

Student Perceptions of Instructor-Student Rapport and Motivation In Hybrid Courses During COVID-19

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ABSTRACT

The relationship between instructors and their students is essential for developing a classroom climate where students feel motivated to learn. The current study surveyed 658 undergraduate students to examine the relationship between instructor-student rapport and motivation in online and face-to-face classes during the COVID-19 pandemic. Results indicated (1) students experienced more rapport with their instructors during face-to-face classes compared to their online classes, (2) students perceived their motivation was greater during face-to-face classes than in online classes, and (3) there was a significant positive relationship between instructor-student rapport and student motivation in both online and face-to-face classes. This study's findings lend further support to research that emphasizes the importance of creating a sense of community in online classes, where students feel connected to their instructors and, consequently, motivated to learn.

KEYWORDS

Instructor-Student Rapport; Motivation; Hybrid Courses; COVID-19; Online Learning

INTRODUCTION

The primary goal of instructors is to encourage their students to learn.¹ Researchers have found that positive instructor-student relationships play an essential role in creating learning environments where students feel connected, involved, and motivated during class.^{1,2} Developing rapport with students helps instructors meet the goal of fostering an effective learning environment. However, developing this type of relationship with students can be challenging for instructors when there is a drastic change in their conventional teaching methods.

Amidst the COVID-19 pandemic, many universities adopted online learning as the primary form of instruction to comply with the pandemic's safety protocols. Due to this shift, the number of students enrolled in remote courses drastically increased. In addition, the trend to participate in distance learning has been increasing over the past decade. The US National Center for Education Statistics (2018) reported approximately seven million postsecondary students in the United States were enrolled in online courses. As we move forward into a more technology-driven educational climate, it is crucial to understand how the change from traditional face-to-face instruction to different forms of online instruction can impact students' learning environment. Therefore, the purpose of this study was to assess the differences in students' perceptions related to instructor-student rapport and student motivation during students' online classes versus face-to-face classes.

Online learning

Research has struggled to find an agreed-upon definition of online learning.³ Considering the online learning literature, Singh and Thurman³ developed the following definition: "Online education is defined as education being delivered in an online environment through the use of the internet for teaching and learning. This includes online learning on the part of the students that is not dependent on their physical or virtual co-location. The teaching content is delivered online, and the instructors develop teaching modules that enhance learning and interactivity in the synchronous or asynchronous environment" (p. 302).

In theory, online learning can be just as effective as traditional face-to-face instruction when appropriately implemented.⁴ Online learning has many benefits for both instructors and students. In times of crisis, such as the COVID-19 pandemic, it provides a student-centered learning environment that is flexible in time and location.⁵ It is an innovative instructional method that allows instructors to adapt to different learning styles that are more inclusive, which differ from the traditional lecture format used during face-to-face classes. According to Dhawan,⁵ online learning provides teachers with tools to build a collaborative and interactive learning environment.

COVID-19 and Higher Education

On March 12, 2020, the World Health Organization declared the COVID-19 pandemic. The virus spread rapidly across the globe and has affected the livelihoods of billions of people.⁶ In the United States, academic institutions had to comply with social distancing guidelines and a mandatory quarantine imposed by the government to keep citizens safe. In the state of emergency and uncertainty, academic institutions had to find a way to continue education for college students whilst complying with these guidelines. As a result of the pandemic, most academic institutions across the nation had to switch to online learning for the first time.⁷

Literature regarding the transition to online instruction during COVID-19 has found that instructor readiness and willingness to change to an online course format is a significant determinant for their success.⁸ According to Veletsianos and Seaman,⁷ amidst COVID-19, many instructors had to tackle the challenge of teaching online without previous experience and with very little time to prepare. Similarly, college students who were accustomed to traditional face-to-face classes had to adapt to online classes quickly.

Aboagye et al.⁹ found that during the transition to online classes, students' most serious obstacles was the lack of access to the technology required for their courses, such as equipment and Internet access. Moreover, the most significant challenge impacting students' intentions to study online was lecturer issues.⁹ Among the many issues that students faced, the one that impacted their experience the most was the quality of instruction they were receiving during the pandemic. Nonetheless, the emergency switch to online classes was a first-hand experience and challenge for the education system as a whole, from the academic institutions themselves to the faculty and students.

Motivation

According to cognitive psychology research, motivation is a part of the learning process.⁵ Motivation increases attention and "sets the stage for cognitive engagement"¹⁰ (p. 476). Students who feel motivated during a class may be more likely to succeed.¹¹ For many years, scholars defined motivation as trait-oriented, meaning that students' self-efficacy, goals, and interests determined their motivation. However, research suggests that external factors such as course format and instructor immediacy behaviors influence student motivation as well.¹² Christophel² described this type of motivation as *state-oriented*.

The self-determination theory of motivation, developed by Deci and Ryan,¹³ suggests it is important to consider the different factors that influence an individual's psychological needs to understand human motivation. Deci and Ryan¹³ defined these needs as "innate psychological nutrients that are essential for ongoing psychological growth, integrity, and well-being" (p. 229). Moreover, these needs are classified by intrinsic and extrinsic factors. Intrinsic motivation, similar to trait-oriented motivation,² is self-determined or autonomous behavior. In other words, when individuals act upon intrinsically motivated behavior, they do not need reinforcement. Behaviors led by intrinsic factors are in themselves rewarding for an individual.^{13,15}

In contrast to the self-determination theory of motivation, extrinsic motivation refers to behaviors that are influenced by specific external factors. This type of motivation is also known as controlled motivation. It depends upon circumstances such as instructor approval, external validation, shame avoidance, fear of consequences, classroom environment, and more. In other words, extrinsic motivation is behavior dependent on circumstances regulated by other people or conditions.^{13,14,15}

The current study examined student motivation among participants who were taking hybrid courses, which are designed to alternate between online and face-to-face instruction. The COVID-19 policies at the university where this study took place allowed faculty to hold face-to-face, online, and/or hybrid classes, so students were exposed to an array of experiences. When motivation is mentioned in this study, it refers to extrinsic motivation because the researchers focused on measuring motivation in the context of two types of classroom conditions. Lastly, motivation is necessary to examine in educational environments because it leads to an instructor's ultimate goal – learning.² Another important factor for the learning process, in addition to motivation, is instructor-student rapport, which is discussed in the following section.

Instructor-Student Rapport

Frisby and Housley Gaffney¹⁶ defined instructor-student rapport as the overall perception that students have of their instructors and "the belief that there is a mutual, trusting, and prosocial bond, including personal connection and enjoyable interactions" (p. 341). Instructors that build a healthy rapport with their students are seen as developing an effective learning environment.¹⁶ It is important to understand if and how much students care about their relationships with instructors because it can provide insight into students' relational goals in the classroom.

Although rapport and immediacy are two different constructs¹⁶ rapport has been used as an umbrella term that includes instructor immediacy behaviors¹⁷ Immediacy behaviors are verbal or nonverbal communication strategies that create affinity between instructors and students.¹⁸ Instructor-student rapport researchers have focused on examining the relationship between instructor

immediacy behaviors and student motivation.^{2,19,20} These scholars have found that a positive relationship exists between instructor-student rapport and student motivation. Moreover, other scholars have suggested that instructor-student rapport, including teacher immediacy behaviors, influence student motivation to learn important lesson content.^{2,17,18} Ultimately, we are uncertain how this relationship could vary in the context of online and face-to-face classes.

Virtual Hybrid Learning

The university examined in this study implemented Virtual Hybrid Learning (VHL) as the primary instruction mode during the COVID-19 pandemic. Virtual Hybrid Learning is a mixed-mode of instruction that combines online learning with traditional face-to-face instruction synchronously.^{22,29} Zydney et al.²³ described this mode of instruction as the "Here or There" (HOT) approach, meaning some students partake in class on-campus (i.e., Here) and other students join in a remote location (i.e., There) at the same time. It is important to consider the instruction modes experienced by students in this study because they are a different experience from courses that are solely online or face-to-face. The educational environment in pure online learning and VHL is not the same. With VHL, students have the opportunity to interact with their instructors in person on the days they meet for face-to-face instruction.

Hybrid Learning

Another mode of instruction implemented at the university in this study was hybrid learning, also known as "blended learning." Similar to VHL, this mode combines online with face-to-face instruction.²⁴ In hybrid learning, students meet with instructors interchangeably, either solely online or in person. Professors using hybrid learning choose the days they want to meet with students in-person or online. With VHL and hybrid learning, participants in this study have experienced online and in-person classes. Some studies have found no significant differences in the academic outcome and the learning environment between online and face-to-face classes.^{25,26} However, Lyke and Frank²⁷ found students feel less satisfied with their educational experience in online classes. Still, the learning environment in full online and face-to-face classes cannot be compared to the online and face-to-face learning environment in VHL or hybrid learning courses.

A limited amount of empirical research has examined the educational environment differences between online and face-to-face classes for students in VHL or hybrid learning course formats.^{28,29} One study on VHL found that online students experience significantly low levels of "relatedness" compared to face-to-face students.²¹ Given the literature gap regarding the educational environment in VHL and hybrid courses, there is uncertainty about the differences in how students experience their online and face-to-face classes within VHL/hybrid learning format. Specifically in terms of their rapport with instructors and motivation.

Overall, previous literature on VHL and hybrid learning formats suggests a lack of student connectedness and rapport associated with classes that take place online.^{21,28,29} Moreover, previous research has found that instructor-student rapport is positively related to motivation.^{2,12,19,20} Based on the literature, it is expected that students will report a lack of rapport with instructors in their online classes and report less motivation in their online classes compared to their face-to-face classes. Thus, we posit the following hypothesis:

1. On average, students will report higher rapport and motivation ratings in their face-to-face classes compared to their online classes.

Taking into account the literature discussed, we formulated five research questions aimed at understanding students' experiences with hybrid courses during COVID-19:

1. To what degree do students value their relationships with instructors?
2. Is instructor-student rapport in online classes positively related to student motivation in online classes?
3. Is instructor-student rapport in face-to-face classes positively related to student motivation in face-to-face classes?
4. Is student motivation in online classes negatively related to motivation in face-to-face classes?
5. Is instructor-student rapport in online classes negatively related to instructor-student rapport in face-to-face classes?

METHODS AND PROCEDURES

Participants

Participants in this study consisted of 658 undergraduate students attending a private, Southern university who were taking hybrid classes (face-to-face and online) and/or virtual hybrid classes, depending on their professors' preferences. The participants consisted of 574 women, 76 men, six non-binary/third gender students, and two who selected "other." Students' age ranged from 18 years of age to 61 years of age ($M = 20.13$, $SD = 3.06$). The participants were of various class standings, including 194 first-year students, 167 sophomores, 140 juniors, 156 seniors, and one student who did not report a class standing. There were 476 students who identified as Non-Hispanic White, 22 who identified as Non-Hispanic Black, 106 who identified as Hispanic White, nine who identified as Hispanic Black, one who identified as Native American or American Indian, 22 who identified as Asian/Pacific Islander, and three who identified as Middle Eastern. Nineteen students did not report cultural backgrounds.

Procedures

Data were collected using an IRB-approved Qualtrics survey distributed via email through a global university message to undergraduate students enrolled in Spring 2021 courses. Students were incentivized to participate in the survey with a \$25 gift card raffle. The Institutional Review Board at our university granted this study "exempt status" as described in 45 CFR 46.104 of the Department of Health and Human Services Policy for the Protection of Human Subjects.

Previous scale construction research on motivation and rapport in the classroom ^{12,17} was used to create the current study's survey and scales. The scales in the survey focused on measuring the following concepts: (a) student value of instructor rapport, (b) instructor-student rapport in online classes, (c) instructor-student rapport in face-to-face classes, (d) student motivation in online classes, and (e) student motivation in face-to-face classes. Cronbach's alpha is the reliability coefficient that was used to measure the internal consistency and reliability of the survey items in each scale. Each item in the survey was presented on a Likert-type scale where participants were given the opportunity to choose an answer that reflects their degree of agreeableness with each item on the survey.

MEASURES

Student Value of Instructor Rapport

Knowing the extent to which students care about their instructors is key to understanding relational goals in the classroom. This scale was created to measure how much students care about their instructors. This scale consisted of a five-item on a five-point Likert-type scale. The scale ranged from "strongly agree" (5) to "strongly disagree" (1). The Cronbach alpha for this scale was .83 ($M = 3.76, SD = .77$). See **Table 1** below for the scale items.

Items	
1.	I value my relationships with professors.
2.	Having close relationships with my professors is important to me.
3.	I have one or more professors whom I see as a mentor, and this is important to me.
4.	When I have good or bad news to share, I often share it with my professors.
5.	I strongly care about my professors.

Table 1. Value of instructor rapport.

Instructor-Student Rapport Online

To understand students' current perceptions of rapport with instructors during their online classes, a five-item on a five-point Likert-type scale that ranged from "strongly agree" (5) to "strongly disagree" (1) was created. The Cronbach alpha for this scale was .76 ($M = 3.15, SD = .87$). See **Table 2** below for the scale items.

Items	
1.	I have a close relationship with my professors this semester.
2.	I look forward to seeing my professors via Zoom.
3.	I am comfortable interacting with my professors during online classes.
4.	I feel more connected to professors taking online classes than when taking in-person classes.
5.	I consider my professors approachable this semester.

Table 2. Instructor-student rapport online.

Motivation in Online Classes

The current study assessed students' motivation during their online classes. The scale consisted of seven items on a five-point Likert-type scale that ranged from "strongly agree" (5) to "strongly disagree" (1). The Cronbach alpha for this scale was .86 ($M = 2.72, SD = .95$). See **Table 3** below for the scale items.

Items	
1.	Overall, I feel motivated to attend my Zoom lectures.
2.	I find my classes that take place through zoom interesting.
3.	I often feel enthusiastic about attending my online classes.
4.	I feel excited during online classes.
5.	I am involved during my online classes.
6.	Online classes are challenging.*
7.	I am more likely to skip classes that take place online.*

Table 3. Motivation in online classes.

Instructor-Student Rapport Face-to-Face.

Participants reported their perceptions of rapport with instructors during face-to-face classes. This scale consisted of a four-item five-point Likert-type scale that ranged from "strongly agree" (5) to "strongly disagree" (1). The Cronbach alpha for this scale was .86 ($M = 4.20, SD = .84$). See **Table 4** below for the scale items.

Items	
1.	I had close relationships with my professors in semesters where courses were taught fully in person.
2.	I look forward to seeing my professors in-person.
3.	I feel comfortable interacting with my professors during classes that take place in person.
4.	I feel more connected to professors taking in-person classes than when taking online classes.

Table 4. Instructor-student rapport face-to-face.

Motivation Face-to-Face.

The purpose of this scale was to assess student motivation during their current in-person classes or in past semesters where classes took place fully in-person. This scale consisted of seven items on a five-point Likert-type scale that ranged from "strongly agree" (5) to "strongly disagree" (1). The Cronbach alpha for this scale was .92 ($M = 3.97, SD = .8$). See **Table 5** below for the scale items.

Items	
1.	I feel motivated to attend my in-person classes.
2.	I often feel enthusiastic about attending classes that take place face-to-face.
3.	I feel excited during my in-person classes.
4.	I am involved during my in-person classes.
5.	I participate more during in-person classes than online classes.

Table 5. Motivation in face-to-face classes.

Data Analysis

In order to compare the average difference between the variables of interest in research question one and the hypothesis, the mean difference was used to examine how the variables differed from one another. Doing this allowed the authors to reflect on the average level of agreeableness reported by students for each Likert-type scale. Moreover, SPSS software was used to determine Pearson product-moment correlations to examine the relationships between the variables of interest in the remaining research questions (3 - 5).

RESULTS

The first research question was asked to understand how much students care about their relationships with professors. The mean score for the value of the instructor rapport scale was 3.76 ($SD = .77$). This mean score reported students, on average, "somewhat agree" that they care about their relationships with instructors.

Research question two asked if instructor-student rapport in online classes positively correlates with student motivation in online classes. A Pearson product-moment correlation found a significant and positive association between instructor-student rapport and motivation in online classes ($r = .635, p < .01$). Similarly, research question three asked if instructor-student rapport in face-to-face classes positively correlates with student motivation in face-to-face classes. A Pearson product-moment correlation found a significant and positive association between instructor-student rapport and motivation in face-to-face classes ($r = .809, p < .01$). See **Table 6** for correlations.

Research question four asked if there is a negative relationship between student motivation in online and face-to-face classes. A Pearson product-moment correlation found a significant and negative association between student motivation in online and face-to-face classes ($r = -.351, p < .01$). Therefore, students who feel motivated in one-course format feel less motivated in the latter. See **Table 6** for correlations.

Furthermore, research question five asked if there is a negative association between instructor-student rapport in online versus face-to-face classes. This Pearson product-moment correlation revealed no significant relationship between these two variables ($r = -.063, p < .107$). In other words, students generally have a degree of rapport with their instructors in both online and face-to-face classes.

	<i>M</i>	<i>SD</i>	<i>a</i>	1	2	3	4
1. Value of Instructor Rapport	3.76	.77	.83	--			
2. Instructor-Student Rapport Online	3.15	.87	.76	.375**	--		
3. Motivation Online	2.72	.95	.87	.119**	.635**	--	
4. Instructor-student Rapport Face-to-Face	4.20	.84	.86	.495**	-.063	-.331**	--
5. Motivation Face-to-Face	3.97	.88	.92	.413**	-.072	-.351**	.809**

** Significant at the $p < 0.01$ level.

Table 6. Correlations, means, and standard deviations of variables.

The hypothesis posited that, on average, students would report significantly less motivation and rapport with instructors during their online classes than in their face-to-face classes. On the Instructor-Student Rapport Online scale, most students reported no negative or positive rapport with instructors ($M = 3.15, SD = .87$). In contrast, relating to the instructor-student rapport face-to-face scale, students reported they feel a strong rapport with their instructors during face-to-face classes ($M = 4.20, SD = .84$). There is a considerable difference between these two scales. The mean difference ($MD = 1.05$) suggests students experience higher rapport with instructors during their face-to-face classes than in their online classes. Moreover, students reported feeling neutral in their motivation during online classes ($M = 2.72, SD = .95$). In contrast, in the Motivation Face-to-Face scale, students reported "somewhat agree" they felt motivated in their face-to-face classes ($M = 3.97, SD = .88$). The mean difference for these scales ($MD = 1.25$) suggests that students tend to be significantly more motivated during their face-to-face classes than in their online classes. Thus, the hypothesis was supported.

DISCUSSION

This study sought to examine the differences in instructor-student rapport and motivation during online and face-to-face classes. This study's overall goal was to survey students' perceptions of their online learning experience during the COVID-19 pandemic. When students are taking online classes, they do not perceive the same rapport with instructors in comparison to their in-person classes. In addition, the learning environment during online classes tends to be less motivating compared to face-to-face classes. This study contributes to educational technology advances by offering another piece of research that addresses some shortcomings with online classes in VHL and hybrid learning course formats.

When instruction is shifted to an online format, it becomes an entirely different educational environment because technology is used as a medium for communication.³⁰ Instructors are encouraged to approach online classes differently from face-to-face classes.⁵ The students in this study reported significantly lower levels of rapport with instructors during online classes. These

findings support Butz & Stupnisky's²⁹ study, where they found that online students experience less "relatedness" with instructors than face-to-face students in VHL courses. Crim³¹ suggested this phenomenon can occur because it is often easy for students in online classes to accept and observe course material passively instead of engaging with their instructors and other students in class.

There is a likelihood that students perceive a lack of social presence with online classes due to the change of medium, which involves computer-mediated-communication through conference software. Tu and McIsaac³² described social presence as "the degree of awareness of another person in an interaction and the consequent appreciation of an interpersonal relationship" (p. 133). Therefore, the degree of social presence experienced in online learning can differ significantly from that in face-to-face classes, influencing students' perceptions of instructor rapport.

Similar to early findings by Christophel,² this study's findings suggest that as student rapport with instructors increases, so does their motivation in class. As a result, the findings from our study support previous literature that suggests a positive association between instructor-student rapport and student motivation.^{2,12,19,20} This positive relationship can exist because when students feel that their instructors care about them and their educational goals, it helps students develop greater self-determination.¹⁴

Findings from this study suggest students who feel motivated in face-to-face classes are significantly less likely to feel motivated in online classes. Fritz et al.³³ also found a relationship between student motivation and their learning style. Learning style is a concept that posits individuals process and retain information differently.³⁴ The researchers suggest that students who are in a class format that does not fit their learning style are likely to feel unmotivated.³³ Similarly, students in this study who reported feeling more motivated in a particular class format could have simply had a preference towards it. There are significant differences in the class format for face-to-face and online classes, which can explain the significant negative relationship found between motivation in online versus face-to-face classes.

According to Murdock and Williams²⁵, there are no significant differences in learning outcomes for students that take online and in-person classes. However, there is a gap in the literature regarding student experiences with different learning environments, such as VHL/hybrid classes.^{28,29} Addressing this gap, this research found significant differences in the levels of rapport and motivation during face-to-face and online classes.

It is crucial to consider that this study took place within hybrid/ VHL classes that were implemented as an emergency protocol to continue education for students amidst the COVID-19 pandemic. Instructors and students were undergoing a distinctive circumstance that influenced their experience in the classroom. In retrospect, taking VHL classes voluntarily, and taking them as an emergency adaptation to continue education are two separate conditions and should be studied as such.³⁵

Instructor immediacy behaviors within the context of a pandemic could be distinct in that they can be influenced by rare interactions that are particular to the emergency. In other words, instructor-student rapport can be determined, for example, by an instructor's empathy when a student is sick or when a student is undergoing mental health problems due to the cathartic effects of being quarantined. Furthermore, rapport could be influenced by an instructor's leniency with assignments or their understanding for students who are having technological difficulties. Ultimately, instructor-student immediacy behaviors during national emergencies should be further explored and examined.

Limitations

This research was not without its limitations. First, female participants were disproportionately represented in the sample gathered for this study. The link to this survey was distributed in a message sent to all undergraduate students using the university's "global email." Future research should aim to gather a sample that more accurately represents the gender/sex ratio of the university where the study is conducted.

Students have experienced significant shifts in their education amidst the COVID-19 pandemic. Therefore, this study has a limitation that considers the mediating role of the psychological distress on students caused by the pandemic.⁴⁰ Thus, the survey responses could have been negatively biased towards online classes due to the cathartic effects of the current educational climate. Future research should try to find ways to avoid any biases that could impact students' responses.

The last limitation is that the survey did not assess precisely how many face-to-face or online classes students took during the semester. Therefore, we are not certain of how many hybrid or VHL courses students were taking and how this may have affected their responses to the survey. Furthermore, this study did not assess students' majors and their interests. As this study focused on measuring student state-oriented motivation, the nature of different course subjects could also influence student motivation. In future studies, researchers should assess students in more depth about their enrolled courses.

Implications

This study's results lend further support to scholars who have emphasized the importance of fostering a sense of community among online students.^{31,36,37} Research suggests that instructors can build a strong social presence with students through collaboration, meaningful interactions, and participation during online classes.^{25,38,39} Moreover, instructors should adapt their conventional face-to-face class format to fit an effective student-centered online learning environment.⁵ These are all factors that help students build rapport with instructors and their peers during online classes. Therefore, given the findings, we suggest instructors prioritize developing a strong rapport with their students because it can enhance their motivation to learn, whether it be face-to-face or online. Moreover, institutions should consider the findings from this study when training their faculty on adjusting their curriculum and teaching style during emergencies or public health crises. Future research should aim to examine important instructor-student immediacy behaviors in the context of an emergency switch to online learning. This is important because it will allow institutions and instructors to continue offering the same quality of education regardless of external circumstances. It will also allow students to receive the same level education no matter where they are or the circumstances they are enduring.

CONCLUSIONS

The present study examined instructor-student rapport and student motivation during online and face-to-face classes in VHL/hybrid learning courses. This study was conducted during the COVID-19 pandemic, reflecting on the current educational climate in higher education. Taken together, the findings support a positive relationship between instructor-student rapport and student motivation. Student motivation and instructor-student rapport are seen as greater in face-to-face classes than in online classes. Further research should continue to examine the educational environment in virtual hybrid learning courses and hybrid courses so students may experience consistency in their educational experience.

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PRESS SUMMARY

The purpose of this study was to examine the relationship between instructor-student rapport and motivation in the context of face-to-face and online classes. Findings revealed a significant positive relationship between instructor-student rapport and student motivation in both online and face-to-face classes. Results suggest students experience more rapport with their instructors during face-to-face classes compared to their online classes, and students reported their motivation is greater during face-to-face classes than in online classes. This study's findings lend further support to research that emphasizes the importance of creating a sense of community in online classes where students feel connected to their instructors and, consequently, motivated to learn.