



Perceived Online Learning and Teacher Immediacy during the Covid-19 Pandemic

Danang Tandyonomanu^{1*}, Anam Miftachul Huda², Tsuroyya Tsuroyya³,
Gilang Gusti Aji⁴

^{1,2,3,4}Universitas Negeri Surabaya, Surabaya, Indonesia

Abstract

The study aims at describing teacher immediacy within online learning. Teacher immediacy refers to using verbal and nonverbal symbols to reduce physical and psychological gaps between teachers and students. Immediacy is claimed to improve student motivation in learning. The study employed a mixed method of focus group discussions and a survey of selected senior high schools from multistage random sampling. Results show that perceived online learning is identical to incomprehensible, overload assignments, a shift of the teacher's role to technology, peer learning, and off-class tutorial participation. On the other hand, online learning is perceived as flexibility in time as students can manage different activities simultaneously. Findings from the survey indicate immediacy negatively influences a shift in teachers' role to technology, whereas self-disclosure has a positive effect. The results somehow reflect a debatable claim of teacher immediacy impact within the Computer-Mediated Communication (CMC) context. Future examinations on the use of multiple technology platforms in forming immediacy are necessary to better comprehend the teacher's role in online learning.

Keywords: teacher immediacy, perceived online learning, students, covid-19

Paper type: Research paper

***Corresponding author:** danangtandyonomanu@unesa.ac.id

Received: 24 July 2022; Received in revised form 29 April 2023; Accepted: 30 April 2023; Available online: 30 April 2023

Cite this document: Tandyonomanu, Danang. et al. (2023). Perceived Online Learning and Teacher Immediacy during the Covid-19 Pandemic. *The Journal of Society and Media*, 7(1), 154-173. DOI: 10.26740/jsm.v7n1.p154-173



INTRODUCTION

Covid-19 has posed a substantial threat to public health (Sohrabi et al. 2020) and transformed social interactions at the global level (Ahmed and Memish 2020). Earlier public activities were held without fear of getting infected. Yet now, mass gatherings have been canceled to prevent the Covid-19 outbreak (Ahmed and Memish 2020), and individuals are strongly encouraged to abide by health protocols or the so-called 'new norm' (Basch et al. 2020). By the end of March 2020, the government implemented drastic measures such as shutting down public places and educational institutions. Individuals were asked to study or work from home (Finset et al. 2020; Stewart 2021; Wang, Pan, and Wang 2023). Even though the Covid-19 pandemic has caused digital inequalities in maspectspect of life, including education (Beaunoyer, Dupéré, and Guitton 2020), online learning is deemed necessary; thus, instructional communication relies on the most updated and dynamic communication technology.

In the field of communication science, online learning has reduced the use of verbal and nonverbal symbols, which are commonly employed in face-to-face (f2f) classroom instruction. Similar to computer-mediated communication, the f2f instruction mediated by communication technology poses a distinct use of verbal and nonverbal symbols, particularly in explicit emotion and frequency (Derks, Fischer, and Bos 2007). Previous studies on online learning claim that asynchronous learning shows a high acceptance rate in media use yet a low rate in learning motivation. Students often uttered problematic issues such as being unwilling to participate, leading to, a significant drop in student learning achievement (Tandyonomanu, Sukardani, and Dharmawan 2021).

In the context of instructional communication, immediacy appears as attempts to increase closeness between speakers and audiences, leading to effectiveness (Woods and Baker 2004). Immediacy is viewed as one of key elements in improving student's learning motivation and achievement, both in affective and cognitive aspects. To build an emotional bond, immediacy conveys the teacher's attempt to eliminate gaps between teachers and students. The gaps cover physical distance and psychological void (Andersen 1979). Teacher immediacy is conducted by using verbal and nonverbal symbols. Immediacy is verbally shown through the use of humor, self-disclosure, inquiries, support, and

participation in student discussions and dictions such as “we” to increase group cohesiveness (Gorham 1988). Nonverbal symbols showing immediacy include eye-contacts, smiles, positive gestures, vocal range, and the use of space (Frymier 1993).

Recent scholarships on teacher immediacy argue that it serves as a potential variable in achieving effective learning, particularly in improving student motivation and participation (Estepp and Toberts 2015). Similar research indicates consistent findings for teacher immediacy to improve student motivation (Ai and Giang 2018; Azeem, Abid, and Hussain 2021; Frymier 1993). Other scholars claim teacher immediacy has played a major role in learning objectives and participation (Roberts and Friedman 2013) as well as student participation and comprehension (Teo, Khazaie, and Derakhshan 2022). In fact, immediacy has proven to increase students’ perception of their competence and trust (Teven and Hanson 2004). On the other hand, a teacher’s inability to show immediacy leads to student rejection (Iaconelli and Anderman 2021).

Investigations on teacher immediacy in an offline environment have been frequently explored, yet the same topic within an online context quite a few. Studies on online learning discuss the effect of video and audio usage serving as high and low immediacy towards student’s perceptions of teacher immediacy and presence (Schutt, Allen, and Laumakis 2009). Other scholars suggest teacher immediacy in online learning has affected student learning experiences both in cognitive and affective aspects (Chakraborty and Nafukho 2015). Considering that the Covid-19 pandemic has forced students to study from home, it is necessary to examine what students experience in online classes and how this situation relates to teacher immediacy.

METHODS

The study employed a mixed method, including Focus Group Discussions (FGD) and a survey. FGDs were used to obtain in-depth and concise data as participants were able to interact with each other. Individual participation in FGDs may increase the percentage of data obtained compared to interviews. FGD participants were selected from 11 senior high schools using multistage random sampling. Two students in the FGDs represented each senior high school. Student learning experiences in an online setting were obtained from the FGDs.

An online questionnaire was broadcast to students of 11 senior high school-elect (n=100). An instrument was developed based on FGD results regarding perceived online experiences, mainly related to teacher immediacy during online classes. ANOVA and multilinear regression analyses were conducted to analyze FGD's findings and teacher immediacy variables.

RESULTS AND DISCUSSION

The study investigated teacher immediacy during the Covid-19 pandemic, which shifted from conventional learning to online. Classroom learning and interactions between teachers and students have been mediated by technology. A significant claim of face-to-face understandings is more effective than online ones as every channel is wide open in conventional learning. Both verbal and nonverbal messages are immediately received. This new form of education mediated by technology raises tough challenges to adapt, primarily for students and teachers.

Regarding teacher immediacy investigation during the pandemic, the study examined whether a rigorous shift in learning affected the learning process. Results from FGDs were analyzed based on time, media, and the teacher's acts during the class.

Online Learning is Incomprehensible

Conventional learnings enable teachers to recognize incomprehensible signs from students, yet online classes have caused indirect interactions. Teachers are unable to optimize the use of online learning platforms such as "zoom", "google meet", and "teams" for an ideal online class. On the other hand, students' pace of learning and capability to process materials is varied, and students often fail to find a proper method to comprehend the lessons.

In an online class, we learn via g-meet, a school web, and google classroom. Sometimes we get the materials from YouTube. To me, this method is ineffective as not every student can understand the materials immediately. (Participant 4)

Online learnings depend on teachers. Younger teachers accept [adapt to] this method, and we will play games the following day. Yet, senior teachers only use a quick [g]meet and finish the class as they barely understand how to use the technology [online teaching platforms]. (Participant 8)

I am poor in Mathematics, for I am majoring in social sciences. Yet, I get Physics for my elective class. The class needs to be fixed as the teacher only shows and explains using an online whiteboard, and his writing could be clearer. (Participant 6)

‘Seemingly frightening classes’ such as Mathematics and Physics require a specific learning method to ease students’ comprehension. Teachers must plan carefully the media used in such courses instead of taking from YouTube content that may be unsuitable to students’ learning levels.

Moreover, students need help with technological problems, including instability of network connections and inadequate gadgets. Some families need to have the privilege of providing decent devices for their children. Therefore, some students use smartphones with small screens that cause difficulty in seeing the material and an inability to comprehend. Students are also forced to get in and leave online classes due to unstable networks.

Online Classes are Identical to Overload Assignments

Despite challenges in technologies and learning methods, students perceive online learning negatively due to poor teaching methods. It seems that teachers also need help in using the technology for an ideal online class, resulting in a reluctance to re-explain the materials. Teachers opt to give many assignments to increase students’ level of comprehension. Apparently, this option is deemed to be a suitable one if students can comprehend the materials. Otherwise, this alternative deteriorates student comprehension.

When teachers are highly motivated, they set a tight deadline for assignment submission, within 30 minutes to an hour. Students hassle to work on the assignment. (Participant 6)

My teacher always needs to explain something. He gives me assignments without explaining the lesson in detail. (Participant 6)

My teacher just gives me assignments. He never explains the material in a semester. Once, he explained music materials and took them from Google. Then, he assigned me to do a student's worksheet. He responded very slowly. My class captain is quite active as he always asks the teacher when students cannot understand the lesson. He texted the teacher, yet he never got a response from the teacher. (Participant 6)

Ideally, assignments are given to increase student comprehension level of the materials. Yet, this option plays a significant role in explaining the lesson in online classes based on FGD results. This raises another challenge for students as they cannot submit assignments from various classes on time. Students barely understand the lesson as teachers rarely provide a comprehensive explanation. Assignments become unbearable since students may not fully comprehend the lesson. On the one hand, learning methods and technological challenges may cause incomprehensible materials. On the other hand, the deadline for assignment submission worsens students' workload in online classes.

The teacher's Role is Shifted to Technology.

Some students have joined online classes since Grade 10, while others still participated in conventional learning before the pandemic. The former may not engage teachers personally and interact with them through smartphones. The latter, however, claim that the teacher's role in class has been substituted.

This peculiar learning context may root in teachers. First, they are unfamiliar with the technology used by a student. They cannot keep up their pace with the student and adapt to the updated communication technology. Thus, they seem to avoid online interactions and transfer their role to available education entities such as training centers or other suitable online sources.

Teachers who rarely explains use G-meet only to take students' attendance list. Then, they send the lesson for that day. That's it. G-meet is seen as a mere courtesy, and that is the case for all senior teachers. (Participant 8)

I think the teacher's role has been replaced at the end of the day. I feel that senior teachers have not yet mastered using WhatsApp, so they rarely send texts. (Participant 6)

--- As the teacher learns that most students barely comprehend the lesson, he becomes 'slow-responsive.' If he wants to start a new material, he only sends a picture of a certain formula. He does not explain anything, and students must learn the formula by themselves. Thus, students take the initiative to browse the formula from YouTube or join 'Ruangguru,' an online learning platform the private sector offers. (Participant 8)

I asked a teacher once. "Students in Grade 12 are not familiar with the procedure of public university enrollment. Kindly ask a counsel to provide further information." The teacher replied, "Just enroll in Ruangguru." I asked him because I wanted my teacher to explain. Why did he have to use a commercial platform to do his job? (Participant 5)

The technology in online learning has replaced the teacher's role as a source of information. Personal relationships between teachers and students fade away due to technology. In explaining the lesson, the teacher's presence is also obscure, for he is often replaced by materials from YouTube and other internet-based sources of information. In other words, teachers are substituted by the technology. In fact, the technology plays a role as a teacher to most students.

Peer Learning Resolves Challenges in Online Classes

Students seek alternatives to increase their understanding of the lesson in online classes. One of the alternatives is to initiate a peer learning activity. Peers consist of classmates and students from both inside and outside schools. Peers from different schools are former classmates in junior high education.

Fortunately, there are friends who join 'Ruangguru', 'zenius', and other training centers. We work on assignments in groups. Those who are

good in Physics, Chemistry, and Mathematics share with us who are not enrolled in any training centers. “This is wrong. This is the correct formula. I know it from the exercise I discussed with my tutor.” I think it is peer learning [that helps me understand the material better]. When we were stuck with a certain lesson, my friend would take a picture and ask his tutor to explain. In the next discussion, “This is the correct answer, and we’ve missed this part.” (Participant 7)

So, we have peer learning. My former classmate in junior high school is good in Physics, Chemistry, and Mathematics. I know I am poor in these three subjects. So, I often meet him to ask about those subjects. Once we meet, “Do you know how to solve this exercise?” Then, the discussion of the subjects continued as I met my friends from different schools. We have a peer learning activity. (Participant 1)

Online classes raise challenges in understanding materials and explanations from teachers. This causes students to opt for their peers to assist them in comprehending the lesson. FGD participants agree that peers enhance the quality of the study group.

Online Learnings Somehow ‘Requires’ Off-Class Tutorials

Several students decided to increase their study hours by taking off-class tutorials. Their parents initiated this alternative.

I have joined online classes since Grade 10. I need some time to adapt, and I get confused. I am a little bit slow in comprehending a lesson when it has a lot of assignments and its materials come from YouTube. The teacher asks me to read and listen. I barely understand the lesson. This impacts my grades significantly during the first semester. So, my mom advises me to take off-class tutorials. Whenever I have assignments, I consult my tutor during the session. (Participant 7)

When I joined online classes, I was shocked. Some teachers explained their material via a Zoom meeting, others never did it. So, I was asked to join off-class tutorials to better understand the material. (Participant 9)

The initiative to join off-class tutorials is feasible due to parents’ concern and capability to afford them. However, some parents do not have the luxury to afford tutors for their children. The Covid-19 pandemic has significantly affected

families' economies. This situation gets worse as some students are forced to work to support their families.

When we join a G-meet, we don't know the condition of each student's family. The fact is that most families cannot support their children. Several students cannot join the g-meet as they must assist their parents to work. This condition is very frustrating as sometimes students have a laboratory assignment that must be submitted on the same day. Students will get zero if they fail to submit the task on time. They cannot get a higher grade if they get zero three times. (Participant 2)

The decision to join off-class tutorials originated from parents who can afford tutors. This alternative, however, is taken by a few students exclusively. Most students rely on schools, particularly their capability and willingness to learn, as their parents cannot afford off-class tutorials due to the Covid-19 pandemic.

Flexibility Serves as a Perceived Benefit in Online Learning

The Covid-19 pandemic has affected students' learning process. Students need not go to a class as they study from home. While they are attending an online class, they engage in other activities.

An online class has advantages such as students can get closer to their family members. By staying at home all the time, I cherish my relationship with my family. (Participant 6)

Having plenty of family time, FGD participants assume that online learning allows them to apprehend and understand their nuclear family better resulting in a strong family bond. In addition, the online class also enables students to improve their skills, such as writing. One participant receives an award in a short-story competition and publishes her work.

I have got a lot of time to study and work on self-development. Thank God I joined a short-story competition and published my piece last year. (Participant 3)

With regards to durations of learning, online classes do not require much preparation and time allotted to commute from home to school. Students' spare time is used to explore potential and self-development, including joining webinars.

As mentioned by my peer, the benefit of online learning is I have time to explore my potential. I get a lot of information about webinars too. (Participant 5)

Online learning offers so much flexibility in terms of time that students do not need to commute to school. The classes are scheduled based on students' agreement. Students take advantage of this condition by helping their parents affected by the Covid-19 pandemic. Other students prefer to explore their potential by improving their soft skills. However, this is not the case for most students as they decide not to take advantage of the online class's flexibility.

The FGD results show that perceived online learning from student experiences is derived from a learning process in which teacher immediacy involves. Two variables are predictors of perceived online learning: immediacy and self-disclosure. The former entails the teacher's efforts in creating student interaction. The efforts are shown through the teacher's verbal and nonverbal symbols. Immediacy is also related to motivation. If a teacher desires a better relationship, he will use helpful verbal and nonverbal symbols. The latter on the other hand is defined as efforts to open up aiming to develop a better relationship. Figure 1. Illustrates a model of the relationship between verbal and nonverbal symbols and motivation as key elements in forming immediacy and self-disclosure serving as another predictor in perceived online learning.

Figure 1.
A Model of Three Key Elements of Immediacy and Self-Disclosure in Perceived Online Learning

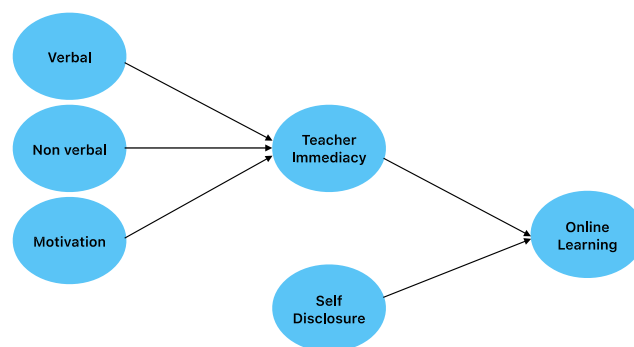


Table 1 shows that 37.5% of verbal and nonverbal communication and motivation influence immediacy. To be precise, verbal communication and

motivation significantly affect immediacy (sig. < .05), whereas nonverbal communication remains insignificant (Sig: .077 > .05) as shown in Table 2. Unlike face-to-face learning, the online class adopts a Computer-Mediated Communication (CMC) context in which nonverbal channels are limited. Consequently, encoders are unable to use various communication formats and channels. Nonverbal communication such as voices and gestures is easily accessed in CMC once a video is available. Another channel to deliver a message is texting. Several social media platforms utilize texting. Since communication aims to convey a message and emotions, the use of emoticons is widely prominent to express emotions in CMC. However, its usage remains less valid as emoticons do not truly represent the intended emotion.

Table 1.
Model Summary Predictors to Immediacy
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.613 ^a	.375	.356	4.372

a. Predictors: (Constant), Motivation, Nonverbal Com., Verbal Com.

Table 2.
Correlations of Verbal Communication, Nonverbal Communication and Motivation Towards Immediacy

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.484	4.024		3.351	.001
	Verbal Comm.	.601	.144	.385	4.186	.000
	Nonverbal Comm.	.204	.114	.161	1.787	.077
	Motivation	.482	.189	.232	2.544	.013

a. Dependent Variable: Teacher immediacy

Both immediacy and self-disclosure influence perceived online learning variables, particularly a shift of the teacher's role to technology (sig. <0,05) as shown in Table 3. The remaining variables are insignificant. The result indicates immediacy specifically the teacher's effort in getting close to or interacting with students does not affect online learning. This situation emerges from any gaps

resulting from media use, which contradicts the principle of immediacy itself. Students consequently perceive the media or technology as their teacher.

Table 3.
T-test of Perceived Online Learning

	t (sig.)				
	incomprehensible	overload assignments	a shift of teacher's role to technology	peer-learning	off-class tutorial participations
Teacher Immediacy	-.035 (.739)	-.120 (.260)	-.221 (.036)	-.037 (.718)	-.097 (.367)
Self Disclosure	.249(.019)	.215 (.045)	.257 (.015)	.321 (.002)	.158 (.143)

Since a shift of the teacher's role to technology has the most significant influence, it is then treated similarly as in Table 1. with immediacy variables. Table 4. Indicates self-disclosure and immediacy towards a shift of teacher's role to technology variable is relatively small, at 7.6% to be precise. This variable emphasizes technology, which teachers use as the main platform. Other variables related to technology have a major effect in shifting the teacher's role to technology variables, including platform usage, teaching materials, tech-savvy skills, and internet availability.

The following multiple linear regression formula was employed to illustrate a shift in the teacher's role to technology and its effect towards immediacy and self-disclosure. $CapY = 4.418 + (-.048)X_1 + .174X_2 + \epsilon$. The formula suggests (1) a shift of teacher's role to technology value is 4.418 if the values of immediacy (X_1), self-disclosure (X_2), and other inexplicable variables are 0; (2) as X_1 with a negative influence of 0.048 increases, a shift of teacher's role to technology value decreases; (3) X_2 has a positive effect of 0.174 towards a shift of teacher's role to technology surge.

Table 4.**Model Summary Self-Disclosure and Immediacy to a Shift Of Teacher's Role to Technology****Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.276 ^a	.076	.057	1.149

a. Predictors: (Constant), Self Disclosure, Teacher immediacy

Table 5.**Regression Analysis of Immediacy and Self-Disclosure to a Shift Of Teacher's Role to Technology****Coefficients^a**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.418	.933		4.736	.000
	Teacher immediacy	-.048	.023	-.221	-2.126	.036
	Self Disclosure	.174	.070	.257	2.473	.015

a. Dependent Variable: A shift of teacher's role to technology

The survey result shows a distinct finding compared to prior explorations on teacher immediacy. The multilinear regression analysis with immediacy and self-disclosure as the predictors indicate a negative and positive influence toward perceived online learning. This result implies that a surge of immediacy affects little perceived online learning. Using verbal and nonverbal symbols to reduce the gap between students and teachers in the form of immediacy seems unachievable when this is related to a shift in the teacher's role in technology. Students believe that a teacher is no longer relevant as his role is substituted by technology. Ultimately, immediacy is irrelevant.

Major studies suggest teacher immediacy positively affects both online and offline perceived learning, particularly in cognitive, affective, and behavioral aspects. In conventional learning, teacher immediacy can increase student motivation (Cayanus, Martin, and Goodboy 2009). Regarding online learning, teacher immediacy significantly improves student achievement (Iaconelli and Anderman 2021; Messman and Jones-Corley 2001), cognitive skills, and

behavioral aspects (Baker 2004). Online learning has limited access to direct nonverbal symbols despite the fact that teachers can communicate and engage students amusingly (Rogers et al. 2009). However, scholars argue that the use of audio and video with high resolutions can enhance teacher immediacy (Schutt et al. 2009).

Since there is a difference between the present study's findings and previous ones, future research on the teacher's role in online learning is worth investigating to reduce inconsistent results regarding teacher immediacy. Innovations in learning theories and methods are potential variables to explore and develop teachers' roles in online learning. It is also likely to redefine teacher immediacy within the context of online classes.

Other findings from the present study are related to students including incomprehensible materials, overload assignments, peer learning, and time flexibility. It should be noted that the FGDs were held during the Covid-19 pandemic and lasted for two years. Most FGD participants never join face-to-face classes since Grade 10. Perceived online learning reflects students' immense need to participate in offline learning, leading to negative perceptions of virtual learning. This situation deteriorates student learning achievement (Butt et al. 2023) even though teacher immediacy is improved (Wendt and Courduff 2018). Online learning is the best method despite concerns about technology skills, minimum interactions and motivations, instability of network connection, and internet security (Almahasees, Mohsen, and Amin 2021).

The present study nevertheless has several limitations. First, perceived online learning was obtained from students forced to join online classes. The situation somehow caused student frustration and negative perceptions. Perceived online learning is ideally investigated within a situated learning environment to reveal positive experiences of online classes. The result then may be poised in terms of perceived advantages and challenges. The next limitation deals with instrument development and a sampling number. 100 senior high school students filled out the questionnaire. The number of respondents in the future may be upgraded and expanded to another education level, such as junior high and primary education. Future investigations may use a better instrument by

considering the challenges and advantages of online learning and the use of CMC context in learning.

CONCLUSION

The present study suggests five forms of perceived online learning including incomprehensible, overload assignments, a shift of the teacher's role to technology, peer learning, and off-class tutorial participation. Of the aforementioned forms, teacher immediacy and self-disclosure affect a shift in the teacher's role to technology. While the former has a negative influence, the latter shows a positive one. Future investigations on teachers' roles in online learning are highly recommended to obtain more comprehensive findings.

Funding Acknowledgement

The authors would like to thank the Faculty of Social Science and Law, Universitas Negeri Surabaya for funding the research within the Penelitian Kebijakan PNPB 2021 scheme.

About the Author

Danang Tandyonomanu is an associate professor at the Department of Communication Science, Faculty of Social Science and Law, Universitas Negeri Surabaya. His primary research interest includes communication and social change, particularly instructional communication. He has published several scholarly articles.

Anam Miftachul Huda is an associate professor at the Department of Communication Science, Faculty of Social Science and Law, Universitas Negeri Surabaya. He is interested in studies of communication and social change, especially in the development of tourism and cultures.

Tsuroyya is a lecturer at the Department of Communication Science, Faculty of Social Science and Law, Universitas Negeri Surabaya. Her research interest is communication and social change, focusing on interfaith dialogue.

Gilang Gusti Aji is a lecturer at the Department of Communication Science, Faculty of Social Science and Law, Universitas Negeri Surabaya. His main research includes journalism, media management, and media literacy.

REFERENCES

- Ahmed, Qanta A., and Ziad A. Memish. 2020. "The Cancellation of Mass Gatherings (MGs)? Decision Making in the Time of COVID-19." *Travel Medicine and Infectious Disease* 101631. doi 10.1016/j.tmaid.2020.101631.
- Ai, Tran Huu, and Luu Hoang Giang. 2018. "The Role of Teacher Immediacy As a Motivational Factor in Student Learning." *The EURASEANs: Journal on Global Socio-Economic Dynamics* 6(6(13)):54–63. doi: 10.35678/2539-5645.6(13).2018.54-63.
- Almahasees, Zakaria, Khaled Mohsen, and Mohammad Omar Amin. 2021. "Faculty's and Students' Perceptions of Online Learning During COVID-19." *Frontiers in Education* 6(May):1–10. doi: 10.3389/feduc.2021.638470.
- Andersen, Janis F. 1979. "Teacher Immediacy as a Predictor of Teaching Effectiveness." *Annals of the International Communication Association* 3(1):543–59. doi: 10.1080/23808985.1979.11923782.
- Angeles, Miguel Barreda-, Sophie Horneber, and Tilo Hartmann. 2023. "Computers & Education: X Reality Easily Applicable Social Virtual Reality and Social Presence in Online Higher Education during the Covid-19 Pandemic: A Qualitative Study." 2(April). doi: 10.1016/j.cexr.2023.100024.
- Azeem, Asmaa, Nisar Abid, and Tariq Hussain. 2021. "Examining the Correlation between University Students' Perceived Teacher Immediacy and Their Motivation." *Psychology and Education Journal* 58(1):5809–20. doi: 10.17762/pae.v58i1.1990.
- Baker, Jason D. 2004. "An Investigation of Relationships among Instructor Immediacy and Affective and Cognitive Learning in the Online Classroom." *Internet and Higher Education* 7(1):1–13. doi: 10.1016/j.iheduc.2003.11.006.
- Basch, Corey H., Grace Clarke Hillyer, Zoe Meleo- Erwin, Jan Mohlma, Alison Cosgrove, and Nasia Quinones. 2020. "News Coverage of the COVID-19 Pandemic: Missed Opportunities to Promote Health Sustaining Behaviors."

Research in Social and Administrative Pharmacy 1–5. doi: 10.1016/j.idh.2020.05.001.

Beaunoyer, Elisabeth, Sophie Dupéré, and Matthieu J. Guitton. 2020. “COVID-19 and Digital Inequalities: Reciprocal Impacts and Mitigation Strategies.” *Computers in Human Behavior* 111(May). doi: 10.1016/j.chb.2020.106424.

Bergdahl, Nina. 2022. “Computers & Education.” *Computers & Education* 188(May):104561. doi: 10.1016/j.compedu.2022.104561.

Bradley-dorsey, Martha, Dennis Beck, Robert Maranto, Bich Tran, and Thomas Clark. 2022. “Is Cyber like In-Person? Relationships between Student-Student, Student-Teacher Interaction and Student Achievement in Cyber Schools.” *Computers and Education Open* 3(December 2021):100101. doi: 10.1016/j.caeo.2022.100101.

Butt, Sameera, Asif Mahmood, Saima Saleem, Shah Ali Murtaza, Sana Hassan, and Edina Molnár. 2023. “The Contribution of Learner Characteristics and Perceived Learning to Students’ Satisfaction and Academic Performance during COVID-19.” *Sustainability* 15(2):1348. doi: 10.3390/su15021348.

Cayanus, Jacob L., Matthew M. Martin, and Alan K. Goodboy. 2009. “The Relation between Teacher Self-Disclosure and Student Motives to Communicate.” *Communication Research Reports* 26(2):105–13. doi: 10.1080/08824090902861523.

Chakraborty, Misha, and Fredrick Muyia Nafukho. 2015. “Strategies for Virtual Learning Environments: Focusing on Teaching Presence and Teaching Immediacy.” *Internet Learning* 4(1). doi: 10.18278/il.4.1.1.

Derks, Daantje, Agneta H. Fischer, and Arjan E. R. Bos. 2007. “The Role of Emotion in Computer-Mediated Communication: A Review.” *Computers in Human Behavior* 24(3):766–85. doi: 10.1016/j.chb.2007.04.004.

Estep, C. M., and T. G. Toberts. 2015. “Teacher_immediacy_and_professo.” *NACTA Journal* 59(2):155–63.

Finset, Arnstein, Hayden Bosworth, Phyllis Butow, Pål Gulbrandsen, Robert L. Hulsman, Arwen H. Pieterse, Richard Street, Robin Tschoetschel, and Julia van Weert. 2020. “Effective Health Communication – a Key Factor in

- Fighting the COVID-19 Pandemic.” *Patient Education and Counseling* 103(5):873–76. doi: 10.1016/j.pec.2020.03.027.
- Frymier, Ann Bainbridge. 1993. “The Impact of Teacher Immediacy on Students’ Motivation: Is It the Same for All Students?” *Communication Quarterly* 41(4):454–64. doi: 10.1080/01463379309369905.
- Gherghel, Claudia, Shoko Yasuda, and Yosuke Kita. 2023. “Computers & Education Interaction during Online Classes Fosters Engagement with Learning and Self-Directed Study Both in the First and Second Years of the COVID-19 Pandemic.” *Computers & Education* 200(March):104795. doi: 10.1016/j.compedu.2023.104795.
- Gorham, Joan. 1988. “The Relationship between Verbal Teacher Immediacy Behaviors and Student Learning.” *Communication Education* 37(1):40. doi: 10.1080/03634528809378702.
- Hazzam, Joe, and Stephen Wilkins. 2023. “Computers & Education The Influences of Lecturer Charismatic Leadership and Technology Use on Student Online Engagement , Learning Performance , and Satisfaction.” *Computers & Education* 200(April):104809. doi: 10.1016/j.compedu.2023.104809.
- Iaconelli, Ryan, and Eric M. Anderman. 2021. “Classroom Goal Structures and Communication Style: The Role of Teacher Immediacy and Relevance-Making in Students’ Perceptions of the Classroom.” *Social Psychology of Education* 24(1):37–58. doi: 10.1007/s11218-021-09609-y.
- Liu, Yue, Xiao Sun, Pengjia Zhang, Peng Han, Haiyan Shao, and Xia Duan. 2023. “Heliyon Generation Z Nursing Students ’ Online Learning Experiences during COVID-19 Epidemic : A Qualitative Study.” *Heliyon* 9(4):e14755. doi: 10.1016/j.heliyon.2023.e14755.
- Messman, Susan J., and Jennifer Jones-Corley. 2001. “Effects of Communication Environment, Immediacy, and Communication Apprehension on Cognitive and Affective Learning.” *Communication Monographs* 68(2):184–200. doi: 10.1080/03637750128054.

- Roberts, Amy, and Denise Friedman. 2013. "The Impact of Teacher Immediacy on Student Participation: An Objective Cross-Disciplinary Examination." *International Journal of Teaching and Learning in Higher Education* 25(1):38–46.
- Rogers, Patricia, Gary Berg, Judith Boettcher, Carole Howard, Karen Schenk, Kristin Klinger, Carole Coulson Typesetter, Sean Woznicki, Amanda Appicello, Larissa Vinci, Mike Brehm, Jen Henderson, Elizabeth Duke, Jamie Snavelly, Carole Coulson, Jeff Ash, Chris Hrobak, and Lisa Tosheff. 2009. "Encyclopedia of Distance Learning Second Edition Volume I A-Des." P. 1212 in Vol. III.
- Schutt, Maria, Brock S. Allen, and Mark A. Laumakis. 2009. "The Effects of Instructor Immediacy Behaviors in Online Learning Environments." 10(2):135–48.
- Sidi, Yael, Tamar Shamir-inbal, and Yoram Eshet-alkalai. 2023. "Computers & Education From Face-to-Face to Online : Teachers ' Perceived Experiences in Online Distance Teaching during the Covid-19 Pandemic." *Computers & Education* 201(May):104831. doi: 10.1016/j.compedu.2023.104831.
- Sohrabi, Catrin, Zaid Alsafi, Niamh O'Neill, Mehdi Khan, Ahmed Kerwan, Ahmed Al-Jabir, Christos Iosifidis, and Riaz Agha. 2020. "World Health Organization Declares Global Emergency: A Review of the 2019 Novel Coronavirus (COVID-19)." *International Journal of Surgery* 76(February):71–76. doi: 10.1016/j.ijssu.2020.02.034.
- Stewart, Mary K. 2021. "Social Presence in Online Writing Instruction : Distinguishing between Presence , Comfort , Attitudes , and Learning." *Computers and Composition* 62:102669. doi: 10.1016/j.compcom.2021.102669.
- Tandyonomanu, Danang, Puspita Sari Sukardani, and Awang Dharmawan. 2021. "Online Lectures Student Satisfaction During the Covid 19 Pandemic." 603(Icss):174–78.
- Teo, Timothy, Saeed Khazaie, and Ali Derakhshan. 2022. "Computers & Education Exploring Teacher Immediacy- (Non) Dependency in the Tutored Augmented Reality Game-Assisted Flipped Classrooms of English

for Medical Purposes Comprehension among the Asian Students.”
179(December 2021).

Teven, Jason J., and Trudy L. Hanson. 2004. “The Impact of Teacher Immediacy and Perceived Caring on Teacher Competence and Trustworthiness.” *Communication Quarterly* 52(1):39–53. doi: 10.1080/01463370409370177.

Wang, Yongliang, Ziwen Pan, and Mingzhe Wang. 2023. “Heliyon The Moderating Effect of Participation in Online Learning Activities and Perceived Importance of Online Learning on EFL Teachers ’ Teaching Ability.” *Heliyon* 9(3):e13890. doi: 10.1016/j.heliyon.2023.e13890.

Wei, Xiaomei, Nadira Saab, and Wilfried Admiraal. 2023. “Do Learners Share the Same Perceived Learning Outcomes in MOOCs? Identifying the Role of Motivation , Perceived Learning Support , Learning Engagement , and Self-Regulated Learning Strategies.” *The Internet and Higher Education* 56(July 2021):100880. doi: 10.1016/j.iheduc.2022.100880.

Wendt, Jillian L., and Jennifer Courduff. 2018. “The Relationship between Teacher Immediacy, Perceptions of Learning, and Computer-Mediated Graduate Course Outcomes among Primarily Asian International Students Enrolled in an U.S. University.” *International Journal of Educational Technology in Higher Education* 15(1). doi: 10.1186/s41239-018-0115-0.

Woods, Robert H., and Jason D. Baker. 2004. “Interaction and Immediacy in Online Learning.” *International Review of Research in Open and Distance Learning* 5(2). doi: 10.19173/irrodl.v5i2.186.