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John A. Huss  
*Northern Kentucky University*

Orly Sela  
*Oranim Academic College of Education*

Shannon Eastep  
*Northern Kentucky University*

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## **A Case Study of Online Instructors and Their Quest for Greater Interactivity in Their Courses: Overcoming the Distance in Distance Education**

John Huss

Shannon Eastep

Northern Kentucky University (United States)

Orly Sela

Oranim Academic College of Education (Israel)

*Abstract: The purpose of this study was to explore the attitudes and experiences of seven online instructors in Teacher Education (three from the United States, four from Israel) pertaining to the deliberate efforts they make to build interaction into their web-based classes to support learning. In the tradition of cooperative inquiry, the use of purposive sampling and a semi-structured interview protocol provided the best opportunity to describe, rather than explain, the perspectives of these instructors who are currently teaching online and developing within this medium. Participants expressed the need to establish quality interactions throughout their distance courses, yet acknowledged barriers they perceive in attaining desired levels of human relationship. They also discussed the importance of collaboration, caring, and context when creating and teaching courses in an online environment.*

### **Introduction**

There is little dispute that online education has experienced an impressive, and, at times, spectacular, rate of growth in the past decade. As recently as 2013, the total number of students in the United States taking at least one online course had risen to 7.1 million, which proportionally is 33.5% of all higher education students (Allen & Seaman, 2014). Yet, the totals from 2013 revealed a smaller increase in the absolute number of additional online students and the lowest ever growth percentage since 2002 (Allen & Seaman, 2014). While far from a collapse, some interesting data are indeed beginning to emerge, much of it related to institutional confidence in the overall comparability in quality between online and face-to-face classes. Such a concern, of course, had arisen early in the online learning escalation. In 2003, close to 43% of academic officers reported that distance education was inferior to on-campus instruction. That number dropped to 23% by 2009, but had risen back to 26% in 2013 (Allen & Seaman, 2014). A comprehensive analysis of the literature by Tallent-Runnels, Thomas, Lan, Cooper, Ahern, Shaw and Liu (2006) may provide insight as to a critical concern shared by many university leaders. A perception exists that the depth of interaction and discussion is not equivalent to traditional face-to-face class sessions. In addition to institutional unease, students themselves report a feeling of isolation and disappointment when there is a lack of interaction and professor presence in their online courses (Xu & Jaggars, 2013).

When considering our own roles as online instructors and instructional designers, as well as our commitment to pedagogical support and development within our respective universities,

we recognized a great need to collect data within our Colleges pertaining to the deliberate efforts made by faculty members to build interaction into their web-based classes in order to encourage learning. As the literature asserts, instructors must use technologies and delivery formats strategically to create satisfying and high-quality educational experiences for students (Shackelford & Maxwell, 2012). We wanted to investigate if instructors in our teacher preparation programs are moving from simply recognizing the need for quality online interaction to truly providing such opportunities in both course design and implementation. We place high value on the exposure of pre-service teachers to faculty who are modelling student-centred uses of technology while promoting interaction and active engagement, regardless of whether the course is taught online or on campus. This current study was initiated to encourage people to look at and think about how programs are progressing as they are going along, instead of just evaluating them at the end, thereby providing a real opportunity for continuous improvement.

We interviewed seven higher education instructors, three from a college of education within a metropolitan Midwestern university in the United States and four from an academic college of education in Israel. This study was practitioner-initiated in that the researchers and participants are all online instructors with a desire to examine personal practices and potentially change them. We were influenced by Hine and Lavery (2014) who called for a conscious and systematic collection and evaluation of information that affects and results from practice. Further, action research is highly appropriate to the development of e-learning, where experience suggests that significant modifications to the traditional paradigm of higher education are required (Souleles, 2012). We view action research as a tension between forces that leads to personal, professional and social change (Riel, 2010) and sought to conduct a study wherein we could inform our individual practices while simultaneously encouraging colleagues to engage in critical reflection for the overall betterment of two teacher preparation programs. Without such performance metrics and quality assurance to guide future course development and delivery, retention in online courses and programs becomes more problematic and uncertain (Huss & Eastep, 2013).

From a theoretical perspective, we drew from the seminal work of Moore and Kearsley (1996) and their advancement of transactional distance theory, which contends that distance is a relative term, a pedagogical phenomenon, and less a function of geographic separation. Transactional distance, or the cognitive space between teacher and student, comprises the intersection of dialogue, structure, and learner characteristics. Moore (1997) acknowledged that 'dialogue' and 'interaction' can often be used interchangeably, but made a distinction that 'dialogue' describes an interaction or series of interactions that are purposeful, constructive and valued by each party. Oliver and Herrington (2001) built on this theory by describing three fundamental elements of an online learning design sequence: the content or resources with which learners interact; the tasks or activities learners are required to perform; and the support mechanisms provided to assist learners in engaging with the tasks and resources.

### **Literature on Interaction in Online**

Clearly, with the ascendance of web-based instruction as a significant form of content delivery in higher education, the body of existing literature has accelerated, with particular focus on those planned interactions between both instructor and student and among students themselves. The importance of effective communication and interaction in online courses is

certainly not a new topic. Vygotsky's (1978) contention that collaborative learning is needed to build cognitive processes for students reinforces the need for interactivity within distance education. Moore (1989) defined three types of interaction pivotal to distance education: learner-content, learner-learner, and learner-instructor. McIssac, Blocher, Mahes, and Brasidas (1999) later declared that interaction is the "single most important activity in a well-designed distance education experience" (p. 122).

Thus, the essentiality of interaction in online courses has long been acknowledged in the literature, but, until the recent past, tended to lurk on the periphery rather than emerging as a concerted point of inquiry. With the medium now flourishing and gaining in sophistication, increasing attention is placed on the ability of online courses to capture those aspects of social presence and community that have customarily been embedded in traditional on-campus meetings.

### **Learner-Learner Interaction**

The preponderance of literature on interaction in distance learning has dealt with learner-learner interaction, with much of it revolving around the use of discussion forums. Too much instructor presence on discussion boards can result in students creating posts that are directed toward the instructor rather than peers (An, Shin, & Lim, 2009; Baran & Correia, 2009). Such a finding is consistent with transactional distance in that learner autonomy is impacted directly by the "extent to which the learner exerts control over learning procedures" (Gioussos, Koutsouba, Lionarakis, & Skavantzios, 2009, p. 2). Moreover, synchronous discussions can become grade-driven rather than an exercise in group knowledge construction (Ke, 2010).

The sheer number of students participating on a discussion board can impact the amount of participation attempted by individual learners. Cheung, Hew, and Ng (2008) reported, for example, 87% of the students in their study did not contribute to online posts because they did not have time to do so. Cheung et al. (2008) also suggested that social cues in online courses frequently shift from a traditional face-to-face orientation to response-orientation, meaning that students in a class who are slow to respond to posts or fail to post at all are frequently perceived by other students as lacking a desire to connect with the whole group. Students on discussion boards often assume 'relational' roles that are not dissimilar to those found in face-to-face settings. Some students move into leadership roles and take it upon themselves to post early, initiate threads, and set guidelines, while others remain on the margins and follow the lead of others (Chapman, Storberg-Walker, & Stone, 2008). Overall, interactions that were most predictive of sense of community were: sharing personal experiences, collaborative group projects, entire class discussions, and exchanging resources (Shackelford & Maxwell, 2012).

### **Instructor-Learner Interaction**

While much of the literature has dealt with learner-learner interaction, there is a growing body of research to support the idea that instructors who are best at facilitating interaction in online classes are those who are resilient, adaptive, and proactive. The teacher's understanding of the learners is important to the way learners are supported through dialogue and structure (Benson & Samarawickrema, 2009). The role of the instructor is to continuously facilitate, foster, and encourage quality communication and interaction (Kassandrinou, Angelaki, &

Mavroidis, 2014). Jackson, Jones, and Rodriguez (2010) used descriptive statistics, bivariate correlations and multiple regressions to identify faculty behaviours which affected the satisfaction of students enrolled in online courses at the community college level. A high positive correlation was found between an instructor's ability to facilitate and direct cognitive and social engagements within the online environment and student satisfaction with their overall learning experience. Andreson (2009) suggested that instructor *preparation* often exceeds participation in determining the success of online interactions and discussions.

Nineteen experienced online faculty members from three countries (six from Spain, six from the US, and seven from Venezuela) teaching in three diverse disciplines were interviewed, and cross-cultural findings indicated a low correspondence between the academic competencies faculty *aspire* to develop in their students and the type of interaction and instructional activities they are currently designing in their online programs. Faculty recognize that complex skills such as critical thinking and problem solving must be developed so students can function effectively in society, yet, are still not designing appropriate interactive learning activities that would enable students to sufficiently engage in inquiry-based learning online (Barbera, Layne, & Gunawardena, 2014).

York and Richardson (2012) conducted a phenomenological study comprising interviews with six experienced online instructors and investigated factors that comprise interpersonal interaction. The respondents were in agreement that course structure is a determining factor in creating environments conducive to interaction. Using constructivist or problem/project-based approaches were perceived to be of greatest value.

### **Summary**

The literature is clear that it is imperative for online instructors to ardently engage with students in the teaching and learning process, and for students to collaborate with one another—perhaps with even greater predetermination than in traditional on-campus classes. Multimedia resources and other tools should serve to enhance the learning experience and provide a focus for students to actively engage with the instructor, their peers, and course content. The current study built upon that demonstrated need to address the separation between and among online participants and sought to be deliberate in its emphasis on how online faculty actively meet this challenge when they conceive and design their courses and the mindful steps they take to address the goal of increased, high quality interaction and bring that goal from 'noble idea' to realization.

### **Method**

This study was conducted to explore the attitudes and experiences of seven online instructors in Teacher Education pertaining to the deliberate efforts they make to build interaction into their web-based classes to support learning. Three of the instructors were from a college of education within a metropolitan Midwestern university in the United States (Emma, Kate, Marion) and four from an academic college of education in Israel (Alice, Carol, Olivia, Theresa). The names used are pseudonyms. The participants were all female, and had been working in higher education for more than a decade. All have some experience in online teaching, but only two (one from each country) identified an academic expertise related explicitly to instructional technology. They were selected for the study based on their experience in higher education in general and online teaching specifically. The goal was a manageable-sized

group of instructors from Teacher Education with varying degrees of skill and familiarity with distance learning that would identify themselves as ‘developing’ within the genre and who were committed to principles of reflective practice.

The qualitative paradigm, which describes phenomena and explains them through the participants’ eyes (Guba & Lincoln, 1994; Silverman, 2004), was particularly appropriate for the research purpose. This practitioner study borrowed elements from two qualitative traditions. First, much of its structural framework is rooted in cooperative inquiry, based primarily on the belief that the research was carried out to empower the participants to flourish fully as humans in the study, and be represented as such in its conclusions, rather than being passive subjects of the researchers. Secondly, the study assumed a phenomenological stance within the interpretive paradigm as it sought to “understand individuals’ common or shared experiences of a phenomenon” (Creswell, 2007, p. 60). The attitudes that instructors hold toward distance education are critical in determining the quality of an online program. As Lederman and Jaschik (2013) reported, the perceptions held by faculty members toward the online delivery mode and the role of collaboration within their courses will heavily influence their own satisfaction with the process as well as the satisfaction of students.

The small sample size was reasonable, inasmuch as Creswell (2013) recommended a heterogeneous group of three to a maximum of 15 individuals for such undertakings. Given that the participants were colleagues in our own universities, the sample size was desirable from the standpoints of improving professional practice through continual learning and progressive problem solving, as well as bringing clarity to the complex research theme of web-based interaction that potentially overlaps in many domains. We were also intrigued with the use of an international sample, bringing together the viewpoints of instructors from the United States and Israel so as to capture any commonalities of online challenges faced by teachers around the world that could be shared across campuses to improve web-based teaching.

The data collection tool was a semi-structured interview (Flick, 2002), which allowed the researchers to delve deeply into the participants’ views, opinions and perceptions, attempting to understand and portray them as they applied to the research investigation, yet allowing the instructors some flexibility in expounding on issues of importance to them. The interview guide can be found in Appendix A. Each participant was approached with the request to participate in the study, and, following her agreement, was interviewed by the researcher(s) on site, with the interview recorded and later transcribed. The Israeli participants were interviewed in Hebrew (their mother tongue) and the transcribed texts then translated into English by the local researcher. Audio-recording the interviews served to address internal validity by preserving what LeCompte and Preissle (1993) labelled: “All data unabridged” (p. 340). Internal validity was further established through disciplined subjectivity (McMillan & Schumacher, 1997) combined with rigorous researcher reflection and self-monitoring.

The interview transcriptions were coded within a narrative inquiry tradition (Connelly & Clandinin, 1990) with the texts categorized according to their content based on word repetitions, indigenous terms, and key-words-in-context. This analysis assisted us in understanding and disclosing the participants’ perceptions of instructor-student and student-student interactions in higher education online courses.

## Results

A qualitative data analysis of the interviews with the seven participants resulted in two major categories: interactions between instructor-student and interactions among students themselves.

### Importance of Instructor-Student Interaction

Five of the seven participants (Carol, Emma, Kate, Marion, and Theresa) stated specifically that creating a relationship with the students in an online course is extremely significant. The participants' language when discussing this issue included terms such as "community", "discourse", "rapport", "trust", "responsive", "voice", "empowerment" and "dialogue." Marion explained her use of audio introductions with her course modules: "I wanted to insert myself into a class; I wanted to insert my personality for rapport building. That's where the trust develops. I can push a student and challenge a student more when they know they can trust me." The instructors were resolute that they invest much effort in creating this critical relationship, using both face-to-face meetings and a variety of online tools. When considering her online students, Kate remarked, "Even though I could be in a line with them, and not know they're standing in front of me, I still feel like I know 'em pretty well." Theresa led us through her creative process when designing her online courses: "I let pedagogical thinking lead me, and the concept that this course has to be very user-friendly, structured, and based on learner independence, but still provide class mediation." She elaborated on the increased amount of interaction she encounters in the web-based format: "In a traditional class my lessons are dialogic, but I have a dialogue among 10 students at best... in an online course I have a dialogue with 22 students, or however many there are in the course.

### Tools and Strategies Enhancing Instructor-Student Interaction

Table 1 captures the list of online tools and strategies, in descending order of popularity, used by participants to enhance instructor-student interaction.

<b>Tools/Strategies</b>	<b>Participants using tool/strategy</b>
email	Alice, Emma, Kate, Carol, Marion, Theresa (6)
discussion boards/forums	Alice, Emma, Kate, (3)
face-to-face meetings (either compulsory whole class sessions or individual meetings on demand)	Alice, Carol, Olivia (3)
feedback on assignments	Alice, Marion, Olivia (3)
video recordings	Emma, Marion (2)
bulletin boards	Carol, Kate (2)
Skype	Emma (1)
telephone conversations	Emma (1)
recorded (voice) messages	Emma (1)
online office hours	Marion (1)
PowerPoint presentations with voiceovers	Marion (1)

Table 1. Interaction tools and strategies used by participants

Alice mentioned how she opts for email over other potential forms of communication with her students: "I'm highly available via mail. I considered Skype and other options, programs that also allow you to have a conversation, but most of the appeals I received only required textual assistance." She went on to say, "I always write emails in a personalized manner, especially the opening and closing, and then in the middle I answer the student's question." Emma contributed:

The other thing that I have done is send voice emails to students, to the whole class even, saying, you know, I've been getting some questions and I wanted to try and clarify that, I'm going to try and explain it orally to you rather than put it in writing, and students seem to like that

Olivia expressed scepticism about the continual need for audio or video input from the instructor: "I can prepare a presentation where I record my voice, but I don't think that's important...it's all about a dialogue with texts and content." In general, the interviewees selected communication tools based more upon comfort, convenience and familiarity, both for themselves and their students, than on their desire to be cutting-edge.

### **Online Courses Hinder Instructor-Student Interaction**

Four of the seven participants (Carol, Kate, Marion, Olivia) brought up their frustration with the fact that the online format seems to hinder the instructor-student interaction. The fact that both teacher and student are unable to use their body language, facial expressions and voice when communicating is a serious liability in forming the rapport necessary for good learning. Marion stated, "Because so much of my face-to-face [courses] I use body language, I read body posture and facial expressions and I respond to that, and I didn't realize how much I use that or how that was a skill that I had until I no longer had access to it." Kate mentioned, "You can't look and immediately tell if people are getting it or not." Olivia explained "...in an online course these relationships [instructor-student] aren't manifested. This interaction is lacking... also lacking is class discussion, which is something very important for learning. I miss that." Olivia further noted:

Yes, they write me, they won't stop complaining and I keep telling them, it was you who chose to learn this in an online course. In class I can answer these questions, here I can't answer every single 'I didn't understand, I didn't know.' So, I don't answer.

The participants perceived the communication between instructor and students as flawed or insufficient and are very much upset by this and unable to find a solution.

### **Intentional Personalization of Instructor-Student Relationship**

Five of the seven participants (Alice, Emma, Kate, Marion and Theresa) discussed ways by which they attempt to personalize the instructor-student relationship, in an effort to overcome the natural barrier constructed by the course format. One way of doing this is by both parties sharing personal information about themselves, their families, their lives, etc., and relating to this information when addressing the students, going so far as taking notes and keeping them by one's computer to remind oneself to do this. Kate elaborated: "I'm very intentional in that first week in making sure I respond to each person and finding something in what they've written about themselves to tie in not only with the class, but I try to make that personal connection with each of them." Another way is by making sure to use informal, personalized language when



communicating with students. As Alice said, “I try to remind them that there’s a real person on the other side.” The instructors also discussed how flexibility with course structure can be used to demonstrate a sense of caring to students. Emma expressed:

It was important to me for the online student to have some flexibility in how they complete assignments, some assignments, that they would have some options, and that they would also be able to work autonomously on some things. Not on all aspects of the course, but on some things.

Olivia described how she attempts to break the material down into smaller chunks and incorporate personal contact: “I make the first three assignments available first, then another two, and then we have a face-to-face lesson.”

### **Importance of Student-Student Interaction**

Four of the seven participants (Alice, Emma, Kate, and Marion) discussed the importance of student-student interaction in online courses. They felt that constructing a community of learners can enhance the students’ learning by assisting them in getting to know each other. Emma revealed, “In small groups, I think, there’s also more opportunity for you really to engage with the other people in your group, to pick up on ideas or insights that they might have.” She continued: I know students would prefer there not be any group work at all. They will often times even say that in their evaluations. But I think the purpose is to develop skills and understandings in people, and, so, those people really have to develop negotiation, consensus building skills. They really need to be sharing ideas, listening to other people, and those things are important enough that I continue to press that.

They discussed engagement in the learning process, achieved through different formats of cooperative learning that require accountability among group members. Alice expressed her fondness for students working together:

I believe in everyone’s personal contribution to the final product, if it’s a cultural point of view, a parental point of view, a teacher’s experience... Every person can add something from his personal point of view. Most of my assignments require collaboration... it’s intentional.

Kate emphasized, “... because that’s really your key to getting your students engaged, is getting that community built right from the start.” Alice articulated an example of her goals for participation and interaction: “It’s important for me to not only talk about something, but also for the students to *do* things. Some interactions are with me, some by themselves, and some with their peers.” In short, the respondents conveyed that it is their role as instructors to help the students work towards effective interactivity by providing the appropriate tools and strategies.

### **Tools and Strategies Enhancing Student-Student Interaction**

Table 2 lists several online tools and strategies, in descending order of popularity, used by the participants to enhance student-student interactions.

<b>Tools/Strategies</b>	<b>Participants using tool/strategy</b>
discussion boards/forums	Alice, Emma, Kate, Theresa(4)
group work	Alice, Emma, Marion (3)
blogs	Emma, Marion (2)
Google Docs	Alice (1)
wiki	Marion (1)
recommendation of informal S-S consultation	Carol (1)
peer assessment	Alice (1)
group presentation in a synchronous lesson	Alice (1)
group email	Kate (1)

**Table 2. Student-student interaction tools and strategies used by participants**

### Reasons against Using Student-Student Interaction

As presented in Table 3, all seven participants in the study enumerated reasons *against* using student-student interactions in online courses.

<b>Reasons</b>	<b>Participants listing them</b>
student preferences	Alice, Emma, Marion, Kate, Olivia, Theresa (6)
past experience in online courses	Alice, Carol, Kate, Olivia (4)
students' inability to depend on their peers	Emma, Marion (2)
instructor's bias against s-s interactions	Marion, Theresa (2)
course rationale	Carol (1)
instructor's own experience as a student	Kate (1)

**Table 3. Reasons against using student-student interaction**

Six of the seven participants believed students prefer *not* to interact with other students in online courses, and this is reason enough not to do so. According to Theresa, “I had lots of forums in the beginning where there was discourse between me and them, not them amongst themselves. They simply discuss it [the material] with me [rather than with each other] ... There isn't a lot of room for debate.” Four participants cited their own experiences in former online courses as reason not to use student-student interaction. For example, Carol shared: “[In a former course] there was also a bulletin board, but now it's not available because they didn't use it... so I cancelled it.”

Alice recounted a similar dilemma: “I opened a room in Elluminate for them, which was open during the entire semester. Nobody used it.....they could talk and it could always be open so that they could use it whenever they wanted to, but they didn't.” Theresa commented on the use of forums: “In the first course I had a forum for every unit... I called it "I Have a Question", and I don't like forums... I've always felt that it's a tool that forces your hand, both for me and for the students. I'm not unfamiliar with them, but I just don't like forums.” Emma conveyed how she seeks alternative options to the standard discussion board:

I like the idea of having someone be sort of the moderator for their group each week and have that be a rotating position each week, and the moderator would then go to a larger whole-class discussion board and post as a representative of the team, summarizing the smaller group.

The faculty members spent much time contemplating the role of learner-learner interaction in their courses and how the lack of a consistent physical presence often leads to students being ‘invisible’ or indifferent to each other.

### **Instructor Reflections**

As the interviews were commencing, the instructors began to share some of their personal 'action' items that were emerging for them as they contemplated their practices. Marion mentioned the overuse of discussion boards: "Don't just do discussion board for the sake of doing discussion board, 'cause students aren't going to appreciate it unless it's meaningful." Kate made some decisions about the need for better organization:

I try to have everything together so people don't have to link to like five different places to find what they're supposed to do that week. Cause it's hard to navigate... think about it from the other side. Go in as a student and see what you have there, make sure it all makes sense. Have a friend or someone go in and see if they're reading it the way you intend it to be.

Emma noted the need for greater consistency with how often she communicates with her students: "You can't just check in with them once a week, you have to be checking in with them daily to see where people are." The participants expressed how the interviews led them to transformation thinking as they planned potential behavioural changes within their approaches to teaching online.

### **Discussion**

In the process of discussing their quest for greater interactivity in distance education, the instructors acknowledged the need to fill a communication and psychological space throughout their classes. They were likewise mindful of the need to establish quality interactions throughout their web-based courses, yet are often frustrated with barriers they perceive in attaining the same level of human relationship, both between themselves and students, and among their students, that they achieve in traditional face-to-face meetings. Participants were also realistic about the true potential for robust online interaction, given that many students are quick to express that it is not very important to them to communicate with classmates on a regular basis.

Five of the seven instructors actively encourage strong human connection with their students and seek to design courses that compensate for physical separation and emphasize frequent technology-facilitated dialogue. By providing audio and video introductions to the various modules, thoughtful and timely feedback on assessments and assignments, virtual office hours, and moderation of discussions that does not disrupt student-student conversation, the instructors endeavour to demonstrate not only their presence, but a sense of caring, in their courses. In brief, they distinguish between their 'managerial' and 'social' roles. They choose to move beyond the tasks of coordinating assignments, receiving student work, diagnosing technical issues, and setting course structure and strive instead to create a nurturing environment based around interpersonal outreach.

The manner in which the instructors approach and ultimately utilize the available technology certainly impacts the degree of community achieved in their courses. The faculty members who were more sceptical about the possibilities of web-based education were less prone to stray far from a text-based form of transmission and more apt to simply 'post' the same types of material they prepare for face-to-face instruction and consider it sufficient for online teaching. Then again, instructors who embraced the possibilities of an online medium were more likely to use specific technological tools to develop closer relationships with students even if the tools were not the instructor's natural preference. Several of the interviewees related the

importance of presenting course materials in a variety of ways using different media, ranging from text and graphics, to sound files and interactive exercises.

Four of the seven instructors deemed the establishment of student-student interaction as being very important, yet, because students are often resistant to an encroachment on the flexibility and autonomy many are seeking in an online environment, the teachers admitted forgoing some attempts to develop significant learner-learner interaction despite believing it was a necessary component of the web experience. The respondents viewed strategies such as course introductions in which students share information about themselves, and peer critiques that allow students to comment on each other's work, as being more amenable to students. Conversely, faculty members tended to use structured discussion boards and collaborative assignments sparingly --or seek alternatives-- because such undertakings had previously met with greater student opposition.

Indeed, many of the participants were candid in disclosing that they were influenced by past failures and likely to avoid strategies that had been unsuccessful when used initially. One of the instructors, in particular, spoke in disparaging terms of the interaction in web-based courses and questioned its capacity for truly providing the type of explicit and instructive communication students really need, especially for complex or novel content. This perspective is consistent with the findings of Allen and Seaman (2014) who reported that only 38% of faculty members either agree or strongly agree that online education can be as effective as in-person instruction in helping students learn. An online course, however, with a greater teacher-centred emphasis and perhaps a more inflexible structure can ultimately *decrease* both the quality of dialogue in that course and the degree of learner autonomy (Falloon, 2011).

### **Limitations and Future Research**

The fact that seven interviews took place in two locations (three in the United States, four in Israel) and therefore were not all conducted by the same interviewers could present issues with differences between interviewers' interactions with respondents as well as nuanced influences brought to the conversations by the various participants. A semi-structured interview protocol served to maintain a consistent and neutral role with participants, although not every contingency can be anticipated in interview settings. Transcripts were coded by all 3 researchers. Lack of triangulation may also be a potential problem with a focus on participants' words only, without verification from additional sources. Another limitation was a failure to address possible cultural, gender, or dispositional differences when exploring these faculty members' efforts to increase online interactivity.

Regarding future research, it would be beneficial to segregate the data by content areas in an effort to determine if faculty members who teach particular disciplines, even within the same College, are more online-adaptable than others or perceive a greater need for interaction. Likewise, the separation of distance education into different types such as synchronous and asynchronous, pure and hybrid, and whether students meet in a physical space, could certainly provide meaningful data and guidance. We are also committed to expanding this inquiry in the form of a longitudinal study to revisit these instructors and trace the evolution of their perceptions

## Conclusion

Although the variable itself is a relative as opposed to absolute term, the transactional distance in the courses taught by the seven instructors is greater than they would like for it to be. Faculty members obviously play a critical role in the process because, in the end, they are responsible for the course design, the manner by which the teaching is presented, and the extent of adaptability and responsiveness to students that is evident in the overall structure.

After participating in these reflective interviews, the participants conveyed a renewed awareness of the necessity to increase dialogue and develop better and more appropriate support materials. Perhaps the most important element they came to realize, however, is the need for collaboration. Moore (1991) related that distance education teaching is rarely an individual act, but rather the joint product of content experts, instructional designers, and technology specialists. Traditional classroom instruction is founded on the authority of the instructor whose presentation of material is often performance-based. Therefore, the need to *share* control of the online classroom and accept the inherent changes in time, space, and channel is a difficult transition for these instructors. They are grappling with the learner-centeredness of distance education as well as the challenge to demonstrate 'caring' in a manner that is received and reciprocated by students.

Consistent with the findings of Benson and Samarawickrema (2009), the instructors also recognize the need to consider context when seeking to manage transactional distance. In situations where students will likely exhibit low levels of autonomy, either because of unfamiliarity with technology or the complexity of the course materials, the faculty member may need to provide early substantial support and dialogue, while students projected to have greater autonomy may benefit more from socially constructed knowledge and less formal structure from the instructor. Thus, the ability to anticipate and then meet the needs of individual learners is paramount in the online environment and another of the challenges faced by these instructors when they design their courses.

The seven instructors confirmed the idea that increased social interactions allow students to develop a stronger sense of learning community, which, in turn, upholds Vygotsky's (1978) assertion that social interaction is necessary for cognitive development. They also acknowledged the importance of student learning styles and how such preferences can influence the extent to which an individual student is motivated to interact with classmates. These faculty members hope to continue to grow as online instructors as they strive to reduce the psychological distance between themselves and their students.

They will also move forward now with awareness that the design of e-learning is not a one-size-fits-all enterprise, but an opportunity to provide a strategy for an analytical approach that is responsive to the characteristics of learners and the context of their learning. Unlike many changes that are brought about by external demand or coercion, these faculty members are seeking change based upon internal conviction, or ownership, as described by Stake (1986). They hope the insights gained through participation in the interviews lead to more effective modelling in their classes, thus directly affecting their pre-service teachers and how they, in turn, interact with their future students.

We have shared the information with our own departments and Colleges to further assist other teachers in progressing from a knowledge base of distinct skills to a modification of those skills that address specific situations and contexts and bring about new strategies as they too collaborate with pre-service teachers and model best practices, even when separated by computer screens.

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## Appendix 1

### Interview guide

- Please tell me a little bit about yourself as a lecturer (field(s) of expertise, experience, interests)
- Please tell me about your experience with online teaching.
- Think about one online course in particular. Please tell me about the course (content, students, context)
- Why did you decide to teach it as an online course? Were you required to do this? Have you taught a F2F version of the same (or similar) course in the past? (follow-up: how would you compare the two in terms of success, reaching objective, student satisfaction?)
- When designing the course, what did you have in mind? Please describe the process in as detailed a manner as possible.
- Please take me through the course site, explaining each element. Why did you decide to use it? What purpose does it serve?
- If you teach the course again next year, what/why will you change? - How successful did you feel the course was?
- What advice would you give a lecturer designing an online course for the first time?
- Would you like to add anything else you feel is important?

### Checklist - things to ask about if lecturer doesn't mention them on his/her own

- Assignments (instructions, ways for students to ask for clarification and/or help, feedback from lecturer)
- Types of feedback & assessment
- Lecturer's beliefs about the importance of s-s and s-i interactions in general and in online courses specifically.
- F2F meetings – How many? When? What are they used for – Community construction? Giving instructions?
- Is there personalization of the t-s relationship? How?
- Social relationships among students – are they actively encouraged? How?
- How can students get pedagogical and/or technical assistance?
- Collaborative assignments? Why or why not?
- Online discussions – Who initiates them? In what way? Are they compulsory? What is their purpose?
- Lecturer participation in online discussions – How much? For what purpose?
- Lecturer's pedagogical approach – Cognitivist? Constructivist? Other? Undefined?
- Have you received any feedback specifically from students on your course? If so, please describe.