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From guides to jugglers, from audience to outsiders: a metaphor analysis of synchronous hybrid learning

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Abstract

Synchronous hybrid learning (SHL) is a new instructional approach that allows on-site and remote students to participate in learning activities simultaneously. Investigating metaphorical perceptions about new learning environments may offer insights into the ways in which they are perceived by various stakeholders. Yet, research is missing a thorough investigation into metaphorical perceptions about hybrid learning environments. Hence, our goal was to determine and compare the metaphorical perceptions of higher education instructors and students regarding their roles in face-to-face versus SHL environments. When asked about SHL, participants were asked to refer separately to the on-site and remote student roles. Following the mixed-methods research design, data were obtained from 210 higher education instructors and students who responded to an online questionnaire during the 2021 academic year. Findings showed that both groups perceived their roles differently in face-to-face versus SHL. For instructors, the "guide" metaphor was replaced with the "juggler" and the "counselor" metaphors. For students, the "audience" metaphor was replaced with different metaphors for each cohort of learners. The on-site students were described as an active audience, while the remote students were described as outsiders or observers. The meaning of these metaphors will be discussed in light of the impact of the COVID-19 pandemic on teaching and learning in contemporary higher education.

Introduction

Synchronous hybrid learning (SHL) is an emerging learning environment, in which one group of students participates in the course on-site, and simultaneously individual students participate remotely from a location of their choice (Butz & Stupnisky, 2016; Detyna et al.,

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2022; Raes, et al., 2020b). This type of instruction has gained new interest due to the global spread of COVID-19, which has forced many universities to shift from fully face-to-face (F2F) to more flexible types of instruction (Usher et al. 2021; Rahayu et al., 2022). Given that SHL is a relatively novel learning environment, only a few studies have examined its use and effectiveness (Detyna et al., 2022; Raes et al., 2020a).

Since SHL allows two separate attendance modes, students are free to choose whether to attend the course lectures on-site or remotely, according to their preferences (Butz & Stupnisky, 2016; Raes et al., 2020a). Despite its tremendous potential, SHL is not without challenges (Bower et al., 2015). One major line of studies has investigated differences in the learning experiences of on-site and remote students in SHL (Barak & Usher, 2022). Some studies suggested that due to their physical separation from the rest of the class, remote students in hybrid courses may experience feelings of isolation and low relatedness to their instructors and peers (Jerke & Mosterd, 2017; Zydney et al., 2019). Meanwhile, SHL instructors were documented as experiencing heavy cognitive load due to the multiple and simultaneous demands while teaching a synchronous hybrid course (Detyna et al., 2022). They specifically expressed the difficulty in trying to create equal learning opportunities for both groups of students (Bower et al., 2015).

While the implementation of SHL has become a common practice in higher education institutions with the outbreak of COVID-19, research focusing on instructors' and students' learning experiences in these newly-designed learning spaces remains limited (Miller et al., 2021; Raes et al., 2020a). Researchers do have a common understanding that there are multifaceted and complex dimensions to teaching and learning in SHL environments, which makes it difficult to explore the learning experiences they provide (Raes et al., 2020a). One known approach for examining experiences that are difficult to articulate through literal language is the use of metaphors (Jensen et al.2021; Thomas & Beauchamp, 2011).

Most studies have explored metaphors of pre-service teachers about their roles in F2F classes. A recurring result was that teachers are portrayed as guides to learners, while students are portrayed as recipients of knowledge who will become experts through instruction (Hamilton, 2016; Thomson, 2016; Wan et al., 2011). Other studies have determined higher education students' metaphors of distance education, showing that students have an overall positive perception of it (Tuncay & Özçinar, 2009; Yilmaz, 2019). Although investigating metaphorical perceptions about new learning environments may offer insights into the ways in which they are perceived by instructors and students (Saban et al., 2007), research is missing a thorough investigation into metaphorical perceptions about hybrid learning environments. The current study aims to fill this gap by *determining and comparing* the metaphorical perceptions of higher education instructors and students regarding their roles in F2F versus SHL *environments.*

Literature review

Hybrid learning environments in higher education

For decades, higher education institutions around the globe have relied upon traditional lecture-based learning spaces comprised predominantly of classrooms and lecture halls. In this model, students take the role of passive recipients of knowledge who will become experts through instruction (Singh et al., 2022). With the tremendous increase in available online learning platforms, learning spaces that allow more flexible and interactive

types of instruction have become prevalent in higher education settings (Thomas et al., 2019). These emerging types of instruction have been documented as influencing students' engagement levels, perceived well-being, motivation, and academic performance (Singh et al., 2022; Thomas et al., 2019). An emerging learning space that allows such flexibility and interactivity is the synchronous hybrid learning environment.

Synchronous hybrid learning (SHL) is a teaching method that allows students to choose between two separate attendance modes that occur simultaneously, that is, on-site participation and remote participation (Barak & Usher, 2022; Butz & Stupnisky, 2016; Galvis, 2018). Higher education institutions around the globe have adopted SHL during the last two years, since it allows the continuity of instruction in times of emergencies, as was practiced during the outbreak of COVID-19 (Detyna et al., 2022; Mentzer et al., 2022; Usher et al. 2021).

One of the most cited benefits of SHL is that it allows more flexibility in course attendance for students, as they can choose whether to attend the course lectures on-site or remotely (Galvis, 2018; Miller et al., 2021). This characteristic of SHL may increase equity in higher education since it allows equivalent learning opportunities to students who are geographically isolated or cannot physically attend classes due to health issues, family, or work responsibilities (Bower et al., 2015; Szeto, 2014; Zydney et al., 2019). From the institution's perspective, SHL is a cost-effective approach that allows expanding its reach to a greater and new base of student populations (Butz & Stupnisky, 2016; Galvis, 2018).

Apart from its great potential, SHL holds many barriers to successful teaching and learning. From the instructors' perspective, it is perceived as a teaching method that often requires more preparation and organization, which may result in an increased workload (Bower et al., 2015; Szeto, 2014). Moreover, SHL instructors are challenged to pay attention to students who attend the course on-site and remotely and to provide both cohorts of students with equivalent learning opportunities (Jerke & Mosterd, 2017; Raes et al., 2020b). Teaching simultaneously in two modes demands extra effort from the instructors. Hence, it is not surprising that instructors reported experiencing a heavy cognitive load and fatigue after teaching synchronous hybrid courses (Popov, 2009; Raes et al., 2020b; Zydney et al., 2019).

From the students' perspective, studies have reported on the different learning experiences that SHL provides to on-site and remote students (Barak & Usher, 2020; Detyna et al., 2022; Zydney et al., 2019). On the one hand, it was argued that on-site students sometimes feel neglected when instructors solve technical problems or adopt a slower lecture pace with lots of repetition to accommodate the lesson to the remote students (Bower et al., 2015; Szeto, 2014). On the other hand, it was documented that remote students often feel distant, isolated, and excluded from the "main" class—that is, where the instructor is located—since they are physically separated from the instructor and the on-site students (Barak & Usher, 2020; Butz & Stupnisky, 2016). Indeed, studies reported that remote students in blended or hybrid courses may experience lower levels of engagement, motivation, and relatedness to their instructors and peers, compared with their on-site counterparts (Jerke & Mosterd, 2017; Zydney et al., 2019).

Only recently have researchers begun to examine how diverse learning environments can directly influence students' beliefs and perspectives (Mantooth et al., 2021; Thomas et al., 2019). Most studies used questionnaires that have been developed, validated, and used for assessing students' perceptions of the classroom environment. Examples of such questionnaires are the What Is Happening In this Class? (WIHIC) or the Online Classroom Learning Environment Inventory (OCLEIFraser, 1998; Long et al., 2022; Rahayu et al., 2022). Yet, some wonder whether the use of single Likert-type items could unpack

instructors' and students' *hidden attitudes and beliefs about teaching and learning* in novel learning environments (Thomas et al., 2019).

As pointed out by hybrid learning environment researchers, there are multifaceted and complex dimensions to teaching and learning in such environments, which makes it difficult to explore the learning experiences they provide (Raes et al., 2020a). A common way to explore multifaceted and complex human experiences is through the use of metaphors (Jensen et al., 2021; Kasoutas & Malamitsa, 2009).

Metaphors in education research

A metaphor is a literary device that draws a comparison between two things and often helps us to make sense of the world around us (Oxford et al., 1998). Metaphors are often employed when we want to express abstract and complex concepts, and we do it by using more familiar and less complicated terminology (Jensen et al., 2021; Thomas & Beauchamp, 2011). Kasoutas and Malamitsa (2009) have identified three reasons why people use metaphors. First, metaphors allow us to express things and ideas that are difficult to describe through literal language. Second, metaphors allow us to capture experiences and ideas that are complex and multifaceted. Third, metaphors allow us to communicate experiences and ideas in a vivid and insightful way.

Within educational research, metaphors have been used mostly as a means to reveal teachers' educational values, attitudes, and practices (Jensen et al., 2021; Kalra & Baveja, 2012; Thomas & Beauchamp, 2011). Metaphors offer insights into the ways in which teachers may understand their roles within the classrooms in which they teach or will one day teach (Saban et al., 2007; Thomson, 2016). This technique has been commonly used to explore pre-service or in-service teachers' perceptions of various aspects related to the teaching practice (Hamilton, 2016; Kalra & Baveja, 2012; Oxford et al., 1998).

Prior studies recognized that one of the most dominant metaphors for teaching is the "guide" metaphor, which puts the teacher in a position of leadership (Hamilton, 2016; Saban et al., 2007). The teacher as a guide metaphor has been reported in numerous studies about teachers' identities. In this metaphor, the teacher is considered to be responsible for finding the right track for students to reach their targets and for helping them to set study goals (Patchen & Crawford, 2011; Wan et al., 2011). This metaphor was also evident in a study that compared metaphors of teacher identity between a group of teachers and students (Wan et al., 2011), where the authors found mismatches between students' and teachers' beliefs about the teacher role; teachers saw themselves as guides or nurturing parents, whereas students saw teachers as controllers of the classroom.

According to Kasoutas and Malamitsa (2009), the guide metaphor may include a variety of metaphors with important differences in teacher and student roles. For example, a teacher that is presented as a guide through the jungle has a different role from a teacher that is presented as a general tourist guide. More metaphors were presented in a study by Thomson (2016), where it was shown that teachers were perceived as content experts, facilitators of learning, and guides or assistants in instruction. All of the above-mentioned studies focused on metaphors of teaching in face-to-face classrooms.

Reviewing the few studies that focused on metaphors of teaching and learning in online classes, Jensen et al. (2021) explored metaphors used for understanding feedback in online learning environments. Their analysis produced six dominant metaphors, such as feedback as coaching or feedback as a dialogue. Another study examined metaphors for the role of the online instructor by analyzing text-based discussions from online

discussion forums (Ouyang & Scharber, 2017); the authors found that the instructor's role evolved from a guide in the first class, to a facilitator, an observer, and a collaborator at the middle stages of the course, and to an observer in the course's later stages. Two other studies have focused on students' metaphorical perceptions of online higher education courses (Tuncay & Özçinar, 2009; Yilmaz, 2019), which were often described positively.

It seems that many studies explored metaphorical perceptions of instructors or students about face-to-face (F2F) or online learning. Yet, despite their growing popularity due to the spread of COVID-19, little has been done to investigate the metaphorical perceptions of instructors and students about their roles in SHL environments.

Research goal and questions

The goal of the study is to determine and compare the metaphorical perceptions of higher education instructors and students regarding their roles in F2F versus SHL environments. Concerning the synchronous hybrid environment, participants were asked to refer separately to the role of the on-site students and the remote student.

The following research questions were examined:

1. Which metaphors do instructors and students use to describe their roles in F2F learning environments?
2. Which metaphors do instructors and students use to describe the role of the instructors in SHL?
3. Which metaphors do instructors and students use to describe the role of the on-site and the remote students in SHL?

Methods

Research setting and participants

This study took place at several higher education institutes across Israel. In mid-March 2020, as a result of the COVID-19 outbreak, all Israeli higher education institutes closed their gates due to the national lockdown, and all courses were shifted to remote teaching modes. Remote teaching took place during the fall semester of the next academic year (2020/21). A few weeks into the spring semester of that academic year, in an attempt to bring back some routine alongside the pandemic, instructors were required to return to teaching from within the campuses, while students were given the choice to learn either on-site or remotely.

Our participants included 130 instructors and 80 higher education students that have taught or participated in a synchronous hybrid course after the first outbreak of the COVID-19 pandemic. Table 1 details the participants' backgrounds in terms of gender and discipline. In both groups, the majority of participants reported they had no prior experience with SHL prior to the pandemic.

Table 1 Participants' distribution by gender and discipline (%)

Research group	Gender		Discipline				
	Male (%)	Female (%)	Natural sciences (%)	Humanities (%)	Social sciences (%)	Applied sciences (%)	Others (%)
Students (n=80)	31.25	68.75	11.2	18.7	47.5	16.3	6.3
Instructors (n=130)	44.62	55.38	11.5	23.1	39.2	20.8	5.4

Table 2 The eight metaphors for teaching/learning in F2F learning environments

#	Metaphors for teaching	Metaphors for learning
1	A parent	A child
2	A doctor	A patient
3	A coach	A team player
4	A chef	A customer
5	A gardener	A flower
6	A guide	A tourist
7	A commander	A soldier
8	An entertainer	An audience

Research tools

This study applied the convergent parallel mixed methods research design (Creswell, 2014). The data were collected via an online questionnaire that was distributed between May and July 2021. Respondents were asked to choose one course that they were teaching or learning in a SHL format. The questionnaire was divided into three parts. The first part included background questions. As mentioned, all participating instructors and students have taught or participated in at least one synchronous hybrid course after the first outbreak of the pandemic.

The second part included a multiple choice question that referred to metaphors for teaching or learning in F2F environments; participants were given a general definition of metaphors ("metaphors are used to express phenomena or situations using a familiar terminology") and were presented with a table consisting of eight known metaphors for the roles of instructors or students in higher education – "Generally speaking, being an instructor/a student in face-to-face courses in higher education is like being [..]". Participants were asked to rate the degree to which they agree with each of the eight metaphors on a 5-point Likert scale (from 1, "definitely not", to 5, "definitely yes"). *The eight metaphors (*See Table 2) *were chosen* based on the findings of Thomson (2016), who reported on metaphorical images for teaching and learning in K-12 settings. The original scale consisted of ten schooling metaphor statements, while in our study only eight metaphors were used based on their relevance for higher education. The Cronbach's α reliability coefficient calculated for the eight metaphors was α=0.65 for F2F teaching and α=0.62 for F2F learning.

In the third part of the questionnaire, participants were asked to complete three statements *about teaching/learning in SHL environments with their own metaphors*. The first statement referred to the role of the SHL instructor ("The role of an instructor in a synchronous hybrid course is like [..]", the second referred to the role of students who attend SHL on-site ("The role of an on-site student in a synchronous hybrid course is like [..]", and the third referred to the role of students who attend SHL remotely ("The role of a remote student in a synchronous hybrid course is like [..]").

Data analysis

The qualitative data were analyzed using the directed approach to content analysis, in which the researchers use codes that were derived from existing studies. In this study, the eight chosen sets of metaphors from Thomson's study served as the eight codes for analyzing the data from the open-ended questions (Thomson, 2016). Any text that was not categorized with the initial coding scheme was given a new code. After the coding process, the first author reviewed the data according to the inductive data analysis approach. To ensure inter-coder reliability, a sample of 20 responses, along with the established set of themes were sent to the second author. The inter-rater agreement between the two authors was calculated using Cohen's Kappa analysis ($k = 0.79$).

The quantitative data were analyzed using IBM's Statistical Program for the Social Sciences (SPSS). To examine differences in the distribution of the eight metaphors within each group we used a series of general linear model (GLM) repeated measures (the within-subject factor), for each group separately. To examine differences in the distribution of the eight metaphors for teaching and learning between the two groups we applied a series of paired-sample t-tests.

Findings

Metaphors of roles in F2F courses

Instructors' perceptions—While referring to the metaphors that best describe their roles in F2F courses, the instructors rated highest the metaphors of a guide ($M = 3.99$, $SD = 0.98$) and a coach ($M = 2.98$, $SD = 1.20$), and lowest the metaphors of a doctor ($M = 1.62$, $SD = 0.92$) and a chef ($M = 1.78$, $SD = 1.03$). A series of GLM repeated measures determined statistically significant differences between the means of the eight metaphors of the within-subjects variable, with ($F(7,129) = 72.11$), at $p < 0.001$. Post hoc pairwise comparison using the Bonferroni correction showed statistically significant differences in instructors' reports on all the observed metaphors ($p < 0.001$ for all).

Students' perceptions—While referring to the metaphorical perceptions that best describe their roles as students in F2F courses, the students rated highest the metaphors of an audience ($M = 3.83$, $SD = 0.98$) and a customer ($M = 2.89$, $SD = 1.31$), and lowest the metaphors of a soldier ($M = 1.55$, $SD = 0.79$) and a child ($M = 1.63$, $SD = 0.85$). A series of GLM repeated measures tests determined statistically significant differences with ($F(7,74) = 54.93$), at $p < 0.001$. Post hoc pairwise comparison tests showed statistically significant differences in students' reports for all metaphors ($p < 0.001$ for all). See Fig. 1 for the distribution of the eight metaphors.
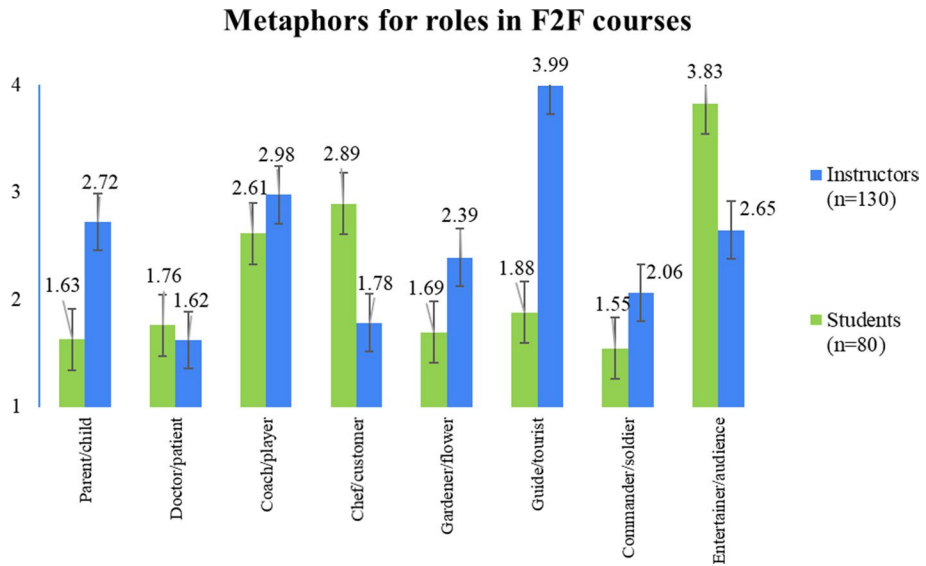
Metaphors for roles in F2F courses

Fig. 1 The eight metaphors for instructors' and students' roles in F2F courses

Metaphors of instructors' role in SHL

The qualitative analysis has raised a total of ten metaphors for the role of the instructor in SHL—eight of which were presented in the closed-ended part of the questionnaire—or closely related to them—and the additional two emerged from the text (i.e., a juggler and a counselor). These metaphors will be discussed first from the perspective of the instructors and then from the perspective of the students.

Instructors' role in SHL from their own perspective

While referring to their role in SHL, the most prominent metaphor was that of a juggler (42.31%, 55 of 130), followed by a counselor (20%, 26 of 130). Both metaphors were not included in the closed-ended part of the questionnaire. The third most common metaphor was of the SHL instructor as a guide (14.62%, 19 of 130). The rest of the metaphors were mentioned in 12 percent or less of the responses.

Based on their responses to the open-ended questions, we have a deep understanding of what the instructors meant by describing themselves as jugglers. A juggler is a person who is skilled in keeping several objects in motion in the air at the same time by alternately tossing and catching them. This metaphor is used to describe a person who involves himself in two or more different activities or groups of people simultaneously to satisfy competing requirements. It emphasizes the instructor's role to deliver the course successfully while juggling between two worlds simultaneously—the physical and the virtual. Examples described the instructors as "multi-taskers" (I198, Female), or those who "try to dance at two weddings" (I86, Female). More examples included the need to juggle the responsibilities of family life ("being a parent in two households", I101, Male) or the obligations of a full-time job ("like a person working multiple jobs simultaneously", (I112, Female).

The second most prevalent metaphor was of the SHL instructor as a counselor—a person trained to give guidance on personal, social, or psychological issues one might have. Referring to the instructors as counselors put the emphasis on non-academic support given to students, such as listening, helping, and giving advice about personal problems. Examples included the SHL instructors as pastors or rabbis who are "there to listen to students and try to help as much as possible" (I154, Female), as "mediators" ("a mediator who supports students emotionally", I91, Female), or as "psychologists" (I197, Male).

Several instructors referred to their role as counselors in the context of the challenges that students encounter due to the outbreak of the coronavirus. One instructor mentioned that his role is "to support the participants, contain them and their frustration from learning alongside COVID-19" (I195, Male). Another participant stated that his role as an instructor in SHL environments is like the role of "a tutor who needs to support students during this difficult time" (I151, Male). The metaphor of the SHL instructor as a guide, which the instructors rated highest when referring to their role in F2F courses, was mentioned only in about 15% of the open responses.

Instructors' role in SHL from students' perspective

While referring to the role of the instructors in SHL, most students stated the metaphor of a guide (30%, 24 of 80), followed by the two new metaphors of a juggler (25%, 20 of 80) and a counselor (16.25%, 13 of 80). The rest of the metaphors were mentioned in ten percent or less of the responses. Most students used the guide metaphor to describe the role of the SHL instructors. Based on students' responses, a guide is a person who is trained to lead or direct others in a certain way. Most students referred to the SHL instructor as a "tourist guide" (I1, Male) or a "bus driver" (I5, Female), whose job is to "accompany the students on their way from point A to point B" (I13, Female).

The second most common metaphor was of the SHL instructor as a juggler. In most cases, this metaphor was used to describe the instructors' role to deliver the course while juggling between the on-site and the remote students. As one of the students elaborated, the SHL instructor should: "know how to maneuver between the students in the classroom and the students at home" (I7, Female). Similar responses referred to the SHL instructor as a "circus man" (I8, Male), "all over the place" (I32, Female), or "playing a land, sea & air game" (I10, Female).

The third most common metaphor was the SHL instructor as a counselor. Examples included the instructor as "a rabbi, who thinks of everyone [..] understand those who are at home and those who are in class" (I36, Female), "a school counselor" (I28, Female), or "a mediator between the students and the university" (I57, Female).

Metaphors of students' role in SHL

The qualitative analysis has raised ten metaphors for the students' roles in SHL; eight of which were presented in the closed-ended part of the questionnaire, while the other two have emerged from the text (i.e., an outsider and an observer). The ten metaphors will be first discussed from the instructors' perspective and then from the students' perspective.

The role of the on-site student in SHL—instructors' perspective

While referring to the role of the on-site students in SHL, more than half of the instructors indicated the metaphor of an audience (52.31%, 68 of 130), followed by a team player (20%, 26 of 130) and an outsider (10%, 13 of 130). The metaphor of an audience represents a group of people who watch or listen to the same play, film, etc. Examining the instructors' responses, it seems they portrayed the on-site students as "a participating audience" (I110, female), or as "active participants" (I99, female). Most instructors described students who are active, sometimes enthusiastic, who take an integral and inseparable part of the classroom conduct. Selected metaphorical images included the on-site student as "an audience in a live performance" (I118, female), "a football stadium crowd" (I134, male), or an "audience in a live TV show" (I129, male).

The second most common metaphor was of the on-site student as a team player. A team player is someone who is good at working closely with other people, or someone who cares more about helping a group or a team to succeed than about his own success. In the context of this study, the instructors referred to the on-site student as an "anchor" (I103, female), a "backrest" (I148, male), or a "support group" (I137, male) who should "be considerate of the rest to help them succeed" (I151, male). This consideration may be expressed by "being curious" (I180, male) or by "speaking loudly so they will be heard and not get into each other's words" (I191, female).

The role of the remote student in SHL—instructors' perspective

While referring to the role of the remote students in SHL, almost half of the instructors indicated the metaphor of an observer (42.31%, 55 of 130), followed by an outsider (20%, 26 of 130). Both metaphors were not included in the closed-ended part of the questionnaire. The third most mentioned metaphor was of the remote student as an audience (13.85%, 18 of 130).

An observer is a person who observes what is happening in front of him (mostly on the screen) but does not participate officially in the activity. One could argue that the notion of an observer is connected to the "audience" metaphor, which the instructors mostly used to describe the role of the on-site SHL students. Yet, while the instructors described the on-site student as an audience who is actively engaged with the lesson, the remote student was described by them as an observer who is passively spectating what is happening on the screen. This distinction can be reflected in the responses of I172 (male) who described the on-site students as "the first line in a stand-up show" and the remote students as "watching a stand-up show on TV".

The second most common metaphor was of the remote student as an outsider. An outsider refers to someone who does not involve with a particular group or society, or someone who feels like a stranger within the group. In the context of this study, the instructors referred to the remote students as the "unpopular kids" (I179, male), as "invisibles" (I96, female), or compared it to a sense of "feeling lost" (I89, male). One instructor metaphorically compared the participation in a synchronous hybrid course from remote to the action of "driving in foggy conditions" (I103, female).

Table 3 A summary of the top-three metaphorical perceptions for roles in SHL (in %)

Roles of	Instructors	On-site students	Remote students
Instructors' perceptions	1. Juggler (42.31%)	1. Active audience (52.31%)	1. Observer (42.31%)
	2. Counselor (20%)	2. Team player (20%)	2. Outsider (20%)
	3. Guide (14.62%)	3. Outsider (10%)	3. Audience (13.85%)
Students' perceptions	1. Guide (30%)	1. Active audience (48.75%)	1. Outsider (40%)
	2. Juggler (25%)	2. Observer (13.75%)	2. Observer (32.5%)
	3. Counselor (16.25%)	3. Team player (13.75%)	3. Audience (15%)

The role of the on-site student in SHL—students' perspective

While referring to the role of the on-site student in SHL, most students used the metaphor of an audience (48.75%, 39 of 80), followed by the metaphors of an observer (13.75%, 11 of 80) and a team player (13.75%, 11 of 80).

Similar to the instructors' responses, most students used the audience metaphor to describe the role of the on-site students. The on-site student was portrayed as an "active audience" (I7, female) that "participates and takes an active part in the lectures" (I19, female). To illustrate the active nature of the on-site student, the students chose metaphors such as an "enthusiastic audience attending his favorite musical theater" (I76, male) or "audience in the championship game of a favorite football team" (I78, male). The second and third most common metaphors were of the on-site student as an observer and a team player. Yet, these metaphors were illustrated by only 14% of the students.

The role of the remote student in SHL—students' perspective

While referring to the role of the remote student in SHL, most students articulated the metaphor of an outsider (40%, 32 of 80), followed by an observer (32.5%, 26 of 80). Both metaphors were not included in the closed-ended part of the questionnaire. The third most mentioned metaphor was of the remote student as an audience (15%, 12 of 80).

Most of the students used the outsider metaphor to describe the role of the remote students in SHL. In the context of this study, the students referred to the remote students as "a ghost who wants to be seen" (I77, male), "a fish out of water" (I8, male), or "the only kid without WhatsApp" (I31, female). One student metaphorically compared the participation in a synchronous hybrid course from remote to the action of "trying to talk on my cell phone in a no-service area" (I4, female), while another student compared it to "trying to follow a foreign film without Hebrew subtitles" (I66, male).

The second most common metaphor was of the remote student as an observer. Examples included the remote student as "someone who watches a film in the movie theater and has no define or significant role" (I61, female), or as "an audience watching the lecture from distance without any real involvement or commitment" (I53, female).

Table 3 concludes the top-three metaphorical perceptions of the roles of instructors and students in SHL environments, from the perspectives of each group.

Discussion

This study was carried out during the rapid transition from F2F instruction to synchronous hybrid learning (SHL) due to the COVID-19 restrictions. Our study extends existing literature in the field of learning environments since it is probably the first attempt to explore the perceptions of both instructors and students about their roles in synchronous hybrid spaces through metaphor analysis. The metaphorical images brought up by the participants can help to unpack their hidden attitudes and beliefs about teaching and learning in synchronous hybrid learning environments, especially during times of emergency.

Several important insights emerged from our findings. First, we found that both instructors and students perceive their roles differently in F2F versus SHL. This was evident through the different metaphors used by each group to describe its members' roles in the two teaching modes. While referring to their role in F2F courses, instructors mostly identified with the metaphor of a guide, which presents the instructors as active and authoritative figures whose job is to lead the students to the predetermined destination of the course end date. Similar results were found in several studies that acknowledged the dominance of the "guide" metaphor to describe the role of F2F instructors (Hamilton, 2016; Saban et al., 2007; Wan et al., 2011) or online instructors (Ouyang & Scharber, 2017).

Conversely, while referring to their role as instructors in SHL, the "guide" metaphor was replaced with the "juggler" metaphor. This metaphorical image emphasizes the difficulties faced by SHL instructors while required to focus simultaneously on two groups of students with very different needs. This result reinforces numerous studies about the challenges faced by instructors who teach hybrid courses. The need to bridge the divide between the two groups of students has been a persistent challenge since the advent of hybrid learning (Jerke & Mosterd, 2017; Popov, 2009; Raes et al., 2020b). Instructors in hybrid classes not only need to teach the on-site and the remote students at the same time but also to facilitate interaction between the two groups and operate the online technology (Bower et al., 2015; Detyna et al., 2022). Hence, their responsibility requires them to multitask and juggle between multiple roles (Szeto, 2014; Zydney et al., 2019).

The above-mentioned challenges intensify when it comes to teaching in online and hybrid environments in a time of emergency. The outbreak of the COVID-19 pandemic was accompanied by a sudden shift from onsite to remote teaching (Long et al., 2022; Rahayu et al., 2022), which has created additional pedagogical and emotional challenges (Mentzer et al., 2022; Usher et al. 2021). This unique situation could provide further explanation as to why the metaphor of the instructor as a juggler, which emphasizes the difficulties faced by the instructors, gained such a wide resonance among the study's participants.

The instructors also described their role in SHL using the "counselor" metaphor, which puts the emphasis on non-academic support given to students. This finding complements other studies conducted recently that reported on the social and emotional needs of students when transitioning to online learning due to the pandemic. In several studies, faculty members stated that while teaching online during COVID-19 they have made, or are willing to make, deeper and more personal connections with their students, helping them with mental, social, and health issues (Usher et al. 2021; Mentzer et al., 2022).

With reference to students' roles in SHL environments, b*oth the instructors and the students* distinguished between the role of the on-site students and the role of the remote students. This is in line with several analyses that reported differences in the way on-site and remote students experience synchronous hybrid lectures (Raes et al., 2020b; Szeto, 2014; Zydney et al., 2019). In this study, while referring to the role of the on-site

students in SHL, both research groups described them as active audience, while the remote students were described as outsiders or observers. These metaphors introduce a student who experiences difficulties with the SHL mode, whether because he feels like a stranger within the group or feels like he does not influence or participate officially in the course activities.

Such feelings have long been described in studies that focus on the challenges faced by remote students in hybrid courses. As pointed out by learning environment researchers, the hybrid model may not satisfy students' basic psychological needs. In a recent paper, the authors investigated whether students' basic psychological needs were met equally for remote and F2F learners in the context of an interactive synchronous hybrid environment. Results showed that relatedness to peers, which is critical for creating a sense of community, was significantly higher among the F2F students than for the remote students (Mentzer et al., 2022). Indeed, hybrid remote students can sometimes feel isolated and left out or unwelcome by the on-site students (Butz & Stupnisky, 2016; Popov, 2009; Szeto, 2014).

According to recent publications, the above-mentioned difficulties have intensified with the sudden transition to emergency remote teaching (Usher et al. 2021; Miller et al., 2021). Studies conducted after the outbreak of COVID-19 revealed that many students have struggled with pandemic-related challenges such as family-related and work-related issues, and mental health problems (Long et al., 2022; Mentzer et al., 2022). A recent study revealed that after the shift from F2F to remote learning due to the pandemic, remote students reported that they lost the feeling of being part of the class, the ability to ask questions, and to engage actively in the lessons (Long et al., 2022). This is a major problem since communication and engagement are considered the most important factors in online lectures (Rahayu et al., 2022).

Back to hybrid learning environments, the unique circumstances brought on by the COVID-19 outbreak could provide an explanation for the different metaphors used to describe roles in the two teaching modes, and mostly the metaphors that described the hybrid remote students as passive and strangers within the group.

Limitations and further research

The first limitation of this study derives from its research tool, in which respondents were asked to self-report on their experiences. While researchers often raise concerns about the reliabilities of self-report measures, it has been argued that these can be reliable if the questions are phrased clearly, relate to recent activities, and answering them will not lead to embarrassing or threatening disclosures (Kuh, 2002). The second limitation relates to the research population. Our findings were obtained from the perspective of higher education instructors and students from one country. Since the process of giving meaning through metaphors is done in a particular cultural context (Kalra & Baveja, 2012), this may limit the generalizability of our findings. Yet, the metaphors for instructors' and students' roles reported here are largely consistent with findings from previous studies, while advancing our knowledge in this area by specifically addressing roles in the relatively new instructional approach of SHL. We suggest future work on instructors' and students' roles in SHL to expand the research settings to a broader, more representative research sample.

Summary

Taken together, our findings indicate that instructors and students appreciate each other's challenges while teaching or learning in synchronous hybrid courses. The instructors recognize the different learning experiences that SHL provides to on-site and remote students, while the students recognize the challenge faced by the instructors who are required to juggle several tasks simultaneously and provide an equal learning experience for both cohorts of students. This is a good starting point to increase our understanding of SHL environments and develop interventions that can be administered in synchronous hybrid courses.

Data availability statement The authors are willing to share the anonymized data collected through the questionnaire.

Declarations

Conflict of interest The authors have no competing interests to declare that are relevant to the content of this article.

Ethical approval This research was granted with an approval from Tel Aviv University's Ethics Committee.

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