

# The effect of online learning on communication between instructors and students during Covid-19 pandemic

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## Abstract

**Purpose** – This study aims to explore whether online learning has an effect on communication between instructors and students in a negative way, whether online learning affects students' productivity levels and to evaluate and suggest ways of improving effective online communication between instructors and students.

**Design/methodology/approach** – This study used is a quantitative research study which was conducted through a semi-structured online survey through a random sample technique.

**Findings** – Results revealed that the vast majority agree with the questions of the study. Students still prefer classroom classes over online classes due to many problems they face when taking online classes, such as lack of motivation, understanding of the material, decrease in communication levels between the students and their instructors and their feeling of isolation caused by online classes.

**Research limitations/implications** – This research studied the impact from students' perspective only as the sample was selected only from students.

**Originality/value** – This research reached the students' point of view in a broader way which will help understanding the issues and provide effective solutions. This research suggested that instructors must communicate with their students and vice versa in more informal channels (instant messages online chat groups, audio calls, private video calls . . .) in parallel with the formal channels (online platforms, email . . .). Finally, instructors should encourage students to participate and study more by providing different kind of incentives.

**Keywords** Communication, Effective communication, Online learning, Productivity, Face-to-face learning, Instructors

**Paper type** Research paper

## 1. Introduction

Communication especially in the education sector needs to be studied as communication between instructors and students has the ability to improve the learning experience and to create a positive setup. Communication is simply the transfer of information from one person to another, or group to another. Effective communication is a process of exchanging ideas, thoughts, knowledge and information in such a way as to fulfill the purpose or intent in the best possible way. In other terms, it is nothing more than the sender's expression of views in a way that the recipient understands best.

The aim of online communication is the same as that of face-to-face communications: bonding; exchanging information; being heard and being understood. Fostering a sense of community in online classes will make the students' learning experience more meaningful and it can help them stay connected during the course life. When instructors communicate with students, whether in a face-to-face class or an online class, they communicate for the purpose of offering knowledge or having information to gain understanding and develop relationships. Communicating with students in an online environment requires a little more thought and planning than communicating with students in the traditional environment



because the online environment lacks body language. Instructors have the advantage of using body language and facial expression in a face-to-face class to help them connect and get their message across to their students. When interacting in an online class, instructors do not have the advantage of using body language to help their students communicate. Knowledge of communication weaknesses within online environments can help them decide how to establish timely and appropriate communications, and how to interact effectively with their online students.

### *1.1 Purpose of the study*

This study aims to explore whether online learning has an effect on communication between instructors and students in a negative way, if online learning during Covid-19 pandemic affects students' productivity levels. As well as, to evaluate and suggest ways of improving effective communication between instructors and students of AUM in online courses. Since this shift to online learning is very new to most students and instructors too, there is a great interest in this topic along the way of experiencing this change especially for students.

### *1.2 Questions of the study*

This study aims to answer the following research questions:

- (1) Does online learning have a negative impact on communication between instructors and students?
- (2) How communication between instructors and students in educational Institutions can be improved?
- (3) What are the problems that students face in online learning and does online learning have a negative effect on students' participation and their productivity level as a whole?

## **2. Literature review**

This research provides a framework on communication that takes place between instructors and students. However, we will be focusing greatly on the topic of "Online learning and its effect on communication specifically that between instructors and their students" including a review on the following sub-headlines:

### *2.1 Communication*

It is necessary to study communication, since every administrative function and operation requires some sort of direct or indirect communication. The school administrators work with and through other individuals, whether planning and organizing or leading and monitoring. This means that the communication skills of each individual affect personal as well as organizational effectiveness (Brun, 2010; Summers, 2010). It seems fair to conclude that lack of effective communication is one of the most inhibiting forces for organizational effectiveness (Lutgen-Sandvik, 2010).

Communication can be described as the process of transmitting information and popular understanding from one person to another (Keyton, 2011). The word "communication" was derived from the Latin "communis," meaning "common." Therefore, "communicating" means "making common," "making known" or "sharing" and involves verbal, non-verbal and electronic means of human interaction (Velentzas and Borni, 2014). The definition underlines the fact that no communication occurs unless a shared understanding emerges from the exchange of information (Cheney, 2011).

This act of making common and known is done by sharing opinions, ideas or the like. One can have the exchange of thoughts and ideas by gestures, signs, signals, expression or writing. People are said to be in communication when discussing some subject, when talking on their telephone, or when exchanging information via letters. Communication is essentially the exchange of information, whether written or oral (Velentzas and Borni, 2014).

Furthermore, the communication process also draws from many interpersonal skills. They include talking, listening, watching, interviewing, analyzing, interpretation and evaluation. Message recipients must be able to identify the intent of the sender, take into account the context of the message, resolve any misunderstandings, decode the information accurately and decide how to act upon it. Such skills are essential for learning, building healthy relationships, building a sense of community and gaining workplace success (Velentzas and Borni, 2014).

### *2.2 Effective communication*

“Great communication skills will add years to your tenure as a successful teacher.” Dr. Jerry Weast of Montgomery County, Maryland (Weast, 2008). Therefore, effective communication must be a priority not a forgotten thought for great teachers (Hilliard and Newsome, 2013).

Effective communication occurs when a desired effect is the result of intentional or unintentional exchange of information, which is communicated by different individuals and performed in a desired manner. This influence also ensures no distortion of the message during the contact process. Effective communication will achieve the desired effect and uphold the effect, with the potential to improve the message’s effect. Therefore, effective communication serves the purpose it was intended or built for. Possible objectives may be to make change, to encourage action, to create awareness, to educate or to convey some idea or perspective. Good communication means talking and listening (Velentzas and Borni, 2014).

To succeed in their career, instructors need outstanding communication skills. Instructors need listening, interpersonal, written and oral communication skills to promote comprehension of the teaching results and the ability to effectively fulfill their responsibilities. Instructors not only need to carry out technical tasks, they also do need to communicate effectively and efficiently with internal and external customers. Developing effective communication skills is an essential part of the ability for the instructors to succeed. To become a good professional, instructors must possess highly developed levels of communication skills. Developing these skills not only increases the potential of the instructors but will also improve the quality of the teachers created. Advanced communication skills are important in all aspects of the teaching cycle. Instructors must have highly developed oral and writing skills to interact effectively with supervisors, learners and collaborators. Communication skills are becoming increasingly necessary for success in the organizational environment of our time. (Ihmeideh *et al.*, 2010). To increase communication effectiveness, schools need to gain knowledge of the value of the responsibilities of the sender and receiver and adhere to the active listening skills (Lunenburg, 2010).

### *2.3 Communication and productivity*

Institutional productivity is a primary determinant of the degree of performance, quality and effectiveness of an organization. This measures to what degree the desired results or programs are accomplished by the students, instructors, groups and schools (Glomo-Narzoles, 2012). In a particular institution, it partly defines the schooling requirements.

Theorists gave their views on factors that influence organization’s productivity. For Hellriegel *et al.* (1998) a community that promotes employee involvement; for Heneman and Schwab (1985) participatory management, increasing employee satisfaction amid lower levels of pay for workers; and for Arakawa and Greenberg (2007), constructive leadership and

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an approach focused on strengths (Glomo-Narzoles, 2012). However, a successful institution of higher education is one that achieves excellence in its triple functions that are teaching, study, and community involvement (Okello, 2015).

Moreover, several studies reveal that there is significant correlation between institutional productivity and communication climate. For Segumpan (1999), there were positive and important associations between the job performance and the environment of supportive communication, and the environment of defensive communication and empowerment. Pavitt (2000) pointed out that the relationship between member communication and productivity at work exists. Madlock (2008) provided a connection between communication, leadership and job performance of employees and satisfaction with productivity and communication. Clampitt and Downs (1993) related productivity with communication, which varied in nature and magnitude (Glomo-Narzoles, 2012).

Every organization establishes its own departments and regularly improves its work. Such organizations need innovative ethics in their management to ensure productivity in all circumstances, either in good times or in challenging times. Internal communication plays a very important role for a successful organization, as effective internal communication affects the productivity of employees and the performance of the organization (Welch and Jackson, 2007).

Motivational strategies and productivity of instructors are related constructs that affect the quality of education. Quality education is the degree to which education is claimed to be of a high standard, meets basic learning needs and enriches learners' lives and their overall living experience (Orodho *et al.*, 2013).

Quality education achievement definitely falls on the shoulders of instructors who need adequate motivation to deliver the desired educational productivity. The position of administrators and teachers cannot be downplayed, given that education is one of the key factors that help to bring about rapid social and economic growth in any given country. But concerted efforts are also made by the school administrators through successful and efficient motivational approaches to ensure the effectiveness of teachers in the school system (Getange, 2016).

#### *2.4 Effective communication between instructors and students*

The topic of communication in teaching is so generic that it has turned out to be almost oceanic. Currently, the topic of communication skills development is very commonly researched. A teacher in a society is a highly respected individual, and teaching is considered the most important and distinctive profession. How effective instructors are is very much linked to how they communicate. They express ideas, information and expectations in a number of ways: by speaking, by gestures and other body language, and by written words (Duta *et al.*, 2015).

Instructors need to be mindful of how they interact because communicating effectively will help instructors have a presence in the classroom that motivates students and encourages learning; they might send unintended messages if they do not know things about their own body language; new technologies provide new opportunities to connect with students (Duta *et al.*, 2015). Based on the literature review of Majid *et al.* (2010) and according to Moore (2007), the teaching and learning process shall not take place without communication. Instructors with strong communication skills can thus create a more positive learning and teaching atmosphere for the students. On the other hand, someone with excellent communication skills has the ability to influence others and positive communication strategies (Guerrero and Floyd, 2006).

For instructors, it is very important to guide students in their learning process; this can be done using three steps in the evaluation process (Lambrechts *et al.*, 2013). The first step, Feed-up: give examples of what is expected during the evaluation; make evaluation criteria explicit

for the students, be transparent about the assessment. The second step, Feed-back: give sufficient feedback to the students, allowing them to learn from their evaluation as much as possible. The third step, Feed-forward: give the students input on how to go further in their learning process.

One study of [Jurik et al. \(2014\)](#) certainly points out the significance of communication between teachers and students, “Verbal teacher-student interactions and student characteristics are meaningful for student learning and motivation.” In this study, authors reviewed how teacher questions and feedback related to individual student traits and gender predict cognitive learning activity and intrinsic learning motivation. A random sample was selected which included 79 high school physics classrooms in Germany and Switzerland. Individual student traits (cognitive abilities, pre-knowledge, self-concept and interest) were checked at the start of the school year to identify five student profiles. Four months after that, a teaching unit was videotaped in the same classrooms. After the teaching unit was videotaped, a questionnaire on cognitive learning activity and intrinsic learning motivation was conducted. The results show that teaching skills should be fostered to improve teachers in asking questions and providing feedback ([Jurik et al., 2014](#)).

Another study by [Doménech-Betoret and Gómez-Artiga \(2014\)](#) examines the relationship among students’ and instructors’ thinking styles, student psychological needs (autonomy, competence and relatedness), and their reports of intrinsic motivation in the psychology degree context. They concluded that psychological need satisfaction has a significant and positive impact on student intrinsic motivation ([Duta et al., 2015](#)). On the other hand, [Urduan and Schoenfelder \(2006\)](#) found out that learning success is treated in many studies as a human characteristic or attribute and not as a result of how instructors teach ([Shan et al., 2014](#)). [Payne et al. \(2007\)](#) found that more reflective and critical students are more likely to show higher academic success ([Komarraju et al., 2011](#)). An empirical study by [Yip \(2012\)](#) supports the idea that variations in academic performance between students are mainly due to their different learning and study strategies; those strategies, in turn, affect the self-effectiveness and efficiency of students ([Muliro, 2017](#)).

### *2.5 Online learning and communication*

Like all previous ones, this global catastrophe has shown the consequences, even after a pandemic has dissipated. Many countries have introduced such curfew and lockout protocols from the outset to cope with the Covid-19 pandemic ([Alawamleh, 2020](#)). Educational entities have been shut down in Jordan from March 15 to May 30, 2020. Therefore, universities have resorted to continuing lectures online through websites such as Google meet. Obviously, this has an effect on communication as communicating virtually differs from face-to-face communication. In this section we will be discussing the following sub-topics to help us gain a better understanding of the subject.

*2.5.1 What is online learning and face-to-face learning?* First, most authors define online learning as accessing learning experiences through the use of certain technology ([Benson, 2002](#); [Conrad, 2002](#)). Both [Benson \(2002\)](#) and [Conrad \(2002\)](#) define online learning as a more modern form of distance learning that enhances access for learners identified as both non-traditional and ineffective to educational opportunities. Many scholars discuss not only the usability of online learning but also its connectivity, mobility and interactivity ([Ally, 2004](#)). [Hiltz and Turoff \(2005\)](#), like [Benson \(2002\)](#), make a clear statement that online learning is a modern form of distance learning, or an updated edition. Like many, these authors believe that there is a relationship between distance education or learning and online learning but appear uncertain in their own descriptive narratives ([Moore et al., 2011](#)).

Second, face-to-face learning is one in which instructors and students meet concurrently and in the same location. Sessions are synchronous in the face-to-face learning process. As no communication technology is required for a face-to-face session ([Caner, 2012](#)).

*2.5.2 The difference between face-to-face learning and online learning.* Over the last few years, digital media have improved the teaching and learning experiences and have become a common practice for university students and lecturers. The use of e-learning and of digital media for teaching and learning has grown rapidly in just a few years (Paechter and Maier, 2010). In a comparative study, Dabbagh and Ritland (2005) examined the differences between traditional and online learning environments, arguing that traditional learning environments are bound by the location and presence of the teacher and the students conducted in real time, managed by the instructor, and are linear in teaching methods.

However, the online teaching and learning environments are unbound and dynamic, using evolving information and communication technologies, asynchronous communication and real-time information. Online learning environments involve a variety of educational practices and are often characterized by student-centered, active learning techniques (Keengwe and Kidd, 2010).

*2.5.3 The benefits of online learning.* There are a large number of studies that consider statistically significant positive effects for student learning outcomes in the online format, as opposed to conventional face-to-face format. Some of the positive learning outcomes include improved learning as measured by test scores, student engagement with the course material, enhanced understanding of learning and the online environment, a stronger sense of community among students and reduced withdrawal or failure (Nguyen, 2015).

Online learning often appeals to a large number of students, as it offers versatility in participation, accessibility and convenience. Furthermore, online learning will continue to be an integral part of higher education (Croxtton, 2014). “Whether or not you’re keen on using technology for learning, the fact is that it’s here to stay. Technology has become an essential way to handle the education, training, and retraining needs of an expanding knowledge society” (Berge, 2007).

*2.5.3.1 Convenience.* It cites the convenience attribute as the prime value of online learning. Students are in circumstances where they choose the convenience of online learning over the facetime provided by the brick and mortar classrooms. The ease of online learning enables direct communication between instructors and peers in the cyber class (Fedynich, 2013).

*2.5.3.2 Participation.* Ease of participation is an aspect of the appeal of virtual classrooms. One of the many versatile aspects of cyber learning is the willingness of the students to participate in a mixed learning environment, either asynchronously or synchronously. Online education can take several forms, from blogs to mailing lists to courses management systems such as Blackboard. Students can participate in chat rooms in real time or asynchronously by posting to newsletters or forums (Morrison *et al.*, 2019). By being equipped with all those forms of communication, students are given the easier route of communication with either the instructor or other students in the class. For communication purposes, the playing field is set, and everyone in the class can participate.

According to Garnham and Kaleta (2002), “Introverts, who are quiet in the face-to-face class, really participate online.” Kupczynski *et al.* (2008) found that student participation increased in the asynchronous environment, as there is time to “post messages, read and respond to messages, reflect on responses, revise interpretations, and modify original assumptions and perceptions. . .” but in a face-to-face class this would not be the case (Fedynich, 2013).

*2.5.3.3 Cost-effectiveness for the university.* Universities now understand the benefits of holding online classes, as the student population continues to grow. Combined with lower online student withdrawal rates, universities found that online learning is very cost-effective and efficient in many ways before online learning came to be possible (Steen, 2008). More students prefer to enroll and take online courses, as this decreases the student and university’s opportunity cost of an education (Dziuban *et al.*, 2005). As more classes are delivered online, enrollment is growing, thereby adding more money to the university’s bottom line.



Classroom distribution is an environment that can be simplified as more students participate in online courses. Demand for classrooms continues to decline, as space is not required as often as usual, thus reducing utility costs and maintaining them. "Online programs have little or no cost to educational facilities, transportation and associated staff," Cavanaugh said. "The importance of distance education also grows when considering the wide range of online courses available" (Cavanaugh, 2009). It is good news in these days for budget cuts, in fact cuts in both the private and public sectors, along with decreasing enrollment for some universities.

*2.5.4 The problems of online learning.* To date, online learning seems to have lots of benefits for everyone involved. While online learning is having a positive impact, problems need to be brought to light. Such drawbacks will prove to be considerable obstacles if fully understood, expected and planned. One study carried out by Boling *et al.* (2012) found that most of their study participants viewed online courses as individualizing learning and limiting interaction with others. Students described feeling isolated from their teachers, from the content of the course and from their classmates. Participants in these courses explained how their online interactions were text-based lectures and several reading and writing assignments completed. Many of those tasks limited the ability of the students to develop a higher level of cognitive abilities and imaginative thinking. For example, one student, John, stated, "Most of our topics are generically produced as part of the course curriculum, and so it is usually very simplistic in what is being asked or what is being given information-wise. . . ." Another student, Pamela, commented that her course consisted of "Just reading and reading and reading until it fell out my ears, and then you had to repeat it back in a persuasive way" (Boling *et al.*, 2012). Vonderwell (2003) described problems with students not engaging in conversation with each other and considered the online atmosphere to be impersonal. One student commented: "It is not like a person to person interaction. It's more like computer to computer interaction" (Kear, 2010).

In addition, McConnell (2006) identified issues related to interpersonal aspects of online communication. Often the students felt alone, overshadowed by other members, or reluctant to publicly share their ideas. Murphy *et al.* (2001) drew up a series of case studies, in which early adopters of online learning communication explored their practice and experiences. Low engagement and interactivity, along with other problems caused by lack of immediacy and non-verbal clues, were a major concern. Some students perceived the medium as "faceless," and there could be misunderstandings. The tone could turn unpleasant, leading even to "flame wars." These problems were particularly off-putting to the students who were new to online learning (Kear, 2010).

Brown and Liedholm (2002) found in a study evaluating student learning outcomes in a microeconomics course that students in the online format performed substantially worse on tests than students in the conventional format while they had better GPA and ACT scores. For complicated questions this disparity was most pronounced, and less pronounced for simple questions. One potential reason was that half of the online students reported spending less than three hours a week and none claimed to spend more than seven hours a week, while half of the students attended each class in the conventional format, at least three hours a week. Another study also found differences in time devoted to class or active involvement resulting in differential outcomes (Hiltz *et al.*, 2000).

*2.5.5 Motivation and learning online.* Schunk (2008) defined motivation as "The process whereby goal-directed activity is instigated and sustained." Motivation can influence what we learn, how we learn and when we choose to learn (Hartnett *et al.*, 2011). Research shows that motivated learners are more likely to participate in challenging activities, participate actively, enjoy and adopt a deep learning approach and exhibit increased performance, persistence and creativity (Schunk and Zimmerman, 2012). Contemporary views link motivation to cognitive and affective processes of individuals, such as thoughts, beliefs and objectives, and emphasize

the interactive relationship between the learner and the learning environment (Brophy, 2010). Studies that explore motivation online learning contexts are relatively limited both in number and scope (Artino, 2007; Bekele, 2010). Existing research has tended to take a limited view of motivation that does not recognize the complexity and dynamic interplay of underlying factors and influences the motivation to learn (Brophy, 2010).

Motivation was more often seen as a personal trait that remains fairly constant across contexts and circumstances (Hartnett *et al.*, 2011). Many studies have focused on identifying lists of traits of successful online learners (Wighting *et al.*, 2008; Yukselturk and Bulut, 2007) and indicate that intrinsic motivation is a common characteristic (Shroff *et al.*, 2007; Styer, 2007). Findings from comparative studies between online students and on-campus students also suggest that online students are more intrinsically motivated across the board than their on-campus counterparts at both undergraduate and postgraduate level (Rovai *et al.*, 2007; Shroff and Vogel, 2009; Wighting, 2008; Hartnett, 2016). Although intrinsic motivation can influence initial engagement as well as retention in online study, research that treats intrinsic and extrinsic motivation as two separate subjects can provide an overly simplistic view of both contextual effects and motivation itself (Hartnett *et al.*, 2011).

Viewing motivation exclusively as an outcome of the learning environment or as an attribute for learners does not consider that individuals may be motivated in any given setting and time to a greater or lesser extent, often in various ways (Turner and Patrick, 2008). Few online learning studies have recognized this contemporary “person in context” as a view of motivation and have done so only in a restricted manner (Shroff *et al.*, 2007; Xie *et al.*, 2006). These factors together point to the need to reconsider the motivation for learning in technology-mediated environments (Urdan and Schoenfelder, 2006).

*2.5.6 The effect of online learning on communication.* Online learning can also include communication mediated by a computer. According to Hung *et al.* (2010), shy students appear to be more interested in online settings than in conventional settings. In Web-based learning, it is necessary to build opportunities for interactions and communication between students and their instructors. Similarly, active students could make the most of online forums, which might offer opportunities to engage fellow students and professors with deeper dialogue and insightful questions as a technique. Asking questions is a way of getting deeper into the subject and making the topic more comprehensible. Additionally, students should take advantage of opportunities to collaborate with other online students to avoid burn-out or lack of interest while learning online, use motivation and support to remain motivated. Efficiency and efficiency of communication in online learning are an important aspect to overcoming the constraints of online communication (Hung *et al.*, 2010).

Also, a research conducted by Kinash *et al.* (2015) established that student attendance does not seem to decrease when online lectures are given, and whether they experience lectures live or online does not seem to affect the student achievement. Many scholars have argued that face-to-face and online formats are only comparable when used for instructive information which can be offered as a lecture. Students need learning tools, and intellectually rich spaces for conversation, debate and deductive questioning. Moreover, the proposition that such educational activities are better conducted face to face was strongly endorsed. Meanwhile, educational researchers have also identified digital scholarship as a disruptive innovation, enabling creativity and renewal in learning and teaching experiences (Kinash *et al.*, 2015).

Bangert (2006) identified four factors related to student satisfaction in online courses, including interaction and communication between students and faculty; time spent on task; active and engaged learning; and cooperation between classmates (Gray and DiLoreto, 2016). Another research correlated the expectations of students about a sense of community and instructor presence in online courses with asynchronous audio feedback (Ice, 2007). They compared their findings based on receiving text-based feedback rather than audio input from the students. Students showed greater satisfaction with embedded asynchronous audio



feedback as opposed to text feedback only (Ice, 2007). Students found that audio feedback was more effective because the slight gap in communication was simpler, their instructors were more worried about it, and they were three times more likely to adapt the material or recommend improvements to this form of feedback (Cavanaugh and Song, 2014).

*2.5.7 The effect of student engagement on the online learning environment.* Student engagement has been described as the level of interest demonstrated by students, how they interact with others in the course, and their motivation to learn about the topics (Briggs, 2015).

There are several affective factors related to student engagement which include attitude, personality, motivation, effort, and self-confidence. Jaggars and Xu (2016) found that in online courses the level of interaction within the course parameters was positively associated with the grades of the students. Through evaluating the level of student interest and taking into account these affective factors, instructors will organize lessons and events more effectively that will enable students to participate more actively in their learning and course work (Jennings and Angelo, 2006; Mandernach, 2011). When students are motivated to do well in their classes, engaged or invested in their desire to learn, and able to devote the effort their teachers expect, they are more likely to participate in their education. The course engagement extends beyond the traditional methods of measuring instructional effectiveness to include student mastery of course learning goals, retention and student satisfaction perceptions, whereas "Consideration of the impact of instructional activities on student engagement provides a more complete picture of the teaching-learning dynamic." Measuring student engagement levels helps instructors to adapt their instructional practices in response to changes in the motivation, participation and attitude of students toward their course and educational pursuits (Mandernach, 2011).

### *2.6 Summary of literature*

The development of good communication skills is an important part of the instructors' ability to succeed. Instructors have to have highly defined levels of communication skills to succeed. Effective communication plays a very important role in effective teaching, since effective communication affects instructors' productivity and instructor and student efficiency. How effective instructors are is closely linked to the way they interact. We communicate thoughts, knowledge and desires in a number of ways: through speech, gestures, and other body language, and written words. Instructors with good communication skills will therefore create a more productive environment of learning and teaching for the students.

Most scholars define online learning as accessing learning experiences through the use of certain technology. Online learning appeals to a large number of students because it offers flexibility in participation, easy access and convenience. However for most studies, students identified issues related to the interpersonal aspects of online communication. Often the students felt alone, overshadowed by other members, or reluctant to publicly share their ideas. Another big issue was poor engagement and interactivity, along with other issues created by a lack of immediacy and nonverbal signals. Several students viewed the medium as "faceless," so there may be misunderstandings and the tone could turn negative.

## **3. Methodology**

This study is a quantitative research study through semi-structured survey which was conducted online due to the pandemic of the Covid-19 which resulted in having lockdown and everyone have to stay at home; instead of distributing physical copies to the students inside the campus. A descriptive research design is applied by using the semi-structured online survey for the purpose of collecting data on the effect of online learning on communication.

### 3.1 Data collection

Prior to developing measurement instruments for the research model, the literature was searched for scales that were already developed to study the impact of online learning on students and instructors. After a check on the existing validated instruments, some of the constructs involved in this research have been employed in previous studies and scales were presented for these constructs. However, none of the existing scales was accurately appropriate for the research model: The Effect of Online Learning on Communication between Instructors and Students. Therefore, new scales had to be developed for these constructs. Following the standard scale development process advocated in literature (Churchill, 1979) and based on the stages of measurement scale creation and validation suggested, Devellis (2016) multi-item scale is developed and validated the impact of Online learning on communication between instructors and students.

A sample of 133 students from the American University of Madaba are used, and it is safe to say that they can be representative of the whole population selected. Simple random sampling method is applied as the sampling technique for the study because it is the most straight-forward and convenient method. As mentioned before, the instrument of data collection is an online survey. Creation of appropriate survey items stems from previous literature. Some of our survey items can be selected from the existing scales from prior studies. Further, some items may be developed from discussions on the relevant topics from different pieces of literature (Lewis *et al.*, 2005).

Regarding the sampling technique, the research used probabilistic sampling; given that positivism is concerned with reducing bias as much as possible, probability-based sampling approach was deemed the most appropriate. This avoids sampling bias or selectively recruiting participants. Moreover, the specific sampling technique used was simple random sampling which means in every item of the population has equal probability of being chosen (Sharma, 2017).

## 4. Analysis, results and discussion

This section contains the analysis of the data collected from the online survey titled “Online learning and its effect on communication,” which was distributed to the students of the American University of Madaba. The data will be presented in pie charts, figures and tables. Also, this section will discuss the analyzed data and whether or not the data agrees with our research questions.

### 4.1 Presentation of survey results

The survey started with basic (demographic) questions for the students to answer (Table 1).

Questions related to the topic of this study include “How satisfied are you with taking your courses online?” Out of 133 students, 19 were “Very satisfied” (14.3%), 44 were “Satisfied” (33.1%), 39 were “Neutral” (29.3%), 23 were “Unsatisfied” (17.3%), and 8 were “Very unsatisfied” (6.0%) (see Figure 1).

The majority of the students who answered the survey were “Satisfied” with taking their courses online with a total of 44 out of 133 (33.1%).

Followed by “Which do you prefer taking, classroom or online classes?” Results were out of 133 students, 104 preferred classroom classes (78.2%), and 29 preferred online classes (21.8%) (see Figure 2).

The majority of the students who answered the survey preferred Classroom classes with a total of 104 out of 133 (78.2%) (Table 2).

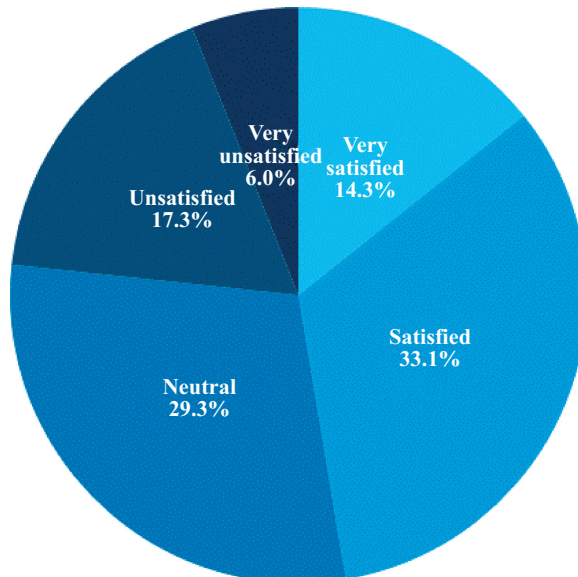
Additionally, “How has your understanding of the material being taught changed when it shifted from a classroom course to an online course?” Out of 133 students, 49 students

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Category	N = 133	Percentage (%)
<i>Gender</i>		
Female	70	52.6
Male	63	47.4
<i>University year</i>		
First year	8	6
Second year	20	15
Third year	35	26.3
Fourth year	53	39.8
Fifth or more	17	12.8
<i>No. of online courses</i>		
1-3	26	19.5
4-6	85	63.9
More than 6	22	16.5
<i>Major</i>		
Business administration	57	42.9
Risk management	15	11.3
Marketing	13	9.8
Accounting	11	8.3
Pharmacy	8	6
Nutrition and dietetics	6	4.5
Mechanical engineering	4	3
Other	19	14.2

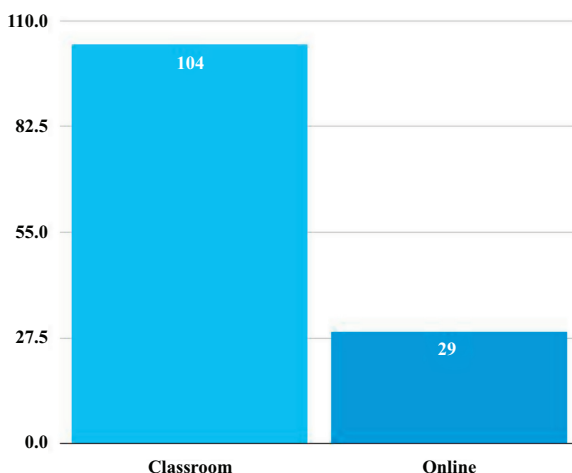
**Table 1.**  
Demographics table



**Figure 1.**  
“How satisfied are you  
with taking your  
courses online?”

answered with “It has not changed” (36.8%), 69 students answered with “It has gotten worse” (51.9%) and 15 students answered with “It has improved” (11.3%) (see [Figure 3](#)).

The majority of the students who answered the survey voted that their understanding of the course material has gotten worse with a total of 69 out of 133 (51.9%).



**Figure 2.**  
“Which do you Prefer taking, classroom or online classes?”

Students who prefer classroom classes' opinions

“I can concentrate more in class if the lecturer is in front of us”  
 “I was motivated to study more and share my thoughts and questions with students and doctors in classroom”  
 “We cannot focus like when we used to in class, each time I take a course it seems like I'm watching a boring YouTube video, no motive. . .”  
 “Classroom classes are more interactive”

Students who prefer online classes' opinions

“Online courses are more comfortable and we can sleep more by not waking up so early”  
 “It's saving a lot of time from transportation and dressing up for university”  
 “Online classes have pros and cons, but in my personal opinion the cons are more, due to many reasons for example; bad Internet connection/bad service that will enable students to enter the online meeting or even listen to the lecturer, mobile/pc issues, students and Lectures are not fully prepared for this online thing”

**Table 2.**  
Students who prefer classroom classes vs students who prefer online classes' opinions

Followed by “Has taking classes online encouraged your desire to participate more?” Out of 133 students, 51 voted Yes (38.3%), and 82 voted No (61.7%) (see [Figure 4](#)).

The majority of the students who answered the survey voted No on the fact that online classes did not encourage participation with a total of 82 out of 133 (61.7%).

[Table 3](#) summarized the results for questions that were answered with the SA, A, N, D, SD scale:

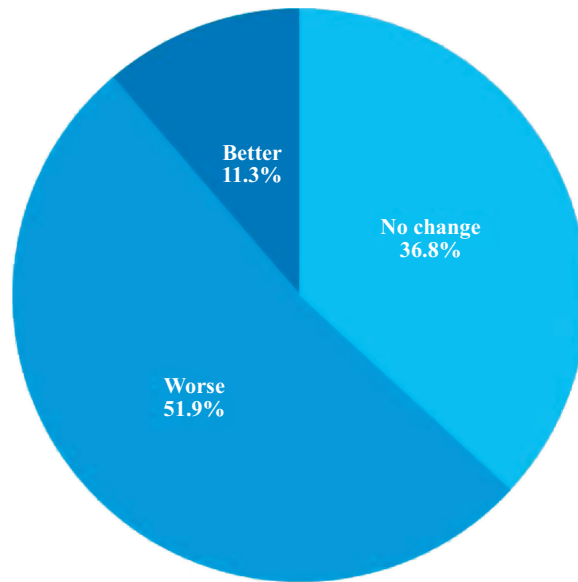
And to follow that “According to your experience, do you think your productivity as a student has increased?” And, out of 133 students, 50 voted Yes (37.6%), and 83 voted No (62.4%).

[Figure 5](#): “According to your experience, do you think your productivity as a student has increased?”

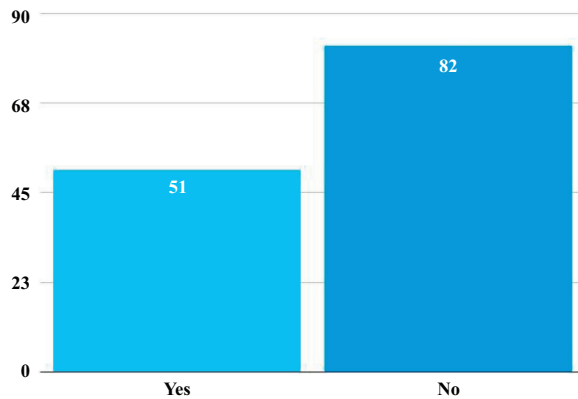
The majority of the students who answered the survey voted No on the fact that their productivity has increased with a total of 83 out of 133 (62.4%).

Since the majority voted “No”, the following is some of the students' opinions on the matter: ([Table 4](#))

Additionally, “Do you think your instructors are being cooperative and more understanding of the hardships we are currently facing as students?” Out of 133 students, 95 voted Yes (71.4%), and 38 voted No (28.6%) (see [Figure 6](#)).



**Figure 3.**  
“How has your understanding of the material being taught changed when it shifted from a classroom course to an online course?”



**Figure 4.**  
“Has taking classes online encouraged your desire to participate more?”

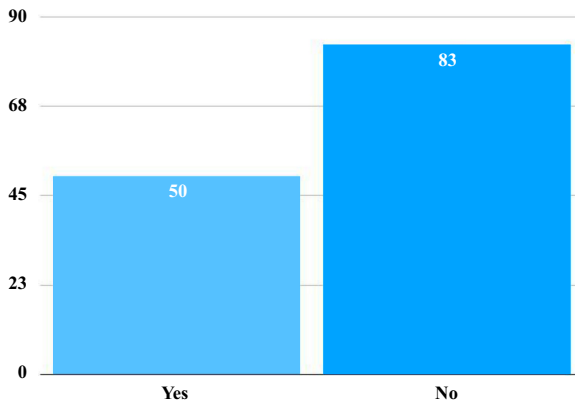
The majority of the students who answered the survey voted yes on the fact that their instructors are being understanding and cooperative with their students with a total of 95 out of 133 (71.4%).

Lastly “In your opinion, how do you think communication can be improved between students and their instructors through online classes?”

A lot of the students shared similar opinions; some students agree that teachers must hold a Google meet for students as a replacement for office hours. The first Student answered: “Have office hours available where you can talk one on one with the instructor online.” Other students agree that communicating more with teachers outside of lectures through social media sites can be very helpful. The second student suggested: “Communicate with more modern ways than email (such as WhatsApp), giving less assignments per course to give us time to actually get connected to our instructors, for example I have on average 14

Questions	Scale	N = 133	Percentage (%)
I believe that online classes have negatively affected communication between my instructor and I	<i>Strongly agree</i>	32	24.06
	<i>Agree</i>	34	25.56
	<i>Neutral</i>	29	21.80
	<i>Disagree</i>	32	24.06
	<i>Strongly disagree</i>	6	4.51
I am learning better now that I am taking my classes online	<i>Strongly agree</i>	4	3.01
	<i>Agree</i>	19	14.29
	<i>Neutral</i>	50	37.59
	<i>Disagree</i>	38	28.57
	<i>Strongly disagree</i>	22	16.54
Interacting with my instructor has become harder in online classes	<i>Strongly disagree</i>	13	9.77
	<i>Agree</i>	44	33.08
	<i>Neutral</i>	32	24.06
	<i>Disagree</i>	29	21.80
	<i>Strongly disagree</i>	15	11.28
I feel more isolated now that I am taking online classes	<i>Strongly agree</i>	40	30.08
	<i>Agree</i>	51	38.35
	<i>Neutral</i>	24	18.05
	<i>Disagree</i>	15	11.28
	<i>Strongly disagree</i>	3	2.26
Do you agree that AUM has continued its educational program online successfully?	<i>Strongly agree</i>	46	34.59
	<i>Agree</i>	55	41.35
	<i>Neutral</i>	25	18.80
	<i>Disagree</i>	5	3.76
	<i>Strongly disagree</i>	2	1.50

**Table 3.**  
Strongly agree, agree,  
neutral, disagree,  
strongly disagree  
questions

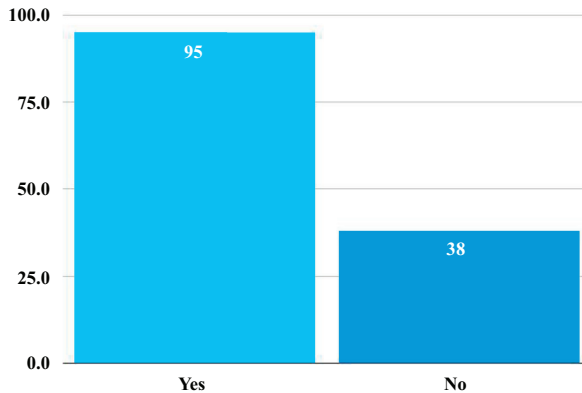


**Figure 5.**  
“According to your  
experience, do you  
think your  
productivity as a  
student has  
increased?”



Opinions of students who voted yes	Opinions of students who voted No
<p>“Being at home helps me focus on my studies and read more”</p> <p>“We have more time to work on our projects”</p> <p>“When you attempt an exam you quickly forget the material but when you do an assignment the learning aspect is more effective because students put all their effort”</p>	<p>“I have become lazier and not in the mood to study”</p> <p>“I’m giving my bare minimum effort to study, and mostly cheat on exams and quizzes”</p> <p>“To me, I understand more in classroom courses because my major needs to be explained directly, otherwise it will be hard”</p> <p>“There’s no way it would increase with all those assignments being given to us! Each course requires 2 assignments and 1 project at least”</p> <p>“For some courses no, there are subjects such as statistics, Math etc. Need more concentration and the students have to be updated with such courses but when students face issues during the online session it will end up not understanding a word, as we all know such subjects requires keeping up with the lectures”</p> <p>“Online classroom demotivates, especially with what’s happening around us. Classroom classes engages student to feel more productive”</p> <p>“I do not feel very productive as I only work for high marks instead of understanding the material”</p>

**Table 4.**  
Students’ opinions  
about online learning



**Figure 6.**  
“Do you think your instructors are being cooperative and more understanding of the hardships we are currently facing as students?”

assignments weekly that rangers from lab reports to take home exams, and I spend on average an unhealthy 6 h a day behind my laptop screen, and it’s barely enough to finish everything.” A few students agreed on communicating with teachers via e-mail. As the third Student said: “If a student is looking for further information from the instructors, they can always contact them through emails.”

On one hand, other students believe that it is the instructors’ job to ensure that the students are focusing, and they understand what is being taught. Student4: “Lectures have to open the discussion more, students only ask questions that they do not understand what about the lecturers start asking students or let them read the slide or participate, so they can make sure that students are with them and concentrating with them, students will understand the course in this way.” On the other hand, a few students believe that it’s the students’ job to communicate by participating more in lectures.

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Student5: "It's up to the students to participate more through an open microphone; instructors are doing everything they can to make us participate and even more."

#### 4.2 Discussion of survey results

To begin with, while some students were satisfied with taking their courses online. However, the majority still prefer taking their classes in a classroom instead. Half of the students also explained that their understanding of the material being taught online has gotten worse with a percentage this corroborates with a study conducted by [Brown and Liedholm \(2002\)](#) to evaluate student learning outcomes in an online course, they found that students in the online format of that course performed substantially worse on tests than students in the conventional format of that same course.

Second, majority of students agree that online learning have a negative impact on communication between instructors and students and the majority agree that interacting with their teachers have become harder as well.

Third, the majority of the students do not feel encouraged to participate while taking courses online, their productivity has not increased while taking their courses online and their understanding of the material has become worse. Our findings agree with [Boling et al. \(2012\)](#), which revealed that most participants of their study viewed that online courses individualize learning, and limit interaction with others. Students reported feeling disconnected with their instructors, the course content, and their fellow classmates.

Lastly, a large number of students feel more isolated now that they are taking their classes online This goes with [McConnell \(2006\)](#) who revealed that a huge problem with online learning was that students feel more isolated, dominated by others, and anxious about presenting their ideas publicly ([Kear, 2010](#)).

### 5. Conclusion

To summarize, the study aimed to explore whether online learning has an effect on communication between instructors and students in a negative way, if online learning affects students' productivity levels. As well as, to evaluate and suggest ways of improving effective communication between instructors and students in online courses. The data was collected by using an online survey which was distributed to a random sample of 133 students from The American University of Madaba (AUM). As mentioned in the results above, the analyzed data and the information received from the students all agree with the questions of the study. The majority still prefer classroom classes over online classes due to the many problems they face when taking online classes, some of which include: their lack of motivation and understanding of the material, the decrease in communication levels between the students and their instructors, and their increased feeling of isolation caused by online classes. This study found that online learning indeed has a negative impact on communication and its effectiveness between instructors and students.

### 6. Recommendations

In Web-based learning, it is necessary to build opportunities for interactions and communication between students and their instructors. Likewise, effective students could make the most of message boards, which might offer opportunities to engage fellow students and instructors with deeper dialogue and insightful questions as a technique. Asking questions is a way of moving deeper into the subject and going deeper makes the subject more comprehensible.

We recommend and encourage that instructors try their best to keep in touch with their students through online office hours, as well as reach out to each student in their class

individually if there is a sudden decrease in performance. It is best if instructors communicate with their students and vice versa in a more informal way like through WhatsApp groups, Messenger calls, private video call meetings and so on.

Instructors should encourage students to participate and study more by providing incentives, at the end of the day every student wants to gain good grades and without the motivation for it is hard to achieve, this can be fulfilled by giving extra marks through short quizzes.

### References

- Alawamleh, M. (2020), "COVID-19 and higher education economics", *Journal of Economics and Economic Education Research*, Vol. 21 No. 2, pp. 1-2.
- Ally, M. (2004), "Foundations of educational theory for online learning", *Theory and practice of online learning*, Vol. 2, pp. 15-44.
- Arakawa, D. and Greenberg, M. (2007), "Optimistic managers and their influence on productivity and employee engagement in a technology organisation: implications for coaching psychologists", *International Coaching Psychology Review*, Vol. 2 No. 1, pp. 78-89.
- Artino, A.R. (2007), "Self-regulated learning in online education: a review of the empirical literature", *International Journal of Instructional Technology and Distance Learning*, Vol. 4 No. 6, pp. 3-18.
- Bangert, A.W. (2006), "Identifying factors underlying the quality of online teaching effectiveness: an exploratory study", *Journal of Computing in Higher Education*, Vol. 17 No. 2, pp. 79-99.
- Bekele, T.A. (2010), "Motivation and satisfaction in internet-supported learning environments: a review", *Educational Technology and Society*, Vol. 13 No. 2, pp. 116-127.
- Benson, A.D. (2002), "Using online learning to meet workforce demand: a case study of stakeholder influence", *Quarterly Review of Distance Education*, Vol. 3 No. 4, pp. 443-452.
- Berge, Z.L. (2007), "Barriers and the organization's capabilities for distance education", *Distance Learning*, Vol. 4 No. 4, p. 1.
- Boling, E.C., Hough, M., Krinsky, H., Saleem, H. and Stevens, M. (2012), "Cutting the distance in distance education: perspectives on what promotes positive, online learning experiences", *The Internet and Higher Education*, Vol. 15 No. 2, pp. 118-126.
- Briggs, A. (2015), "Ten ways to overcome barriers to student engagement online", *Online Learning Consortium*, available at: [http://onlinelearningconsortium.org/news\\_item/tenways-overcome-barriers-student-engagement-online/](http://onlinelearningconsortium.org/news_item/tenways-overcome-barriers-student-engagement-online/) (accessed 25 May 2020).
- Brophy, J. (2010), "Classroom management as socializing students into clearly articulated roles", *The Journal of Classroom Interaction*, Vol. 33 No. 1, pp. 41-45.
- Brown, B.W. and Liedholm, C.E. (2002), "Can web courses replace the classroom in principles of microeconomics?", *American Economic Review*, Vol. 92 No. 2, pp. 444-448.
- Brun, J.P. (2010), *Missing Pieces: 7 Ways to Improve Employee Well-Being and Organizational Effectiveness*, Palgrave Macmillan, New York, NY.
- Caner, M. (2012), "The definition of blended learning in higher education", in Panagiotis, S. and Anastasiades (Eds), *Blended Learning Environments for Adults: Evaluations and Frameworks*, IGI Global, New York, pp. 19-34.
- Cavanaugh, C. (2009), *Getting Students More Learning Time Online: Distance Education in Support of Expanded Learning Time in K-12 Schools*, Center for American Progress, pp. 1-28.
- Cavanaugh, A.J. and Song, L. (2014), "Audio feedback versus written feedback: instructors' and students' perspectives", *Journal of Online Learning and Teaching*, Vol. 10 No. 1, p. 122.
- Cheney, G. (2011), *Organizational Communication in an Age of Globalization: Issues, Reflections, Practices*, Waveland Press, Long Grove, IL.
- Churchill, G.A. Jr (1979), "A paradigm for developing better measures of marketing constructs", *Journal of Marketing Research*, Vol. 16 No. 1, pp. 64-73.

- Clampitt, P.G. and Downs, C.W. (1993), "Employee perceptions of the relationship between communication and productivity: a field study", *The Journal of Business Communication*, Vol. 30 No. 1, pp. 5-28.
- Conrad, D. (2002), "Deep in the hearts of learners: insights into the nature of online community", *The Journal of Distance Education*, Vol. 17 No. 1, pp. 1-19.
- Croxton, R.A. (2014), "The role of interactivity in student satisfaction and persistence in online learning", *Journal of Online Learning and Teaching*, Vol. 10 No. 2, p. 314.
- Dabbagh, N. and Bannan-Ritland, B. (2005), *Online Learning: Concepts, Strategies, and Application*, Pearson/Merrill/Prentice Hall, Upper Saddle River, NJ, pp. 68-107.
- DeVellis, R.F. (2016), *Scale Development: Theory and Applications*, Sage Publications, Newbury Park California, Vol. 26.
- Doménech-Betoret, F. and Gómez-Artiga, A. (2014), "The relationship among students' and teachers' thinking styles, psychological needs and motivation", *Learning and Individual Differences*, Vol. 29, pp. 89-97.
- Duta, N., Panisoara, G. and Panisoara, I.O. (2015), "The Effective Communication in Teaching. Diagnostic study regarding the academic learning motivation to students", *Procedia-Social and Behavioral Sciences*, Vol. 186, pp. 1007-1012.
- Dziuban, C.D., Moskal, P. and Hartman, J. (2005), *Higher Education, Blended Learning, and the Generations: Knowledge Is Power-No more Elements of Quality Online Education*, Sloan Center for Online Education, Needham, MA, Engaging communities, pp. 88-89.
- Fedynich, L.V. (2013), "Teaching beyond the classroom walls: the pros and cons of cyber learning", *Journal of Instructional Pedagogies*, Vol. 13, pp. 1-7.
- Garnham, C. and Kaleta, R. (2002), "Introduction to hybrid courses", *Teaching With Technology Today*, Vol. 8 No. 6, pp. 1-5.
- Getange, K.N. (2016), "Motivational strategies and teachers' productivity: lessons of experience from public secondary schools in Kisii county, Kenya", *IOSR Journal of Research and Method in Education*, Vol. 6 No. 4, pp. 33-38.
- Glomo-Narzoles, D.T. (2012), "Communication climate: its relation to institutional productivity", *Asian Journal of Social Sciences and Humanities*, Vol. 1 No. 4, pp. 196-205.
- Gray, J.A. and DiLoreto, M. (2016), "The effects of student engagement, student satisfaction, and perceived learning in online learning environments", *International Journal of Educational Leadership Preparation*, Vol. 11 No. 1, p. n1.
- Guerrero, L.K. and Floyd, K. (2006), *Nonverbal Communication in Close Relationships*, Routledge, New York.
- Hartnett, M. (2016), "The importance of motivation in online learning", *Motivation in Online Education*, Springer, Singapore, pp. 5-32.
- Hartnett, M., St George, A. and Dron, J. (2011), "Examining motivation in online distance learning environments: complex, multifaceted, and situation-dependent", *International Review of Research in Open and Distributed Learning*, Vol. 12 No. 6, pp. 20-38.
- Hellriegel, D., Slocum, J.W. and Woodman, R.W. (1998), *Organizational Behavior*, 8th ed., South-Western College, Cincinnati, OH.
- Heneman, H.G. III and Schwab, D.P. (1985), "Pay satisfaction: its multidimensional nature and measurement", *International Journal of Psychology*, Vol. 20 No. 1, pp. 129-141.
- Hilliard, A.T. and Newsome, E. Jr (2013), "Effective communication and creating professional learning communities is a valuable practice for superintendents", *Contemporary Issues In Education Research*, Vol. 6 No. 4, pp. 353-364.
- Hiltz, S.R. and Turoff, M. (2005), "Education goes digital: the evolution of online learning and the revolution in higher education", *Communications of the ACM*, Vol. 48 No. 10, pp. 59-64.

- Hiltz, S.R., Coppola, N., Rotter, N., Turoff, M. and Benbunan-Fich, R. (2000), "Measuring the importance of collaborative learning for the effectiveness of ALN: a multi-measure, multi-method approach", *Journal of Asynchronous Learning Networks*, Vol. 4 No. 2, pp. 103-125.
- Hung, M.L., Chou, C., Chen, C.H. and Own, Z.Y. (2010), "Learner readiness for online learning: scale development and student perceptions", *Computers and Education*, Vol. 55 No. 3, pp. 1080-1090.
- Ice, P., Curtis, R., Phillips, P. and Wells, J. (2007), "Using asynchronous audio feedback to enhance teaching presence and students' sense of community", *Journal of Asynchronous Learning Networks*, Vol. 11 No. 2, pp. 3-25.
- Ihmeideh, F.M., Al-Omari, A.A. and Al-Dababneh, K.A. (2010), "Attitudes toward communication skills among students'-teachers' in Jordanian public universities", *Australian Journal of Teacher Education*, Vol. 35 No. 4, p. 1.
- Jaggars, S.S. and Xu, D. (2016), "How do online course design features influence student performance?", *Computers and Education*, Vol. 95, pp. 270-284.
- Jennings, J.M. and Angelo, T.A. (Eds) (2006), *Student Engagement: Measuring and Enhancing Engagement with Learning: Proceedings of a Symposium Held on Monday and Tuesday 27 and 28 March 2006 at the Frederic Wallis House Conference Centre*, New Zealand Universities Academic Audit Unit, Lower Hutt.
- Jurik, V., Gröschner, A. and Seidel, T. (2014), "Predicting students' cognitive learning activity and intrinsic learning motivation: how powerful are teacher statements, student profiles, and gender?", *Learning and Individual Differences*, Vol. 32, pp. 132-139.
- Kear, K. (2010), *Social Presence in Online Learning Communities*, Proceedings of the 7th International Conference on Networked Learning 2010, 3-4 May 2010, Aalborg, Denmark.
- Keengwe, J. and Kidd, T.T. (2010), "Towards best practices in online learning and teaching in higher education", *Merlot Journal of Online Learning and Teaching*, Vol. 6 No. 2, pp. 533-541.
- Keyton, J. (2011), *Communication and Organizational Culture: A Key to Understanding Work Experience*, Sage, Thousand Oaks, CA.
- Kinash, S., Knight, D. and McLean, M. (2015), "Does digital scholarship through online lectures affect student learning?", *Journal of Educational Technology and Society*, Vol. 18 No. 2, pp. 129-139.
- Komarraju, M., Karau, S.J., Schmeck, R.R. and Avdic, A. (2011), "The Big Five personality traits, learning styles, and academic achievement", *Personality and Individual Differences*, Vol. 51 No. 4, pp. 472-477.
- Kupczynski, L., Brown, M. and Davis, R. (2008), "The impact of instructor and student interaction in internetbased courses", *Journal of Instruction Delivery Systems*, Vol. 22 No. 1, pp. 6-11.
- Lambrechts, W., Mulà, I., Ceulemans, K., Molderez, I. and Gaeremynck, V. (2013), "The integration of competences for sustainable development in higher education: an analysis of bachelor programs in management", *Journal of Cleaner Production*, Vol. 48, pp. 65-73.
- Lewis, B.R., Templeton, G.F. and Byrd, T.A. (2005), "A methodology for construct development in MIS research", *European Journal of Information Systems*, Vol. 14 No. 4, pp. 388-400.
- Lunenburg, F.C. (2010), "Communication: the process, barriers, and improving effectiveness", *Schooling*, Vol. 1 No. 1, pp. 1-10.
- Lutgen-Sandvik, P. (2010), *Destructive Organizational Communication: Processes, Consequences, and Constructive Ways of Organizing*, Routledge, New York, NY.
- Madlock, P.E. (2008), "The link between leadership style, communicator competence, and employee satisfaction", *The Journal of Business Communication (1973)*, Vol. 45 No. 1, pp. 61-78.
- Majid, N.A., Jelas, Z.M., Azman, N. and Rahman, S. (2010), "Communication skills and work motivation amongst expert teachers", *Procedia-Social and Behavioral Sciences*, Vol. 7, pp. 565-567.
- Mandernach, B.J., Donnelly-Sallee, E. and Dailey-Hebert, A. (2011), "Assessing course student engagement", *Promoting Student Engagement*, Vol. 1, pp. 277-281.

- McConnell, D. (2006), *E-learning Groups and Communities*, McGraw-Hill Education, London.
- Moore, K.D. (2007), *Classroom Teaching Skills*, McGraw-Hill Humanities, Social Sciences & World Languages.
- Moore, J.L., Dickson-Deane, C. and Galyen, K. (2011), "e-Learning, online learning, and distance learning environments: are they the same?", *The Internet and Higher Education*, Vol. 14 No. 2, pp. 129-135.
- Morrison, G.R., Ross, S.J., Morrison, J.R. and Kalman, H.K. (2019), *Designing Effective Instruction*, John Wiley & Sons, New York.
- Muliro, J. (2017), *Assessment of the Key Success Factors of Strategic Knowledge Management that Influence Organizational Performance: A Case of the World Agro Forestry Centre*, United States International University-Africa, Doctoral dissertation, Nairobi.
- Murphy, D., Walker, R. and Webb, G. (2001), *Online Learning and Teaching with Technology: Case Studies, Experience and Practice*, Kogan Page, London.
- Nguyen, T. (2015), "The effectiveness of online learning: beyond no significant difference and future horizons", *Merlot Journal of Online Learning and Teaching*, Vol. 11 No. 2, pp. 309-319.
- Okello, P.G. (2015), *The Effect of Human Resource Practices on Students' Performance at St. John Bosco Core Primary Teachers*, Uganda Management Institute, College Nyondo, Uganda, Doctoral dissertation.
- Orodho, J.A., Waweru, P.N., Ndichu, M. and Nthinguri, R. (2013), "Basic education in Kenya: focus on strategies applied to cope with school-based challenges inhibiting effective implementation of curriculum", *International Journal of Education and Research*, Vol. 1 No. 11, pp. 1-20.
- Paechter, M. and Maier, B. (2010), "Online or face-to-face? Students' experiences and preferences in e-learning", *The internet and higher education*, Vol. 13 No. 4, pp. 292-297.
- Pavitt, C. (2000), "Answering questions requesting scientific explanations for communication", *Communication Theory*, Vol. 10 No. 4, pp. 379-404.
- Payne, S.C., Youngcourt, S.S. and Beaubien, J.M. (2007), "A meta-analytic examination of the goal orientation nomological net", *Journal of Applied Psychology*, Vol. 92 No. 1, p. 128.
- Rovai, A.P., Ponton, M., Wighting, M.J. and Baker, J. (2007), "A comparative analysis of student motivation in traditional classroom and e-learning courses", *International Journal on E-Learning*, Vol. 6 No. 3, pp. 413-432.
- Schunk, D.H. (2008), *Cognition and Instruction*, Learning Theories: An Education Perspective, pp. 278-323.
- Schunk, D.H. and Zimmerman, B.J. (Eds) (2012), *Motivation and Self-Regulated Learning: Theory, Research, and Applications*, Routledge, New York.
- Segumpan, R.G. (1999), *Work Performance as Influenced by Communication Climate, Empowerment and Value Focus Among University Personnel*, Unpublished Doctor of Education (Educational Management) Dissertation, West Visayas State University, Iloilo.
- Shan, S., Li, C., Shi, J., Wang, L. and Cai, H. (2014), "Impact of effective communication, achievement sharing and positive classroom environments on learning performance", *Systems Research and Behavioral Science*, Vol. 31 No. 3, pp. 471-482.
- Sharma, G. (2017), "Pros and cons of different sampling techniques", *International journal of applied research*, Vol. 3 No. 7, pp. 749-752.
- Shroff, R.H. and Vogel, D.R. (2009), "Assessing the factors deemed to support individual student intrinsic motivation in technology supported online and face-to-face discussions", *Journal of Information Technology Education*, Vol. 8, pp. 59-85.
- Shroff, R.H., Vogel, D., Coombes, J. and Lee, F. (2007), "Student e-learning intrinsic motivation: a qualitative analysis", *Communications of the Association for Information Systems*, Vol. 2007 No. 19, pp. 241-260.



- 
- Steen, H.L. (2008), "Effective eLearning design", *MERLOT Journal of Online Learning and Teaching*, Vol. 4 No. 4, pp. 526-532.
- Styer, A.J. (2007), *A Grounded Meta-Analysis of Adult Learner Motivation in Online Learning from the Perspective of the Learner*, Doctoral dissertation, Capella University.
- Summers, D.C. (2010), *Quality Management: Creating and Sustaining Organizational Effectiveness*, Prentice Hall, Upper Saddle River, NJ.
- Turner, J.C. and Patrick, H. (2008), "How does motivation develop and why does it change? Reframing motivation research", *Educational Psychologist*, Vol. 43 No. 3, pp. 119-131.
- Urduan, T. and Schoenfelder, E. (2006), "Classroom effects on student motivation: goal structures, social relationships, and competence beliefs", *Journal of School Psychology*, Vol. 44 No. 5, pp. 331-349.
- Velentzas, J.O.H.N. and Broni, G. (2014), "Communication cycle: definition, process, models and examples", *Recent Advances in Financial Planning and Product Development, Proceedings of the 5th International Conference on Finance, Accounting and Law (ICFA '14)*, Istanbul, Turkey, 15-17 December 2014, pp. 117-131.
- Vonderwell, S. (2003), "An examination of asynchronous communication experiences and perspectives of students in an online course: a case study", *The Internet and Higher Education*, Vol. 6 No. 1, pp. 77-90.
- Weast, J. (2008), "Creating shared leadership that works", *School Administrator*, Vol. 65 No. 7, p. 38.
- Welch, M. and Jackson, P.R. (2007), "Rethinking internal communication: a stakeholder approach", *Corporate Communications: An International Journal*, Vol. 12 No. 2, pp. 177-198.
- Wighting, M.J., Liu, J. and Rovai, A.P. (2008), "Distinguishing sense of community and motivation characteristics between online and traditional college students", *Quarterly Review of Distance Education*, Vol. 9 No. 3, pp. 285-295.
- Xie, K., DeBacker, T.K. and Ferguson, C. (2006), "Extending the traditional classroom through online discussion: the role of student motivation", *Journal of Educational Computing Research*, Vol. 34 No. 1, pp. 67-89.
- Yip, M.C. (2012), "Learning strategies and self-efficacy as predictors of academic performance: a preliminary study", *Quality in Higher Education*, Vol. 18 No. 1, pp. 23-34.
- Yukselturk, E. and Bulut, S. (2007), "Predictors for student success in an online course", *Educational Technology and Society*, Vol. 10 No. 2, pp. 71-83.

### Further reading

- Eryilmaz, M. (2015), "The effectiveness of blended learning environments", *Contemporary Issues In Education Research*, Vol. 8 No. 4, pp. 251-256.

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