an average level of technology use that was: • less than two • two • three or more	Novice: satisfied first Moderate: satisfied second Experienced: satisfied third
III and IV combined	Technical skills for participating in CMC	Identified as a novice online learner and technology user Identified as a moderate/experienced online learner and technology user	Low: satisfied first Medium: satisfied non- High: satisfied second

iii. Uncomfortable with Online Communication

The participants' level of satisfaction with online interaction was impacted by their technical fluency for engaging in mediated communication and their effectiveness (pace and understanding) when learning from electronic screens. Participants who described themselves as technological novices said they had to exert more intellectual energy to engage with the medium's appearance and digest the conversation messages simultaneously.

iv.   The Requirements of Ongoing Debates and Reading

This challenge was experienced by more than half of the participants, particularly those with less previous knowledge, for example, the numerous significant conversation discussions together with the various sources offered on the website. This challenge was brought about by time restrictions for individuals who had entire employment, families, and other commitments. Some children, though, eventually come up with methods for choosing knowledge to remedy the issue. They concentrated on the knowledge required to complete the session requirements and did not explore extra support until time allowed.

v.   Organizational challenges in learning

The structure of the learning was challenging for more than half of the participants. They mentioned how difficult it was to organize training when there were many intellectually stimulating opportunities, such as ongoing online conversations. The requirements of employment, family obligations, or both, attempting to take another online program simultaneously; and the innovation of the strategy for first-time participants who seemed to have to get used to the distinctions between this method of learning and the frequent once a week on site differentiated instruction layout amplified this issue.

vi.   Issues With Interpretations That Use Text as Their Primary Medium

This issue was mentioned by participants who described themselves as slow learners and also preferred visual and aural styles of learning. Although they had done so previously when working in a learning process, they might no longer depend on the trainer's speeches and vocal conversations for assistance. This assessment is in line with the questionnaire-based self-report of individual English fluency that indicated that it was only at a sufficient level. Participants were clearly at a handicap in a content learning environment due to factors including poor language skills and a tendency for visual or aural learning methods.

4.2 Discussion

In a hybrid learning program, which mixes in-person professional training with online resources, professionals, learners, and individuals actively learn with technologies. The proposed research examined participants' opinions of the similarity between online and in-person sessions, and how prior learning encounters might have an impact on such impressions. The results highlight how critical it is to hear about individuals who would be enrolled in online sessions, particularly at a time when several institutions are looking at innovative strategies to involve learners either on or off-site. By shifting communication from point-to-point communication like that observed in face-to-face interpersonal communication to a network whose interaction is enabled by the organized nature of technology, digital entertainment (technology) improves the way where in interactivity happens (Holmes, 2009).

The latest analysis also emphasizes the important role of using facts to guide these choices rather than assuming what students will think or what they will desire. The majority of individuals are taking online classes for the first time. Interaction in the online class, student motivation to

participate in the online class, course structure, and instructor facilitation and knowledge are all important predictors of perceived student learning and satisfaction. Allen and Seaman (2017), have stated that over the past couple of years, online education has not only become more prevalent, but rather easier to acquire, this trend is mostly seen in higher education, and one of the reasons why this is so is because, in the absence of online educations, a vast majority of students in underdeveloped countries had to shift abroad in order to acquire higher education, this burden has been significantly reduced by the internet, using which, students can remain in their home countries whilst acquiring a good quality education from the other side of the globe. Because online classes lack physical socialization, online individual engagement is a stronger predictor of perceived student learning outcomes. There is no significant difference in either country's students' learning outcomes or satisfaction levels. According to Osguthorpe & and Graham (2003), creating a blended learning environment that achieves a harmonious learning balance between face-to-face interaction and online access can be critical. Online classes miss out on the student experience, lack of teacher-student interactions can limit the understanding of students and this method of education almost completely eradicates one-on-one interactions which can impair concepts in the minds of students, (Laine, 2003). Hara and King (2000) have stated that students may also feel isolation, anxiety, and confusion as a result of acquiring education in a very limited space. Lastly, a large-scale study was conducted in the United States of America which showed that online education was not all too beneficial when compared with face-to-face education, this does not mean that it is detrimental, but rather similar more or less.

The study also revealed participants' priorities for online learning since it gives individuals the freedom to communicate with their experts, and learners, and start engaging with their online sessions whenever they want. Additionally, one of the main reasons individuals choose online learning is the simplicity of connectivity associated with higher levels. Learners acquire a favorable opinion regarding knowledge because e-learning technologies make it simple to obtain it. The capacity to research from any spot that is not available with conventional face-to-face training is one way that this research demonstrates the value of e-learning. The research also revealed that respondents believed e-learning to be comparable to in-person instruction. The report's results suggest that the perspective. The perception of greater flexibility may be driving demand for online classes. Future research on student perceptions will assist educators in better understanding the reasoning behind the perceptions documented in this study. The appetite for online learning could be fueled by the sense of additional flexibility. The additional research on students' perspectives can assist experts and learners in better comprehending the justifications for the perspectives utilized. Using mediated communication can help to solve significant issues with online learning. It makes it easier for pupils to communicate with one another and with other people. Additionally, it promotes the discussion of semantics. When mediated communication is being used, the trainees are at ease. With the aid of mediated communication, online learners can effortlessly communicate with native speakers who can speak whenever and wherever they choose.

Despite a growth in the proportion of businesses employing online learning, most are discovering that these courses frequently have inadequate retention and graduation levels (Collins & Callahan, 2011). Some workers are uncomfortable with computers or prefer the social contact offered by a traditional classroom. Although there is the possibility for genuine interactivity, there are still barriers to this technology's general dissemination. People seem to be able to take lessons from their digital peers with the rising usage of technologies including videoconference and the availability of additional bandwidth.

5. Conclusion

The numerous features of collaborative learning over conventional face-to-face learning and online training have been covered in the conversations that came before it. The mixed learning sessions help students feel more a part of their organization and less frustrated by a completely electronic world. Mediated communication ought not to be substituted due to the significance of nonverbal cues, voice modulation, facial gestures, and gestures in conversation. The two learning systems; face-to-face learning and e-learning may enhance each other in terms of pedagogy. The effectiveness of collaborative learning in remote training was proved in this research, especially in terms of individual learning, student engagement, and pupil communication.

Nevertheless, a number of learners claimed that associated with technological limitations, inadequate response, and the interviewer's incapacity to communicate, online lectures can be more challenging than formal learning sessions. These conceptual and methodological deficiencies combined necessitate more complex thinking regarding technological potentials and objectives. We also require a more organized, non-face-to-face model-free study on mediated communication. Investigating circumstances in which mediated communication is preferable to face-to-face communication may be one tactic to do this (Hollan & Stornetta, 1992). Recent findings, for instance, have demonstrated that, in some circumstances, messaging services are recommended over face-to-face contact as they are less intrusive (Nardi et al., 2000). To conclude, advancement in a range of aspects is required if the discipline of mediated communication is to advance. We must improve our understanding of activities and their relationships, conduct more thorough investigations of major predisposing causal contextual cues, and develop new concepts that more accurately depict mass and irregular communication. We will never have concepts based on this technique for mediated communication without doing this, as opposed to attempting to explain the outcomes of mediated communication in the shape of face-to-face communication.

Additionally, the hybrid learning method is probably going to become the predominant instructional strategy in the future. In conclusion, it is crucial to carefully incorporate web-based technologies, resources, and multimedia in developing language if you want to improve a program without undermining the value of in-person training from EFL experts or instructors. Additional studies should be undertaken to discover more about how students' satisfaction and assessed productivity are impacted by organizational innovation. Additionally, research needs to focus on

the elements that are essential for learners to embrace digital resources if the epidemic recurs as well as approaches to inspire learners to respond in more cooperative learning.

6. References

Allen, I. E., & Seaman, J. (2016). *Online report card: Tracking online education in the United States.* Babson Survey Research Group. Babson College, 231 Forest Street, Babson Park, MA 02457.

Argyle, M., & Graham, J. A. (1976). The central Europe experiment: Looking at persons and looking at objects. *Environmental Psychology and Nonverbal Behavior,* 1(1), 6–16. https://doi.org/10.1007/bf01115461

Agung, A. S. N., Surtikanti, M. W., & Quinones, C. A. (2020). Students' perception of online learning during COVID-19 pandemic: A case study on the English students of STKIP Pamane Talino. SOSHUM: *Jurnal Sosial Dan Humaniora,* 10(2), 225-235.

Bentley, I., McGlynn, S., Smith, G., Alcock, A., & Murrain, P. (2013). *Responsive environments.* Routledge.

Bakerson, M. A., Heck, M. L., & Mettetal, G. (2015). When Imagining" What If" is Problematic: Complexities of IRB Teacher Research Approval. *International Journal of Interdisciplinary Educational Studies,* 10(1). 15-27.

Baym, N. K. (2006). The Performance of Humor in Computer-Mediated Communication. *Journal of Computer-Mediated Communication,* 1(2).85-99 https://doi.org/10.1111/j.1083-6101.1995.tb00327.x

Beattie, G. (1978). Sequential Temporal Patterns of Speech and Gaze in Dialogue. *Semiotica*, 23(1-2).101-149. doi: 10.1515/semi.1978.23.1-2.29

Benthall, J., Argyle, M., & Cook, M. (1976). *Gaze and Mutual Gaze. RAIN,* (12), 7-21. doi: 10.2307/3032267

Bierema, L. L., & Merriam, S. B. (2002). *E-mentoring: Using computer mediated communication to enhance the mentoring process.*

Bordia, P. (1997). Face-to-Face Versus Computer-Mediated Communication: A Synthesis of the Experimental Literature. *Journal Of Business Communication,* 34(1), 99-118. doi: 10.1177/002194369703400106

Brödner, P. (1995). Adler, Paul S. (ed.): Technology and the future of work, New York: Oxford University Press, 1992; and Adler, Paul S. and Winograd, Terry A. (eds.): Usability: Turning Technologies into Tools, New York: Oxford University Press 1992. *International Journal of Human Factors in Manufacturing,* 5(2), 227–230. https://doi.org/10.1002/hfm.4530050209

Collins, F. L., & Callahan, J. L. (2011). Alternatives to a core curriculum to accomplish broad and general training: A scientist-practitioner perspective. *Training and Education in Professional Psychology,* 5(1), 15–21. https://doi.org/10.1037/a0022528

Coleman, J. S. (2009). Individual interests and collective action: Studies in rationality and social change.

Cooper, R. M. (1974). The control of eye fixation by the meaning of spoken language. *Cognitive Psychology,* 6(1), 84–107. https://doi.org/10.1016/0010-0285(74)90005-x

Clark, H. H., & Schaefer, E. F. (1989). Contributing to Discourse. Cognitive Science, 13(2), 259–294. https://doi.org/10.1207/s15516709cog1302_7

Clark, H. H., & Wilkes-Gibbs, D. (1986). Referring as a collaborative process. *Cognition,* 22(1), 1–39. https://doi.org/10.1016/0010-0277(86)90010-7

Conferencing, C., Hiltz, S. R., Johnson, K., & Agle, G. (1978). *Replicating Bales Problem Solving Experiments on a Computerized Conference: A Pilot Study.*

Chapanis, A., Ochsman, R. B., Parrish, R. N., & Weeks, G. D. (1972). Studies in Interactive Communication: I. The Effects of Four Communication Modes on the Behavior of Teams During Cooperative Problem-Solving. Human Factors: *The Journal of the Human Factors and Ergonomics Society,* 14(6), 487–509. https://doi.org/10.1177/001872087201400601

Clark, H. H., & Wilkes-Gibbs, D. (1986). Referring as a collaborative process. *Cognition,* 22(1), 1–39. https://doi.org/10.1016/0010-0277(86)90010-7

Dutton, J., Dutton, M., & Perry, J. (2002). How do online students differ from lecture students. *Journal Of Asynchronous Learning Networks,* 6(1), 1-20.

Dunlop, S., Wakefield, M., & Kashima, Y. (2009). Pathways to Persuasion: Cognitive and Experiential Responses to Health-Promoting Mass Media Messages. *Communication Research,* 37(1), 133-164. doi: 10.1177/0093650209351912

Elmwood, V. (2020). The Journalistic Approach: Evaluating Web Sources in an Age of Mass Disinformation. *Communications in Information Literacy,* 14(2). https://doi.org/10.15760/comminfolit.2020.14.2.6

Fedynich, L., Bradley, K. S., & Bradley, J. (2015). Graduate Students' Perceptions of Online Learning. *Research in Higher Education Journal,* 27, 133-164.

Fish, R. S., Kraut, R. E., Root, R. W., & Rice, R. E. (1993). Video as a technology for informal communication. *Communications of the ACM,* 36(1), 48–61. https://doi.org/10.1145/151233.151237

Fitri, H., Nugraha, A. T., Hakimah, Y., & Manihuruk, C. (2019). Strategic management of organizational knowledge and competency through intellectual capital. *Polish Journal of Management Studies,* 19, 33-64.

Grosso, S. S., Smith, T. L., & Grosso, J. L. E. (2012). Interactive questions concerning online classes: Engaging students to promote active learning. *International Journal of Education Research,* 7(1), 49-60

Ginns, P., & Ellis, R. (2007). Quality in blended learning: Exploring the relationships between on-line and face-to-face teaching and learning. *The Internet and Higher Education,* 10(1), 53-64.

Gallagher, M. (1971). Rhythms of Dialogue.Joseph Jaffe , Stanley Feldstein. *The Quarterly Review of Biology,* 46(3), 323–324. https://doi.org/10.1086/406985

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.

Gill, T. Grandon. (1995). High-tech hidebound: Case studies of information technologies that inhibited organizational learning. *Accounting, Management and Information Technologies, 5*(1), 41–60. https://doi.org/10.1016/0959-8022(95)90013-6

Gray, J. A., & DiLoreto, M. (2016). The effects of student engagement, student satisfaction, and perceived learning in online learning environments. International Journal of Educational Leadership Preparation, 11(1), n1.

Garner, P. (2014). Porfirio Díaz. Routledge.

Holmes, K. (2009). Planning to teach with digital tools: Introducing the interactive whiteboard to pre-service secondary mathematics teachers. Australasian *Journal of Educational Technology,* 25(3). 35-52.

Hillman, D. C. A., Willis, D. J., & Gunawardena, C. N. (1994). Learner-interface interaction in distance education: An extension of contemporary models and strategies for practitioners. *American Journal of Distance Education,* 8(2), 30–42. https://doi.org/10.1080/08923649409526853

Innovative higher Baym, N. K. (1995). The emergence of community in computer-mediated communication education, *Accounting, Management and Information Technologies,* 26(3), 211-227.

James, S. E., Brumfitt, S. M., & Cudd, P. A. (1999). Communicating by telephone. *Journal of Fluency Disorders,* 24(4), 299–317. https://doi.org/10.1016/s0094-730x(99)00019-4

Keysar, B., Barr, D. J., Balin, J. A., & Paek, T. S. (1998). Definite Reference and Mutual Knowledge: Process Models of Common Ground in Comprehension. *Journal of Memory and Language,* 39(1), 1–20. https://doi.org/10.1006/jmla.1998.2563

Kleck, R. E., & Nuessle, W. (2006). Congruence between the Indicative and Communicative Functions of Eye Contact in Interpersonal Relations*. *British Journal of Social and Clinical Psychology,* 7(4), 241–246. https://doi.org/10.1111/j.2044-8260.1968.tb00565.x

Krause, N., Pompedda, F., Antfolk, J., Zappalá, A., & Santtila, P. (2017). The Effects of Feedback and Reflection on the Questioning Style of Untrained Interviewers in Simulated Child Sexual Abuse Interviews. *Applied Cognitive Psychology,* 31(2), 187–198. https://doi.org/10.1002/acp.3316

Laili, R. N., & Nashir, M. (2021). Higher education students' perception on online learning during Covid-19 pandemic. *Edukatif: Jurnal Ilmu Pendidikan,* 3(3), 689-697.

Lazarevic, B., & Bentz, D. (2021). Student perception of stress in online and face-to-face learning: the exploration of stress determinants. *American Journal of Distance Education,* 35(1), 2-15.

Lea, M., & Spears, R. (1991). Computer-mediated communication, de-individuation and group decision-making. *International journal of man-machine studies,* 34(2), 283-301.

Lincoln, Y. S., & Guba, E. G. (1985). Naturalistic inquiry. *International Journal of Intercultural Relations,* 9(4), 438–439. https://doi.org/10.1016/0147-1767(85)90062-8

Lenka, S. K., & Kant, R. (2017). Organizational health of secondary school teachers in relation to their adjustment. *Journal of Educational & Psychological Sciences,* 18(01), 662-679.

Mackay, T. F. (2014). Epistasis and quantitative traits: using model organisms to study gene–gene interactions. *Nature Reviews Genetics,* 15(1), 22-33.

Nguyen, T. (2015). The effectiveness of online learning: Beyond no significant difference and future horizons. *MERLOT Journal of online learning and teaching,* 11(2), 309-319.

Nissa, S. F., & Haryanto, A. (2020). Implementasi pembelajaran tatap muka di masa pandemi covid-19. *Jurnal Ika Pgsd (Ikatan Alumni Pgsd) Unars,* 8(2), 402-409

Nardi, B. A., Whittaker, S., & Schwarz, H. (2000). It's not what you know it's who you know. *First Monday,* 5(5). 438–439. https://doi.org/10.5210/fm.v5i5.741

Nemchenko, L. (2018). Montage as the Meaning-generative Principle of Avant-garde: From Montage in Cinema to Montage in Theatre (Soviet and Post-Soviet Theatre and Cinema). *KnE Social Sciences,* 3(7), 114-131. https://doi.org/10.18502/kss.v3i7.2469

Norman, D. (2000). The design of everyday things. MIT Press.

Norwine, A. C., & Murphy, O. J. (1938). Characteristic Time Intervals in Telephonic Conversation. *Bell System Technical Journal,* 17(2), 281–291. https://doi.org/10.1002/j.1538-7305.1938.tb00432.x

O'Neill, S., Scott, M., & Conboy, K. (2011). A Delphi study on collaborative learning in distance education: The faculty perspective. British Journal of Educational Technology, 42(6), 939-949.

Pollard, A. (2015). Web-based journals in the classroom: Motivation and autonomous learning. *Indonesian Journal of Applied Linguistics,* 4(2), 20-31.

Paul, J. A., & Cochran, J. D. (2013). Key Interactions For Online Programs Between Faculty, Students, Technologies, And Educational Institutions A Holistic Framework. *Quarterly Review of Distance Education,* 14(1), 61-78.

Parker, E., Short, J., Williams, E., & Christie, B. (1978). The Social Psychology of Telecommunications. *Contemporary Sociology,* 7(1), 32-51. https://doi.org/10.2307/2065899

Platt, C. A., Amber, N. W., & Yu, N. (2014). Virtually the same?: Student perceptions of the equivalence of online classes to face-to-face classes. *Journal of Online Learning and Teaching,* 10(3), 489-502.

Rafaeli, S., Ariel, Y., Joinson, A. N., McKenna, K. Y. M., Postmes, T., & Reips, U. D. (2007). Assessing interactivity in computer-mediated. *Oxford handbook of Internet psychology*, 71-88.

Rizaldi, D. R., Fatimah, Z., Susilawati, S., & Makhrus, M. (2022). Student Responses related to Face-to-Face Learning Policies to Overcome Learning Loss Condition. *Journal of Science and Science Education,* 3(1), 9-16.

Shedletsky, L. J., & Aitken, J. E. (2001). The paradoxes of online academic work. *Communication Education,* 50(3), 206-217.

Shapiro, M. B. (2010). Emotion in the Human Face. 2nd edition. Edited by P. Ekman. Cambridge: Cambridge University Press. 1983. Pp 439. £25.00, £9.95 (paperback). *British Journal of Psychiatry,* 143(3), 315–316. https://doi.org/10.1192/s0007125000117775

Stamou, A. G. (2018). Studying the interactional construction of identities in Critical Discourse Studies: A proposed analytical framework. *Discourse & Society,* 29(5), 568–589. https://doi.org/10.1177/0957926518770262

Stefik, M., Foster, G., Bobrow, D., Kahn, K., Lanning, S., & Suchman, L. (1987). Beyond the chalkboard: computer support for collaboration and problem solving in meetings. *Communications Of The ACM,* 30(1), 32-47. https://doi.org/10.1145/7885.7887

Tagoe, M. A. (2014). Transforming Teaching and Learning at University of Ghana through Community Service-Learning: Listening to the Voices of Students. *Journal of Education and Training Studies,* 2(4), 85-96.

Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management science,* 46(2), 186-204.

Wentz, B., Jaeger, P. T., & Lazar, J. (2011). *Retrofitting accessibility: The legal inequality of after-the-fact online access for persons with disabilities in the United States. First Monday.*

Whittaker, S., Geelhoed, E., & Robinson, E. (1993). Shared workspaces: how do they work and when are they useful?. *International Journal Of Man-Machine Studies,* 39(5), 813-842. doi: 10.1006/imms.1993.1085

Woll, B. (1997). William H. Edmondson & Ronnie B. Wilbur (eds.), International Review of Sign Linguistics, 1, 77-89.

Yilmaz, A. B. (2019). Distance and face-to-face students' perceptions towards distance education: A comparative metaphorical study. *Turkish Online Journal of Distance Education,* 20(1), 191-207.