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Avatar Kinect: Drama in the Virtual Classroom among L2 Learners of English

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Abstract

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Keywords

Gesture-Based Learning, ESL/EFL, Drama, Virtual, Avatar, Middle East

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This study presents a qualitative approach to exploring classroom behaviour using dramaturgical analysis of student interactions in relation with, and as mediated through, a gesture-based gaming software among L2 learners of English at two international branch campuses in the Arabian Gulf where face-to-face interactions between unrelated members of the opposite sex are generally discouraged. We investigated whether Avatar Kinect might provide a safe way for young males and females to interact while discussing social issues in a composition course. Data were collected through personal observation and survey. Five key themes emerged from the study. First, some participants chose to perform at front stage and others chose to remain back stage. Second, front stage participants chose avatars with gender and skin colour similar to themselves. Third, all participants appeared to be engaged in the interactive role play processes and with one another. Fourth, front stage actors appeared to act without inhibition. Finally, all participants expressed frustration with technology shortcomings. Keywords: Gesture-Based Learning, ESL/EFL, Drama, Virtual, Avatar, Middle East

This study focuses on the use of Avatar Kinect, a gesture-based technology, as an instructional support in a first-year composition course. Specifically, Avatar Kinect was the platform chosen to carry out an online brainstorming session in preparation for a writing activity amongst first-year university L2 English composition students. Methodologically, the present study seeks to apply dramaturgical analysis to a language learning environment supported by online role-play, an approach that appears to be relatively rare in the literature. As such, the study hopes to make an important contribution to the field of qualitative research methodology using dramaturgical analysis as a viable approach.

Background to the Study

As early as 2012, the New Media Consortium (NMC) Horizon Report 2012 Higher Education Edition (Johnson, Adams, & Cummins, 2012) had predicted that gesture-based learning platforms would become adopted as a pivotal educational technology by higher education. Since then, gesture-based learning platforms have indeed become much more common in education especially in special needs education (Bouzid, Khenissi, Essalmi, & Jemni, 2016; Cai, Chiew, Nay, Indhumathi, & Huang, 2017; Dieker, Rodriguez, Lignugaris/Kraft, Hynes, & Hughes, 2014; Escudeiro et al., 2014) and rehabilitation (Da Gama, Fallavollita, Teichrieb, & Navab, 2015; Pedraza-Hueso, Martín-Calzón, Díaz-Pernas, &

Martínez-Zarzuela, 2015; Shubert, Basnett, Chokshi, Barrett, & Komatireddy, 2015). At present, the most common gesture-based technology is used in touch-gesture devices tablets and similar devices. A logical next step in this technological trajectory is spatial gesture-based learning, in which individuals use body movements such as hand waving to manipulate objects in a virtual space. Technology for this type of learning incorporates 3D scanning/motion sensing input devices. Microsoft Kinect is one such device. Kinect was developed to couple with the Microsoft Xbox 360 gaming console allowing the utilization of players' body gestures and voices to control and play Kinect-enabled Xbox video games without using other devices. A notable Kinect social gaming platform is Avatar Kinect, which is the main focus of our research. Specifically, this paper presents findings from a study of the pedagogical use of Microsoft's Avatar Kinect software in a first-year English composition class within which all participants were non-native speakers of English.

Avatar Kinect allows players to interact, or "hangout," in the guise of personalised avatars in a predefined virtual setting. Users engage in this virtual environment through role-play and imaginative learning. To illustrate, consider that the Kinect device incorporates a camera that visually tracks the player's body movement and facial expressions in real time, allowing the avatar to realistically mimic the player. Kinect also includes an audio system that features a built-in voice recognition feature, thereby enabling players to chat with one another synchronously. Thus, Avatar Kinect allows English as a Foreign Language (EFL) students to carry out role-play using target language structures and communicative skills without inducing the performance anxiety that can occur in traditional face-to-face environments. Avatar Kinect also fosters a non-threatening learning environment because its sessions are restricted to invited players only. Conveniently, for the purposes of evaluation and review, these sessions can be recorded and replayed.

Given the context of the research, in an American branch campus in Qatar, a country known for its strict boundaries between genders and cultures, the research is underpinned by the following research questions:

i) How can an online role-play based educational experience affect second language learners' experience of a discussion of important social topics for writing?
ii) In a demographically mixed group of males and females and Qatari and non-Qatari students, how does an online learning experience affect patterns of interaction along gender and cultural lines?
iii) Can Avatar Kinect, which has been used primarily in special needs and health-related education, be used profitably to support a second language writing course?

Online Environments in Language Learning

Use of online technology for social interaction and entertainment has become ubiquitous amongst young adults around the world. Research in these areas has investigated a multitude of areas including user identity (boyd, 2006), interpersonal connection (Light, Griffiths, & Lincoln, 2012), privacy (Larsen, 2007), and social presence (Chi-Hsuing, 2001). One also finds substantial and enlightening research on the online world as it relates to education, including an examination of teaching processes using computerized interventions (Conceição, 2006; Samuel, 2016) and the impact of these technologies on student learning (Cesareni, Cacciamani, & Fujita, 2016; Chi, 2009; Molenaar, Chiu, Sleegers, & van Boxtel, 2011). Of particular relevance to the current study is research on the nature and process of role-play as it relates to student learning.

Role-play is an integral component of interacting within an online environment such as the Avatar Kinect one. In order to engage with the online environment users must first create or adopt an online persona, or avatar. Functioning in the online environment is accomplished by initiating activities appropriate to the virtual reality within which the user's avatar exists. In other words, the user plays the role of the avatar within the virtual world. Ahamer (2013) investigated the nature and process of role-play as a learning tool and found that role play enables students

> to perceive the unseen, forgotten, hidden, and missed traits of realities. Role-play allows for the perception of others' paths and resulting perspectives optimally, quickly, thoroughly, and succinctly. Hence, the concept of role-play should be optimized in a way that facilitates under- standing of the *other* (i.e., the *nonego*) by offering (a) a clearly structured, (b) an easily intelligible, and (c) a flexibly adaptable social process as a temporal pattern. (Ahamer, 2013, p. 275)

These ideas are extended by Cesareni et al. (2016) who examined the impact of role-play on knowledge building. Their research concluded that "we can view roles as fostering conversational functions that students can assume to guide individual behavior that regulate group interactions consistent with the knowledge building principles, which are interdependent and designed to work together" (p. 35).

A recent study of language learning in Singapore sheds light not only on how online environments can be utilized in the language classroom, but also on how the combination of face-to-face small group interactions "intertwine" with the virtual world (Wen, Looi, & Chen, 2015). This blending of small group, face-to-face interactions, coupled with online learning, is parallel to that of the current research. In Wen at al.'s study, a class of students in Grade 8 worked face-to-face in small groups while using a collaborative technology (Group Scribbles, or GS) to produce writing. Analysis of the activity showed that,

> First, online interaction tends to feature more balanced participation than face-to-face discussion. When online interaction is juxtaposed with face-to-face interaction, students with higher language proficiency are less likely to dominate group work...This result is consistent with the literature on computer-assisted language learning which shows that L2 learners tend to participate more equally and take more risks to experiment with ideas. . . . (Wen et al., 2015, p. 103)

Although this Singaporean case study examines learning among students at an age far younger than those in the current research, our findings are similar to those of Wen et al. We also found that a number of students who are comparatively less confident and proficient in speaking in the traditional face-to-face class became more engaged and spoke more during the Avatar Kinect sessions.

In reviewing literature related to metacognition and student learning, Molenaar et al. (2011) concisely highlighted findings regarding the importance of student engagement; "in interactive activities, students build on their group members' contributions through elaboration, feedback, agreeing, and challenging ideas" (p. 603). In other words, small group interaction with other students can benefit learning outcomes and, as Wen et al. (2015) have found, these interactions can include student-initiated avatars in an online environment. These benefits occur when engaging with student peers even without the inclusion of teacher *experts*. Chi (2009) found that "interacting even with an ignorant partner has significant advantages for the

explainer, in that it can cause the explainer to answer questions more deeply, and it can cause the explainer to engage in more knowledge-building activities" (p. 94).

Participants in the current study are predominantly non-English speakers in English-based Western university branch campuses, which resembles another Asian study of relevance to this work. Chi-Hsuing (2001) studied the social presence of Chinese university students in the online interactions of Computer Mediated Communication (CMC). Chi-Hsuing found that student engagement in the online world is complex and multifaceted, requiring researchers and educators to consider a variety of significant factors:

> When integrating CMC into an online learning environment, it is necessary to consider the student's local culture, language skills, keyboarding skills, format of CMC, face saving, computer literacy, use of paralanguage and emoticons, responsiveness of asynchronous communication, use of stylistic communication styles, and feelings of private/public. (Chi-Hsuing, 2001, p. 57)

All of the above factors must be considered for students as they engage and interact within the virtual realm of online interaction.

Drama in the ESL/EFL Classroom

Enacting a role in the online environment of virtual reality is a form of theatre. Drama has been a common pedagogical approach in the classroom for decades, and it has come into vogue more recently in the English as a Foreign Language (EFL) or English as a Second Language (ESL) classroom (Boudreault, 2010; Holden, 1981; Maley & Duff, 1982; Price, 1980; Royka, 2002). Although the course in which this avatar experience was employed was not designated as an EFL/ESL *per se*, all of the student participants in the course had a mother tongue other than English. The first languages of these students were Arabic, Bengali, Tagalog, and Greek. This multilingual/multicultural setting is well-suited for drama as a pedagogical tool because, "The improvisation aspect of drama gives students opportunities for developing their communicative skills in authentic and dynamic situations" (Boudreault, 2010, np). Drama as a pedagogical technique in the ESL/EFL classroom is especially beneficial because it affords opportunities to lower the students' affective filters during the learning process. As Boudreault claimed,

> When the students are enjoying an activity, they are learning and letting their guard down. The shyness and fear of using English very often blocks learning. When the students are submerged in an active fun activity, they are more open to new concepts and learning will occur…Through the games, the students begin to realize the importance of shared space, time, attention, information and ideas. The games spark spontaneity and minimize self-consciousness which often inhibits learning. (Boudreault, 2010, np)

Brom, Šisler, Slussareff, Selmbacherová, and Hlávka (2014) also recognized the significance of creating an enjoyable experience for students and argued that "the ability of an educational intervention to instigate positive affect" (p. 313), or in other words, personal enjoyment, is an important feature in online gaming aimed at educational purposes. While these researchers have highlighted the benefit of dramaturgy, to date, the approach has not been applied to online role-play especially involving Avatar-Kinect-supported learning. Thus, given the extensive use of avatar-mediated role-play in this educational experiment, a dramaturgical analysis was

chosen as the theoretical framework for this study (Chi-Hsuing, 2001), in the hopes of addressing this apparent gap in the literature.

Theoretical Framework

Khoshsabk (2017) notes that:

> Whether we want it or not, our everyday lives are saturated with digital technology which has revolutionized the ways we communicate, learn and gain information. We experience a constant digital connectivity to the outside world and to other individuals that could be significantly different from the real-life experience of having connection to whatever is surrounding us. The digital environment provides us with the chance to experience our own representation of identity on a personal and social level. From a dramaturgical perspective, we are performing various roles for known and unknown audiences through different online platforms. (Khoshsabk, 2017, p. 182)

Dramaturgy (Goffman, 1959) is an analytic framework that looks at social life through the metaphor of the theatre stage. Dramaturgical analysis sees the person as an actor who prepares back stage to perform on stage front, "the place where the performance is given" (1959, p. 66). Getting dressed in one's bedroom is a form of back stage activity, whereas entering the kitchen to meet one's family or entering one's place of work to meet colleagues would be examples of front stage activities. Front stage features two components: the personal front and the setting. The personal front includes the visual appearance of the performer, the actor's physical gestures and mannerisms, and actor's dialogue. The location, or stage, along with scenery and props create the setting. All of the above are manipulated by the actor in a process of impression management. The actor communicates dialogue appropriate to each particular role and scene, in ways appropriate to the role and scene, while wearing the accepted costume of the role and scene, using appropriate props, and so forth. Human interaction is therefore perceived as a series of theatrical performances. Once back stage, actors can relieve themselves of their props and costumes, forget about having to say the expected things in the expected ways, and relax.

While on stage, individuals enact performances through role-taking, adopting a role that enables one to understand another person's perspective, and role-making, the modifying of one's current role to make it fit the social situation (Mead, 1934). Problem-free social interactions occur when actors understand and play their roles correctly and effectively. A physician wears a white coat and speaks in medical jargon, a police officer wears a specific uniform and carries a weapon, and a college professor stands at the front of the classroom and lectures. Others in the performance, such as the patient, bystander or student, play roles that complement and support the roles of physician, police officer and professor (Preves & Stephenson, 2009). Embarrassing or awkward moments of social *faux pas* occur when one or more actors are unprepared to play their role, misinterpret the scene, or in some other way make mistakes in their performance. The subsequent social discomfort produced is similar to that experienced by a theatre audience when an actor arrives on stage wearing the wrong costume or forgets lines. Commonly used in market research, dramaturgical analysis has also found fertile ground in education (Starratt, 1990), with particular emphasis on gender performance (Lester, 2011; Tierney & Bensimon, 1996) and teacher performance (Bates, 1998; Halliday, Davies, War, & Lim, 2008; Preves & Stephenson, 2009). In addition, dramaturgy has recently proven "to be a productive theoretical framework and tool for analysing games and gaming situations" (Vangsnes, Økland, & Krumsvik, 2012, p. 1141).

In her dramaturgical study of the language used by Iranian adults on Facebook, Khoshsabk found that,

> The significance and openness of the audience will directly affect an individual's degree of awareness of their expressiveness. The actor's level of awareness of themselves and the acts are built by the degree of their engagement with the audience and their acceptance. (2017, p. 182)

Perhaps it is no surprise then, that dramaturgical analysis is recognized as providing "an impressive range of concepts and techniques for conducting qualitative research" (Travers, 2008, p. 60).

Methodology

The study spanned two sessions comprised of three groups each. A total of 20 students participated in this study. One more was invited but failed to attend. The gender split was predominantly female with 15 women and 5 males. This is consistent with the predominantly female ratio of students in the participating university campuses. Session one included 4 student participants in each of the two groups, session two included 4 in the first group and 3 in the second group, session 3 had only one group comprised of 2 participants (1 absent).

A dramaturgical look at the use of online characters and scenarios in this project reveals the research team to be *de facto* directors who led student participants through a series of specific performances the virtual Kinect stage through the use of game avatars. Participants manipulate their respective Kinect avatars, or *Digital Others* (McNeilly, 2014, p. 434), to engage in on screen (f) debates with one another. In this study, we determined participants as front stage when they assumed control of the onscreen avatars and back stage when they did not. Other participants in the same classroom but not actively manipulating an avatar were also considered back stage. One researcher in each trial served the dual role of actor and director through manipulating his or her on screen avatar to engage with student avatars. A second researcher remained back stage and took field notes while observing the research activity and interactions at front stage and back stage.

Research Setting

Research Station: a room equipped with a Microsoft Xbox360 gaming console connected to a Kinect unit. A large TV-like screen was also made available for viewing. The Microsoft social gaming platform, Avatar Kinect, was downloaded to the console during the research trial. Both Wi-Fi and wired network connections were available.

In all, three trials were conducted for this research. Trial 1 was conducted at the College of the North Atlantic-Qatar (CNAQ). Three research stations were set-up: one classroom hosting a normal class and two offices to host two voluntary students from the same class in each of the offices. The purpose of the trial was to test the usability and operability of the Avatar Kinect platform and gauge "user experience" of the participating students. When all three stations were activated at the same time, we experienced frequent disconnections from one or more of the stations. To circumvent this challenge, we initiated a session with just two stations, the classroom and one of the offices. The resultant connection was more stable leading to a more effective session with less disruption. Later analysis showed that due to the campus network security policies, unusual network traffic such as gaming platforms were either blocked or minimized by the institution's network firewall. It was a time-consuming process

to convince the network administration team to adapt the network security policies in order to permit gaming traffic on the network even for research purposes.

Trial 2 and Trial 3 took place at the Virginia Commonwealth University in Qatar (VCUarts Qatar) a month later. Trial 2 served as a rehearsal in which we tested the research platform and setup. This trial also familiarized the investigators at VCUarts Qatar with the equipment and helped finalize the experimental process for Trial 3. Four stations in different locations of the VCUarts Qatar campus building were used but the entire building shared the same network. To ensure adequate bandwidth and reliability for the experiment, we decided to use a wired connection instead of a Wi-Fi connection. The practice trial was successful in enabling all four avatars representing the participants at the four stations to communicate in a virtual meeting scenario.

Trial 3 was earmarked for the actual experiment itself, and this occurred two days later. This trial simulated a school lock-down situation in which students and their instructor would be unable to attend class in the physical building and would meet instead in a virtual classroom in order to conduct a classroom discussion prior to writing a paper on a social issue. In this case, the virtual classroom scenario involved a series of participant discussions regarding various social issues in Qatar among freshman English composition students. The trial was divided into two 45-minute sessions. Session 1 was conducted in the morning and Session 2 in the afternoon. During both sessions, three groups of participants with three to four members each were formed. The groups were labelled as Session 1 (S1) Group 1, S1 Group 2, S1 Group 3 and Session 2 (S2) Group 1, S2 Group 2, and S2 Group 3.

Since the stations (rooms) for the experiment had to be reserved for each trial day, we had to setup the hardware / software and network requirements before each session during the trial days. During Session 1, the network connection exhibited serious, unexpected lags and at times disconnections occurred at some stations. It took almost 30 minutes to stabilize the network connections, which reduced the actual experimentation time to the last 15 minutes. With this in mind, we decided to leave the morning session's connection intact to minimize networking problems for Session 2, which took place shortly afterwards. Although there were intermittent network lags and disconnections remained a challenge, Session 2 was considerably more stable than Session 1 and provided all participants with a much more hassle-free user experience.

Procedure

There were 11 participants total in Session 1 and 9 participants total in Session 2. The scenario setup was the same for both sessions. The groups were placed in their own stations, with participants in groups of three or four, assigned to ensure a mix of males and females in each group. Each group of participants shared the same avatar during the session but they had the ability to modify avatar appearances as they wished. Avatars interacted in a talk-show like setting in the virtual environment, sitting alongside one another like guests on the show. A fourth station was set-up to accommodate the instructor or the discussion moderator. The moderator's avatar led the discussions as would a television talk-show host and students who actively engaged in the discussion would manipulate the avatar role in this virtual space.

Data for this study were collected through triangulation of two predominant strategies. Triangulation is a recognized and respected approach to data collection (Creswell, 2007; Denzin & Lincoln, 2005; Hatch, 2002) because it enhances accuracy in data collection through pinpointing "aspects of a phenomenon more accurately by approaching it from different vantage points using different methods" (Sommer & Sommer, 2002, p. 59). Using a triangulated approach, the research team isolates aspects of the study for deeper examination and compares "different kinds of data from different sources to see whether they corroborate

one another" (Walsh, 2001, p. 231). Triangulation enables confirmation of credibility and dependability of the data and enhances transferability of the findings (Denzin & Lincoln, 2005). These results are necessary because, in much qualitative research, "*credibility*, *transferability*, *dependability*, and *confirmability* replace the usual positivist criteria of internal and external validity, reliability and objectivity" [italics in the original] (Denzin & Lincoln, 2005, p. 24). More closely related to the current study is recent work by Tsushima (2015), who highlights the necessity and benefits of triangulating a combination of qualitative and quantitative methods, such as the combination of observation and survey employed in the current study, in relation to language development in the classroom. While Tsushima focuses predominantly on the assessment of language development, and articulates the challenges faced during these early days of mixed methods (MM) research on the topic, she argues, "when appropriate research design and context are chosen, MM research approaches are capable of helping researchers delve deeper into the research issue and contribute more thoroughly to their areas of scholarship" (Tsushima, 2015, p. 115).

Data collection involved a grounded approach. First, the observations were conducted in a covert fashion in order to minimize the direct impact of the observers upon the student participants in the study. Methodologically, each observer was given a note pad and asked to pay attention to the flow of the interaction and note anything that related to gender and culture-related behaviour during the online lesson. Regarding the questionnaire itself, this was developed among the four researchers through brainstorming in a grounded approach. The questions included several open-ended questions in order to elicit broader responses that could then be coded into salient themes. In terms of analysis of the questionnaire data, the four researchers each read and re-read the questionnaire responses to identify what themes were present. Next, the researchers shared their own findings with each other and developed an overall list of themes. This represented an important aspect of the triangulation method, involving as it does, cross-researcher discussion and ultimate consensus.

As mentioned, the first form of data collected in this study was field notes, the research team completed field notes of observations during the avatar activities and later reflected upon their notes individually to maximize recall of observations (Creswell, 2007). The team also discussed these observations collectively to facilitate clear and comprehensive understandings. Informed by Creswell's (2007) inclusion of data monitoring as a component of fieldwork and Denzin's (2009) approach to sense making and interpretation, the researchers noted personal thoughts and reactions to what was observed. These observations were then reflected upon to build deeper layers of analytic material (Denzin & Lincoln, 2005; Fielding, 2007; Hatch, 2002).

Next, the observational data were then triangulated with a student participant survey. The survey data were analysed through interpretive and typological processes (Hatch, 2002) in order to study pre-determined themes of interest while also remaining open to emergent themes. Topics of interest were guided by the review of relevant literature and research questions guiding the study (Hatch, 2002). These findings are explored in the Results section below.

Results

Our field notes revealed that in each session there was one participant who voluntarily stepped to the front stage to take on the role of onscreen performer. The remaining participants remained backstage as observers; however, some of the backstage participants also fed suggestions to the performers just a prompters feed lines to actors on a stage. Front stage participants were given the opportunity to choose from a variety of avatar options but, in all cases, they chose avatars that were visibly similar to themselves. In each case, the avatars were the same gender as the participant and the participants manipulated the skin colouring to appear

appropriate to the participants. Most front stage participants in this study were of Arabic origin with skin darker than most Caucasians and they manipulated the tone of their avatars to reflect this skin colouring. This finding mirrors Robertson, Magdy, and Goldwater's (2018) quantitative study revealing that twitter users tend to select emojis that reflect their actual skin colour (see also Hankerson et al., 2016). In terms of the identities of the front stage performers vs. the backstage participants, it is worth noting that, although males were a distinct minority in each class, each male in each group, whether Qatari, non-Qatari Arab, or non-Arab, managed to take an onstage role despite the fact that in real-life some of these males are actually quite soft-spoken in class. Also, among females who went onstage, the majority of these were non-Qatari females, some of whom were of Indian, Greek, or New Zealander background. Indeed, there was only one female Qatari who went onstage. However, this particular performer is also quite outspoken in real-life and tends *not* to wear a head covering, which is greatly frowned upon among Qatari females.

As for the actual performances and interactions, on the one hand, participants remaining backstage appeared to enjoy the performances of those participants acting front stage and their onscreen avatars, and the performers also appeared to enjoy the process of performing with the avatars. All participants in the sessions expressed amusement at the look and movements of the avatars on screen. In some cases, this amusement was counterproductive to the debate initiated by the director/moderator. These data are supported by Vangsnes et al. (2012), who found that,

> the player and the teacher in this gaming situation have different agendas. This means that they view the gaming in two different ways. The player has a playing perspective of the game. He seems to view the game as an arena for excitement and competition. The teacher seems to have an educational perspective or a didactic perspective on the gaming situation. She is interested in the game, but at the same time it becomes a pedagogical challenge to her that she views that game as a starting-point for conversation and learning through dialogue. (Vangsnes et al., 2012, p. 1145)

On the other hand, participants also complained about the inability of on screen avatars to express emotion. This is not surprising in that,

> Face-to-face conversation is generally not persistent, and relies heavily on a wide range of non-verbal cues. Online environments provide a structured set of tools to facilitate communication, but are often over-constrained by the model of communications embedded in the tools. (Dwyer & Suthers, 2006, p. 509)

Animated characters such as Kinect avatars are better at showing emotion through gesture than inanimate characters such as images (André & Rist, 2001), but in comparison with human interaction, "computer-generated communication (CCM) is unable to deliver social context clues" (Tu, 2001, p. 45).

Participants in all sessions were stymied by technological glitches. This was frustrating for back stage observers and even more so for on screen performers because technical problems can inhibit an actor's ability "to 'connect' with his virtual counterpart, as is required in traditional theatre" (Van Baarle, Stalpaert, & Verdonck, 2014, p. 57). Despite these frustrations, back stage participants were active in listening to the onscreen conversations amongst the avatars and offered encouragement to their front stage peers. In almost every session, one participant took the role of "prompter" and provided the front stage participant with comments and questions for use in the debate with other avatars. The supportive

component of these back stage interactions places them into the category of relational activities, including "turns regarding the social interaction among participants, such as engaging other group members, discussing the division of labour among the group members, and supporting other group members" (Molenaar, et al., 2011, p. 609). Thus, back stage interactants can play as pivotal a role as onscreen actors.

Five themes emerged from the dramaturgical analysis:

1. Some participants chose to perform front stage and others chose to remain back stage. Primarily, males, both Qatari and non-Qatari, and next, non-Qatari females, especially unveiled ones, tended to perform front stage as opposed to remaining backstage.
2. Front stage participants chose avatars with gender and skin colour similar to themselves.
3. All participants appeared be engaged in the interactive role play processes and with one another.
4. Front stage actors appeared to act without inhibition.
5. All participants expressed frustration with technology shortcomings.

Theme 1 revealed that, without being directed to do so, some participants voluntarily assumed the role of front stage actors while the others participated from back stage, often feeding lines to their front stage counterparts. One explanation for this is that prompting enabled the more introverted students to play an active and meaningful role with the theatrical performance without having to step out on to front stage. Also, the fact that most of the males had gaming experience could account for why this same group tended to assume the front stage role. In addition, as modesty is a highly prized virtue among female Qataris, who often shun having their photos taken, the reluctance to perform front stage, even in Avatar form, may be a carry-over from the social practice of trying not to draw attention to oneself as a female. Indeed, it was noteworthy that the only Qatar female that was a front stage performer, was not a habitual headscarf-wearer. Theme 2 highlighted participant desire to establish avatars exhibiting a visual appearance close to that of the participants, themselves. Although performing through an avatar involves a degree of role-taking and role-play, participants wished to express on screen identities congruent with their physical and cultural identities off stage. Theme 3 speaks to the highly engaging nature of the experience for both types of participant. The participants were actively participatory at both front stage and back stage and there was much laughter and humour as they interacted with the avatars. Similarly, Theme 4 underscored how the Avatar Kinect platform seemed to encourage spontaneity and creativity in role play and role-taking interaction and led to a great deal of "freer practice" in classroom communication in their L2. It appeared this occurred because participants seemed to forget that they were involved in a pedagogical activity and simply enjoyed the game-like context of the activity. In contrast to these four themes, Theme 5 underscored the negative aspects of the experience for many. Several participants were visibly perturbed by the time it took to both set up and trouble-shoot connection issues, especially in Session 1. Many participants felt limited by the platform itself, which allowed for only one avatar per group.

Three of these themes were echoed by findings from thematic analyses of the survey data. A predominant theme related to participant frustrations with technological glitches. The researchers anticipated technological glitches, but they were surprised that it took nearly the entire period of Session 1 (roughly 75 minutes) to set up the Avatar Kinect program. Sample responses related to this theme include the following from Session 1:

- Long set up time
- Waste of time caused by lots of connection problems
- Waste of class time
- Connection problems are disturbing
- Unstable connections and hard to connect causes sound issues

During Session 2, connection issues remained a challenge, although for a shorter duration, thus allowing more class time and interactivity during the classes. Nonetheless, participants continued to report frustrations:

- The technological limitation of this platform (at its infancy) (i.e., limited hand gesture, face recognitions) distract instead of enhance classroom discussions)
- Some connection problems
- Connect problems and limitation of the platform; don't see using an avatar works better than other interactive media for conferences such as Blackboard, Google Hangout, and Skype

The second theme to emerge in both dramaturgical analysis and from the surveys is that participants were actively engaged with one another. This theme is reflected in the following participant response:

- Aside from Internet issues, the discussion groups' setup allows members of a small group to discuss among themselves first before sharing their ideas to all the other groups (Session 2, Group 1)

One unexpected new theme to emerge in the survey data was the significance of anonymity for participants. Participants identified role player anonymity as a positive benefit of the Avatar Kinect system and offered reasons as to why they felt it was so beneficial:

- Using an avatar provides students with more confidence to talk because you are anonymous
- Hopefully, this platform help[s] shy people to open-up
- Some people find it easier to communicate virtually

In sum, the dramaturgical analysis identified five themes, two of which were also reflected in the survey data. The survey data identified the additional theme of role player anonymity, for a total of six themes to emerge within this exploratory study.

Analysis

The results articulated above highlight the intertwined nature of face-to-face, small group dynamics in conjunction with an online, virtual platform for multilingual learners and the efficacy of dramaturgical analysis in understanding these interactions. Although the learners in this study were not in a categorized ESL/EFL classroom, the sessions were comprised entirely of L2 English learners. Participant responses supported previous literature that the virtual component of learning may improve students' ability to overcome shyness and communicative insecurities. Participant perceptions from this study also validate ongoing research related to the benefits of dramaturgy as an analytic process in studying teaching and

learning in the higher education classroom, and in particular, interactions amongst ESL/EFL students in an international branch campus. Participation in the virtual environment permits participants to take on different roles and different personae, thereby lowering their affective filter and creating a less inhibited learning atmosphere. Participants were able to engage in the classroom collaboration in different ways such as working in small groups or leading the discussion through controlling the avatar.

Participants also identified the avatar platform as a potentially valid tool for other conversations. Most participants responded "Yes" when asked if they thought this experience would prepare them for future discussions on social topics. See the comments listed below.

- Yes, because it also helps to hear each other out. And not talk at the same time
- Yes, it helped us to argue and agree with each other more
- Yes, because we relied on one another and took turns when participating
- Yes, you have to cooperate and share, harder to "cut someone off" as they talk
- Yes, because as said before, the debate is a lot more organized and controlled, not everyone is shouting or talking over others
- Yes, because learning how to use the avatar is problem-solving itself
- Yes, the avatar represents a team
- Yes, I appreciate and support team work

As Boudreault writes in relation to drama as a pedagogical tool in the ESL classroom, "Apart from the obvious development of communication skills, it encourages leadership, team work, compromise, authentic listening skills and practice with real life savoir-faire" (Boudreault 2010, np).

Discussion

Overall, this Avatar Kinect study has yielded several important lessons. It has added support to the applicability of dramaturgical analysis as an effective analytic method for gaining insight and understanding regarding learning behaviours of students in a higher education. In particular, this research has shown that dramaturgical analysis can enable researchers to suss out motivations and perceptions related with personality and cultural sub-contexts for non-native English speakers in the Arab Gulf. Socially outgoing participants were able to successfully debate social topics front stage line while more introverted participants remained back stage yet still interacted through prompting their more extroverted peers. Finding that students were inclined to use avatars which represented their own gender and racial appearance (Hankerson et al., 2016; Robertson, Magdy, & Goldwater, 2018) suggested that software programmers are wise to include a wide-ranging set of choices for avatar appearances, but the options could be expanded. For example, participants in this study were able to adjust skin colouring of the avatars but all avatars remained in Western dress because participants were unable to choose culturally traditional apparel.

One of the benefits of the Kinect platform was that it offered a new and dynamic way to engage with students and second, that participants enjoyed the experience overall, at least so long as long as technological issues were kept to a minimum. Still, given the technical constraints, this study cautions educators to do their utmost to prevent glitches before they occur so as to ensure a more stable and reliable learning environment. Virtual platforms should be rigorously tested and re-tested prior to deploying them as a part of a learning environment. In this regard, in order to achieve maximum utility, it is clear that institutional support and

flexibility around IT policy must be secured before network-based virtual platforms can be effectively implemented for learning within a given educational institution. On a positive note, advances in technology may soon make these glitches a thing of the past.

This study has shown that Avatar Kinect or similar platforms can provide great potential for higher education learning. Avatar Kinect sessions can be closely controlled and monitored by instructors and therefore provide a safe, private, highly customized and portable virtual learning environment. Furthermore, using avatars that provide some form of anonymity may encourage students who are uncomfortable participating in the real-life classroom due to shyness or cultural sensitivities. Even so, there still appeared to remain lingering reluctance for Qatari females to take a more active and central role in the groups observed. Nevertheless, the fact that these same individuals were quite involved in backstage prompting suggests that avatar anonymity may indeed enable such students to become more open and confident in virtual learning spaces. Since Avatar Kinect functions in real time, avatar (role-player) interactions are quite realistic and lively. Therefore, the players may be more motivated to further engage and immerse in these learning sessions. Finally, the body movements required in gesture-based learning enable students to become physically engaged, stimulate attention, and enhance kinaesthetic learning (Farley & Stagg, 2011).

This exploratory study has opened the door to further areas ripe for research including, but not limited to, the following. First, in light of prior dramaturgical research on gender performance, further research could investigate the nature and process of gender performance within the Avatar Kinect virtual world when used in the classroom context. Second, online gender performance within the specific geopolitical and sociocultural milieu of higher education in the Arab Gulf bears further investigation, most especially through qualitative processes which enable researchers to gather thick and rich data. Issues of race, religion and social status are additional fertile areas for future examination. Next, this study raises the question, could theatrically-focused role-play in the learning environment enable shy students to achieve a voice? This question leads to a larger pedagogical line of inquiry that could examine whether the oft-repeated mantra of "technology for the sake of technology" should go unchallenged in the field of education. In other words, despite the several positive reports from participants involved in this study, could conventional face-to-face classroom teaching achieve the same learning outcome in a more expedient and effective way and if so, what pedagogical techniques would be best to achieve this goal? Qualitative processes such as ethnography and phenomenology would enable researchers to gather valuable insight into these areas.

Of course, many of these questions are based on the assumption that the virtual platform is available as an addendum to a face-to-face learning environment. However, as was mentioned at the outset of this study, the learning experience under investigation was conducted as a simulation of a scenario in which students are unable to meet face-to-face with the instructor and with one another. In such cases virtual learning may be the only viable alternative. Viewed in this light, the Avatar Kinect experience was successful insofar as it allowed for online collaboration and discussion among classmates and the instructor. Further, the formation of small groups that shared an avatar may have stimulated the small group learning discussed by Molenaar et al. (2011), thus suggesting this program and others like it could be used effectively for groups that span community and even national boundaries.

In terms of future research, this study can be considered only preliminary. Indeed, since we observed and analysed three sessions, it would be highly advisable to monitor the use of Avatar Kinect or a similar platform over a more expanded period of time such as several weeks or months. Ideally, ethnographic research throughout an entire course using this kind of platform would provide ample opportunity to study both student learning and instructional effectiveness across a variety of learning task types and across a significant length of time. We also recommend cross-cultural comparative research to examine the feasibility and usage this

sort of software in a variety of cultural contexts. Research like the above could well extend the dramaturgical analysis to look at how roles are negotiated and interchanged while also analysing more closely the type and quality of linguistic output of the learners. Finally, other theoretical frameworks could be brought into play, including social psychological analyses of teambuilding and interaction, psychological analyses of identify construction in the online environment, and sociological analyses more tightly focused upon gender, race, social class and culture.

References

Ahamer, G. (2013). Game, not fight: Change climate change! *Simulation & Gaming, 44*(2-3), 272-301.

André, E., & Rist, T. (2001). Presenting through performing: On the use of multiple lifelike characters in knowledge-based presentation systems. *Knowledge-Based Systems, 14*, 3-13.

Bates, L. R. (1998). Theatre as a teaching metaphor. *College Teaching, 46*(4), 122.

Boudreault, C. (2010). The benefits of using drama in the ESL/EFL classroom. *The Internet TESL Journal, XVI*(1).

Brom, C., Šisler, V., Slussareff, M., Selmbacherová, T., & Hlávka, Z. (2014). You like it, you learn it: Affectivity and learning in competitive social role play gaming. *International Journal of Computer-Supported Collaborative Learning, 11*, 313-348.

Bouzid, Y., Khenissi, M. A., Essalmi, F., & Jemni, M. (2016). Using educational games for sign language learning-a signwriting learning game: Case study. *Journal of Educational Technology & Society, 19*(1), 129-141.

boyd, d. m. (2006). Friends, friendsters, and top 8: Writing community into being on social network sites. *First Monday, 11*(12).

Cai, Y., Chiew, R., Nay, Z. T., Indhumathi, C., & Huang, L. (2017). Design and development of VR learning environments for children with ASD. *Interactive Learning Environments, 25*(8), 1-12.

Cesareni, D., Cacciamani, S., & Fujita, N. (2016). Role taking and knowledge building in a blended university course. *International Journal of Computer-Supported Collaborative Learning, 11*, 9-39

Chi, M. (2009). Active-constructive-interactive: A conceptual framework for differentiating learning activities. *Topics in Cognitive Science, 1*(1), 73-105.

Chi-Hsuing, T. (2001). How Chinese perceive social presence: An examination of interaction in online learning environment. *Education Media International, 38*(1), 45-60.

Conceição, S. C. (2006). Faculty lived experiences in the online environment. *Adult Education Quarterly, 57*(1), 26-45.

Creswell, J. W. (2007). *Qualitative inquiry & research design: Choosing among five approaches* (2nd ed.). London, UK: Sage.

Da Gama, A., Fallavollita, P., Teichrieb, V., & Navab, N. (2015). Motor rehabilitation using Kinect: A systematic review. *Games for Health Journal, 4*(2), 123-135.

Denzin, N. (2009). *Qualitative inquiry under fire: Toward a new paradigm dialogue*. New York, NY: Taylor and Francis.

Denzin, N. K., & Lincoln, Y. S. (2005). Introduction: The discipline and practice of qualitative research. In N. K. Denzin, & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (3rd ed., pp. 1-32). Thousand Oaks, CA: Sage.

Dieker, L. A., Rodriguez, J. A., Lignugaris/Kraft, B., Hynes, M. C., & Hughes, C. E. (2014). The potential of simulated environments in teacher education: Current and future possibilities. *Teacher Education and Special Education, 37*(1), 21-33.

Dwyer, N., & Suthers, D. (2006). Consistent practices in artifact-mediated collaboration. *Computer-Supported Collaborative Learning, 1*, 481-511.

Escudeiro, P., Escudeiro, N., Reis, R., Barbosa, M., Bidarra, J., Baltasar, A. B., . . . Norberto, M. (2014). Virtual sign game learning sign language. In Computers and Technology in Modern Education, ser. *Proceedings of the 5th International Conference on Education and Educational technologies*, Malaysia.

Farley, H., & Stagg, A. (2011, November). *From 'hands up' to 'hands on': Harnessing the kinesthetic potential of educational gaming* [Presentation]. Paper presented at the Pre-Publication Paper Createworld11, Queensland, Australia. Retrieved from http://eprints.usq.edu.au/21183/2/Farley_Stagg_CreateWorld_2011_PV.pdf

Fielding, M. (2007). Jean Rudduck (1937–2007) 'carving a new order of experience': A preliminary appreciation of the work of Jean Rudduck in the field of student voice. *Educational Action Research, 15*(3), 323-336.

Goffman, E. (1959). *Presentation of self in everyday life*. New York, NY: Doubleday.

Halliday, S. V., Davies, B. J., War, P., & Lim, M. (2008). A dramaturgical analysis of the service encounter in higher education. *Journal of Marketing and Management, 24*(10-2), 47-68.

Hankerson, D., Marshall, A. R., Booker, J., El Mimouni, H., Walker, I., & Rode, J. A. (2016, May). Does technology have race? In *Proceedings of the 2016 CHI Conference Extended Abstracts on Human Factors in Computing Systems* (pp. 473-486). ACM.

Hatch, J. A. (2002). *Doing qualitative research in education settings*. Albany, NY: State University of New York Press.

Holden, S. (1981). *Drama in language teaching*. Essex, UK: Longman.

Johnson, L., Adams, S., & Cummins, M. (2012). *The NMC Horizon Report: 2012 higher education edition*. Austin, TX: The New Medium Consortium.

Khoshsabk, N. (2017). Theatrically digital: Education and online identity. *International Journal of Education*, 5, 179-193.

Larsen, M. (2007). *Understanding social networking: On young people's construction and co-construction of identity online* [Presentation]. Paper Presented at The Society for Social Studies of Science (4S) Annual Conference Montreal, Canada.

Lester, J. (2011). Acting on the collegiate stage: Managing impressions in the workplace. *Feminist Formations, 23*(1), 155-181.

Light, B., Griffiths, M., & Lincoln, S. (2012). 'Connect and create': Young people, YouTube and graffiti communities. *Continuum: Journal of Media & Cultural Studies, 26*(3), 343-355.

Maley, A., & Duff, A. (1982). *Drama techniques in language learning*. Cambridge, UK: Cambridge University Press.

McNeilly, J. (2014). *Method for a new dramaturgy of digital performance, Routledge companion to dramaturgy*. London, UK: Routledge.

Mead, G. (1934). *Mind, self and society*. Chicago, IL: University of Chicago Press.

Molenaar, I., Chiu, M., Sleegers, P., & van Boxtel, C. (2011). Scaffolding with small groups' metacognitive activities with an avatar. *Computer-Supported Collaborative Learning, 6*, 601-624.

Pedraza-Hueso, M., Martín-Calzón, S., Díaz-Pernas, F. J., & Martínez-Zarzuela, M. (2015). Rehabilitation using Kinect-based games and virtual reality. *Procedia Computer Science*, 75, 161-168.

Preves, S., & Stephenson, D. (2009). The classroom as stage: Impression management in collaborative teaching. *Teaching Sociology, 37*(3), 245-256.

Price, P. (1980). *Creative play production in the classroom*. New Haven, CT: Yale Publishers.

Robertson, A., Magdy, W., & Goldwater, S. (2018). Self-representation on Twitter using emoji

skin color modifiers. *arXiv preprint arXiv:1803.10738*.

Royka, J. (2002). Overcoming the fear of using drama in English language teaching. *The Internet TESL Journal, 8*(6).

Samuel, A. (2016). *Faculty perceptions and experiences of "presence" in the online learning environment* (Doctoral dissertation). Retried from ProQuest Dissertations and Theses.

Shubert, T. E., Basnett, J., Chokshi, A., Barrett, M., & Komatireddy, R. (2015). Are virtual rehabilitation technologies feasible models to scale an evidence-based fall prevention program? A pilot study using the Kinect camera. *JMIR Rehabilitation and Assistive Technologies, 2*(2).

Sommer, R., & Sommer, B. (2002). *A practical guide to behavioral research: Tools and techniques* (5th ed.). New York, NY: Oxford.

Starratt, R. J. (1990). *The drama of schooling/The schooling of drama*. London, UK: The Falmer Press.

Tierney, W., & Bensimon, Estela, M. (1996). *Promotion and tenure: Community and socialization in academe* (SUNY Series, Frontiers in Education). Albany, NY: State University of New York Press.

Travers, M. (2008). *Qualitative research through case studies*. Los Angeles, CA: Sage Publications.

Tu, C. (2001). How Chinese perceive social presence: An examination of interaction in online learning environment. *Education Media International, 38*(1), 45-60.

Tsushima, R. (2015). Methodological diversity in language assessment research: The role of mixed methods in classroom-based language assessment studies. *International Journal of Qualitative Methods, 14*(2), 104-121.

Van Baarle, K., Stalpaert, C., & Verdonck, K. (2014). Virtual dramaturgy: Finding liberty in the virtual machine. *Performance Research: A Journal of the Performing Arts, 18*(5), 54-62.

Vangsnes, V., Økland, N., & Krumsvik, R. (2012). Computer games in pre-school settings: didactic challenges when commercial educational computer games are implemented in kindergartens. *Computers & Education, 58*, 1138-1148.

Walsh, D. (2001). Doing ethnography. In C. Seale (Ed.), *Researching society and culture* (pp. 217-232). Thousand Oaks, CA: Sage.

Wen, Y., Looi, C. K., & Chen, W. (2015). Appropriation of a representational tool in a second-language classroom. *International Journal of Computer-Supported Collaborative Learning, 10*, 77-108. doi: 10.1007/s11412-015-9208-0

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