Designing Alien Mysteries in Chatterdale: An Instructor’s Perspective

As part of a larger, three-year long European project, Franziska reflected on her experiences in designing and implementing age-appropriate, immersive learning experiences in the virtual village of Chatterdale in OpenSim. Thirteen-year-old German and Norwegian students learning English as a target language engaged in collaborative goal-driven actions, task-oriented activities, and verbal interactions in a quest to solve a mystery involving extraterrestrials and the local residents’ disappearance. Building on Barab, Gresalfi, and Arici’s (2009) conceptualization of game-oriented environments as transformational activities, the focus was placed on investigating how the emerging affordances can empower learners and enact opportunities to actively participate in these game-driven learning experiences and mold the content and context. The study illustrated that the design of this virtual Chatterdale science fiction scenario was student-instigated, while students’ quest to unravel the mystery afforded opportunities for active involvement and collaborative actions, engagement in verbal exchanges, and interaction with content and context.

Keywords: OpenSim, game-driven learning experiences, virtual environments, ecology

Introduction

Multi-user virtual learning environments, such as OpenSim, Second Life, and Minecraft, can transform teachers’ teaching practices and students' learning experiences if immersive, game-like but task-driven learning experiences are effectively designed and implemented in the language curriculum. Many foreign language educators tend to agree that the semiotic resources enacted by the virtual characters, sculpted three-dimensional interactive environments featuring a wide multiplicity of objects, communication modes, the collaborative and playful nature of the virtual platform, the rich repertoire of engaging game-like activities and experiences can be deployed to build affordances for social interaction, creativity, intercultural exchanges, immersive language learning experiences, task-driven activities, and collaboration (see Gee, 2003, 2007; Young, Schrader, & Zheng, 2006; Allison, Cambell, Davies, Dow, Kennedy, McCafferty, Miller, Oliver, & Perera, 2012; Zheng, 2012; Godwin-Jones, 2014). Most studies in second or foreign language learning have been conducted in Second Life and more recently in Minecraft (see Molka-Danielsen & Deutchmann, 2009; Clark, 2009; Jauregi, Canto, de Graaff, Koenraad, & Moonen, 2012; Zheng, Newgarden, & Young, 2012; Zheng, 2012). The open-source virtual platform of Open Simulator (OpenSim) has received considerably less attention than other virtual platforms. Despite some initially promising findings on the prospect of enacting technological and cultural affordances in this virtual environment to immerse students in challenging, thought-provoking, motivating, fun, imaginary, and collaborative game-like activities (see Berns, Gonzalez-Pardo, & Camacho, 2011; Berns, Gonzalez-Pardo, & Camacho, 2013), few studies have been published on how second or foreign language educators can design transformational game-related activities in OpenSim (Barab, Gresalfi, & Arici, 2009). As Barab et al. (2009) demonstrate, “To play transformationally, a player must become a protagonist who uses the knowledge, skills, and concepts embedded in curricular content to make sense of a fictional situation and make choices that transform that situation” (p.
Such game-driven activities can also guide second or foreign language educators in investigating how “players deploy their agency in organizing their actions and interactions” (Zheng, Newgarden, & Young, 2012). That is, transformation is an agent-directed behavior where affordances emerge in the virtual learning environment, in this case OpenSim, that galvanize learners’ interactions and collaboratively enacted actions. Utilizing these semiotic resources, i.e., artifacts, avatars, and actions, to immerse students in transformational learning activities, however, requires dexterity, extensive knowledge, and expertise. Language educators that are newly adopters of virtual learning environments, such as OpenSim, are often confronted with “technological barriers, institutional opposition, limited familiarity, and other concerns [that] may be preventing” them from fully exploring and utilizing such virtual environments in their language curricula (Neely, Bowers, & Ragas, 2010, p.3). Not all institutions have the technological infrastructure or the technical, pedagogical, and institutional support to train their teachers to design and deliver goal-determined activities in virtual environments (see Hubbard & Levy, 2006; Arnold, 2007; Arnold & Ducate, 2011). Some useful online pedagogical resources have been created for educators using OpenSim to enhance students’ learning experiences, such as OPENSIM-EDU (http://opensim-edu.org/blog/). However, even though these resources are insightful and extremely useful, they do not suffice for the successful implementation of OpenSim in the language curriculum as a path to enact affordances for transforming second/foreign language learners’ learning experiences. Second or foreign language educators need to go beyond these successful integrations in the different institutionally-supported contexts to explore new teaching possibilities and identify institutional, technological, and technical support and constraints for implementing OpenSim in their own curricula.

Moreover, Berns, Gonzalez-Pardo, & Camacho (2013) warn that the integration of game-based learning experiences in virtual platforms pose a particular challenge since they often fail to be designed around clearly exemplified learning goals and specifically defined tasks and activities. As a result, “many users get lost in the virtual environment and loose finally their interest in it” (p. 212). Other users, on the other hand, often get carried away by the interactive, game-driven nature of such virtual spaces and instead of focusing on task completion, they interact with the multiplicity of semiotic resources, navigate through the open spaces, and engage in long conversations with students from all over the globe (see Clark, 2008; Cookie-Plagwitz, 2008; Berns, et al. 2013).

OpenSim might galvanize students’ interest by immersing them in cultural and linguistic experiences but, at the same time, educators need to contemplate students’ learning styles and needs, level of motivation, the instructional materials, and the required conditions under which this virtual environment can form a constructive tool or a hindering mechanism for language learning. Educators need to also explore the teaching contexts where OpenSim might not form the most compelling tool for language learning, i.e., in cases where students’ limited technological knowledge or low proficiency level in the target language can impede their capacity to engage in constructive conversations with their peers. In cases where second or foreign language educators determine that OpenSim can be dynamically tailored to transform their learning experiences, the learning objectives and activities need to be carefully enacted on clear game-designed learning goals, which can be a taunting task for educators who have no or limited experience in teaching in virtual world environments. Creating a network of experienced practitioners who can share their expertise, practices, knowledge, and perceptions about the pedagogical and learning value of a particular tool and the emerging contradictions during their use in particular situated contexts can form an empowering tool for language educators. Expanding on Barab et al. (2009) framework on transformational play, in this paper, we provide an educator’s perception and experience in using the semiotic resources of the multi-user virtual environment of OpenSim to enact transformational learning experiences through collaborative quests and other gaming activities. More precisely, the
study addressed the following research questions: (1) How can students’ reflective and insightful inquiries be used to design game-driven learning experiences in OpenSim? (2) How can student-inspired game-based scenarios be used to immerse students in roles that enact affordances for active and demanding participation trajectories but are laden with opportunities for verbal interaction, collaborative actions, and goal-driven experiences in the target language? (3) How can content be turned from a formal textbook-situated activity to a meaningful and practical game-determined activity? (4) How can a virtual setting be turned into an interactive contextualized learning experience?

**Transformational Play and Learning Experiences in OpenSim**

Confronting the conventional argument that game-playing experiences are trivial, addictive, time-consuming experiences that inhibit learning and real world experiences, Gee (2003) perceives situated game-playing experiences as engaging and crucial activities where “They situate meaning in a multimodal space through embodied experiences to solve problems and reflect on the intricacies of the design of imagined worlds and the design of both real and imagined social relationships and identities in the modern world” (p.48). Even though Gee’s (2003) underlying principles on gaming experiences refer to video games, many of these principles can also be extended to quests or well planned activities in OpenSim that involve interacting with avatars or objects, performing specific collaborative tasks, such as solving mysteries, using postcards and utilizing other modes of communication or setting strategies that can aid in solving a particular mystery and learning a second or foreign language. OpenSim is an open source 3D virtual platform written in C#, a widely used multi-paradigm programming language. Second or foreign language educators can build in OpenSim, customize the virtual environment, and add additional software modules to enhance its functionality and design game-driven applications and experiences (see Berns, Gonzalez-Pardo, & Camacho, 2011). Both real-life and imaginary activities can be enacted or simulated in such virtual environments, which can transform learning by turning such experiences into immersive, highly engaging learning experiences (Helmer, 2007; Clark, 2009; Molka-Danielsen, 2009). Language learners can use their imagination, creativity, and engage in “long-term, joint coordinated action. In these spaces, cultures and meanings emerge from a complex set of interactions among the participants, rather than as part of a predefined story or narrative arc” (Brown & Thomas, 2009, p.2). Taking it a step further, Zheng (2012) advocates that “Built-in material and cultural artifacts are able to become affordances for players to create teams, groups, in which joint actions can be coordinated and sustained” (p. 547). But even in cases where students engage in collaborative actions with assigned peers, the actions can still be collaboratively coordinated through the assigned tasks, unpredictable turn of events during such game-based quests, or joint quests for solutions to inworld problem-solving events. Zheng, Newgarden, and Young (2012) maintain that such gaming experiences enact affordances not simply for coaction but also for a wide range of communicative activities, such as asking for help, exchanging strategies, and offering directions. In a similar vein, Cornillie, Thorne, and Desmet (2012) contend, game-enacted activities situate human development in theoretical frameworks grounded in problem-solving activities, experiential, collaborative, and distributed paths of learning. Most scholars would consent that game-based activities tailored for language learning are more effective if implemented in project-driven curricula where second or foreign language learners engage in goal-driven activities. In language contexts where the wide variation of gaming activities in such virtual settings is not explicitly linked to the learning goals and objectives, language learning will not materialize.
Barab et al. (2009) accentuate the transformational value of game-driven learning experiences, which “transform learners in three ways: (1) they transform a person from a passive recipient to an empowered actor, (2) they transform content from information that the learner has to remember to a tool that the learner can use to accomplish the desired ends, and (3) they transform context from an assurance that ‘this knowledge will be relevant in the future to a present reality that responds to the learner’s actions” (p.78). In essence, Barab et al. (2009) propose curriculum-enacted activities that are intended to immerse learners in roles that require asserting a sense of agency. The content is molded through meaningful goal-seeking actions that promote deeper learner engagement, and finally context is transformed by using such contextual information to perform actions in the current situation and not dwell on its future value. Initiatives to integrate in the curriculum such transforming learning experiences in OpenSim would require the design of goal-seeking activities where language learners would jointly partake in and coordinate their participation in goal-seeking actions, would jointly strive to complete tasks, engage in verbal interactions that would guide them in accomplishing a particular goal, and would use the artifacts and game-nature setting of this virtual environment to achieve their intended goal. Transformational learning during such game-like experiences would invite language learners to assume agency in deploying the artifacts, i.e., postcards, engaging in written or oral communications to organize and coordinate their actions. Interestingly, scholarly discussions highlight the experiential, socially-organized and goal-seeking nature of such cooperative game-afforded virtual experiences. However, very few resources exist on instructors’ insightful perspectives on the actual and multiplicity of processes and contradictions involved in designing, launching, and delivering successful game-like experiences in virtual learning environments, such as OpenSim. Instructors usually come across institutionally-organized initiatives and successful implementations of OpenSims and other virtual environments for educational purposes. However, not all instructors that are new to virtual learning environments form part of such organized and funded institutional initiatives. Consequently, there is a need to obtain experienced instructors’ perspectives on these complex design and delivering processes in virtual environments in order to build new more powerful, immersive, and transformative learning experiences for language learners.
Method

The study formed part of the Euroversity project, a three-year long study funded by the Executive Agency, Education, Audiovisual and Culture in 2011. Euroversity was composed of a large network of 19 organizations of educators, researchers, and practitioners in a wide multiplicity of fields who shared their expertise and knowledge and compiled multiple resources and guidelines to guide educators in teaching in virtual environments and launched new teaching courses in such virtual settings. In the second year of the project, educators, who were involved in compiling these resources or offering new courses or learning events in virtual environments, were interviewed. The interviews were to evaluate the effectiveness of these resources and enhance the guidelines in planning, designing, and offering courses in virtual environments. Instructors’ perceptions, opinions, experiences, and feedback were then used to revise these resources. Out of the nine interviews conducted via Skype, this study focuses on one educator, Franziska, a forty-three-year-old Austrian female learning consultant and educator who was actively involved in different aspects of the project. Franziska consented to participate in this study. A pseudonym was used to protect her identity. Franziska was selected mainly for her technological and pedagogical knowledge, extensive experience, and expertise in teaching and training in OpenSim and Second Life. Franziska was adept at combining students’ imagination, the semiotic resources of OpenSim, and task-oriented activities to design collaborative and transforming learning experiences for both students and instructors. Reflecting on her own teaching practices and collaborative language learning projects launched with other academic institutions, Franziska used her expert knowledge not simply to train teachers and educators to teach in OpenSim but also to devise practical, immersive, and transforming experiences for the students. Franziska was not apprehensive at all in sharing the institutional, technological,
technical, pedagogical, and learning contradictions emerging while designing and teaching in OpenSim or in other virtual learning environments.

The Chatterdale mystery in OpenSim

The Chatterdale mystery was designed in the virtual village of Chatterdale in OpenSim, which is a multi-user virtual platform often used by educators, schools, and academic institutions, such as the University of Cincinnati and Rutgers University for a wide multiplicity of teaching, research, learning, training, and even counselling purposes. Like many educators, for Franziska, OpenSim formed a gateway for designing highly immersive game-like scenarios that promoted student interactions through cooperative task-driven, goal-determined actions. The village of Chatterdale was carefully designed to feature a unique suburban community landscape design, combining elements of grass, scattered trees, and its craftily constructed buildings and structures, lighthouse, and various community resources and amenities. Chatterdale was a virtual microcosmic community, with its intricacies, mysteries, and above all extraterrestrial activities. The game was designed after students’ initial visit to Chatterdale, where they were intrigued by the absence of local residents. Consequently, 4 classes of 13 year old Norwegian and Austrian students, a total of 100 students, were immersed in a quest to explore what truly transpired in this virtual setting that had led to the disappearance of the local residents and later on to Professor Jones, a hunter who had confessed his suspicions on alien involvement in the local residents’ disappearance. Professor Jones’ aunt reported his disappearance to the local authorities.

This game-like experience was set in motion by an e-mail distributed to each team of Norwegian and Austrian students. Three different teams on three different missions were devised: (i) a debt collection team which was sent to Chatterdale to unveil what had led these local residents to stop paying their bills; (ii) a newspaper team which was invited to investigate local residents disappearance and compose a newspaper article on the topic; (iii) a railway team which was invited to investigate, report on the railway damage, and propose suggestions for its improvement. Each team was comprised of two Norwegian and two Austrian students, who eventually searched for clues, talked to the two remaining local residents, a priest and a drunk Chatterdale resident, and used inductive reasoning to discover Professor Jones’ and local Chatterdale residents’ mysterious disappearance. The award for the team completing the task first included some accessories for their avatars, while the team who discovered Professor Jones first won the competition. Each team had to compose a final writing assignment based on their role and assigned tasks in this game-like activity.

Research Instruments and Data Analysis

The data were collected during an hour-long interview via Skype and recorded using the screen recording software Camtasia. A questionnaire comprised of twenty-one questions was offered to Franziska prior to the interview. The questions were devised to solicit crucial information on educators’ previous experiences, training, and teaching in virtual environments, their perceptions, beliefs, and feedback suggestions on the relevance, usefulness, practicality, and applicability of these proffered project resources in teaching in multi-user virtual learning environments and suggestions for revising these resources. The questionnaire was only intended as a guideline during the interview and additional questions or clarifications were requested during that process. For a detailed
discussion on these guidelines on teaching in multi-user virtual learning environments, please refer to the wiki set for the Euroversity project (http://euroversity.pbworks.com/w/page/64358485/Final%20draft%209-March-2013#heading1).

The data were transcribed using Och’s (1979) conversational analysis procedures. Using Barab, Gresalfi, and Arici’s (2009) call for immersing students in transformational play, particular attention was paid on investigating Franziska’s use of the contextual affordances and constraints of the virtual village of Chatterdale to engage students in joint collaborative actions, interactions, and communications to solve a mystery. Students invitation to engage in game-like experiences where they were asserted a sense of agency in solving the mystery, coordinating, and engaging in dialogic exchanges with their peers and using the semiotic resources and constraints to reach their intended goal. Further, focus was also placed on Franziska’s design of goal-oriented actions that promoted, through the different demands imposed by the slightly different tasks that students needed to jointly complete, a more comprehensive understanding of the content, i.e., brief e-mails inviting students to visit the virtual village to investigate the disappearance of the Chatterdale residents. Finally, following Barab et al. (2009) and van Lier’s (2004) insightful discussion on the complexity and crucial significance of context, the study examined how Franziska used some of the contextual affordances and constraints a virtual environment shrouded in mysteries, rumors, and constant turn of events to help students solve the mystery. As van Lier (2004) notes, “in ecology, context is the heart of the matter” (p.5). Consequently, attention was placed on how Franziska perceived context and deployed those semiotic resources that turned it into a more interactive, immersive, and goal-driven virtual learning environment.

Results and Discussion

(1) Student-inspiration on the design of a riddle in a virtual microcosmic scenario

Designing and integrating in the curriculum, game-driven scenarios that enact affordances for engagement, agency deployment, action, and interaction is a dynamic but complex and multifaceted activity. Multiple contextual variables and constraints, as well as scenarios and genres, that promoted immersive game-driven experience and could contribute to learner engagement in actions, dialogical, and interactive communicative-oriented activities needed to be taken in consideration. In (1) lines 1-5, Franziska contemplated with her Norwegian colleagues multiple imaginative scenarios, such as vampire fiction, that would galvanize students’ interest and motivate them to engage and collaborate in imaginary game-play actions. However, instead of collaboratively developing a vampire fiction plot or any other game-driven scenario, Franziska became very perceptive of her students’ needs. She was inspired by her students’ repeated inquiries during a training session about a virtually enacted microcosmic society that featured some of the physical and material artifacts of a human society, such as shops and restaurants, but showed no signs of human life. Building on her students’ relentless quests to discover what really happened to the residents of this virtual microcosmic community, Franziska devised an intriguing science fiction scenario initially involving a scavenger hunt, where a granny who owned a lighthouse in the village of Chatterdale passed on but, in her will, informed all heirs that they could inherit the lighthouse only if they could locate it and solve the mystery behind it. Similarly, the actual plot involved alien abductions of local residents, vanishing of material artifacts, such as bikes, unlawful imprisonment of professor Jones, a mystery hunter who initially offered students clues about alien involvement in the mysterious disappearance of the local residents, and students’ role as investigators jointly collaborating to solve this mystery and free professor Jones who was suddenly imprisoned by aliens.
I mean there were many interesting aspects in it. One was certainly the story itself. We really thought it took us some time to: to come up with this kind of story. We really thought what topics would those students be interested in. And we thought about vampires, something and then many different ideas and then finally the inspiration came from the students themselves because, when they had this introduction session, one question they asked me is ‘where’ ‘Why are there no people?’ There are so many nice buildings, and there is a hotel, shop, and restaurant, and everything but where are no people. And I thought, yes, this is a good question ((laughs)) Where did people? So maybe let’s pick it up and build a quest around this question where: ‘what happened to the people?’ And to do it with Professor Jones and aliens.

For Franziska, instructional goals should be aligned with students’ interests, expectations, and what they perceived as salient in a virtual scenario embedded in goal-driven actions. Game-driven scenarios would enact affordances for verbal interactions, collaborative actions, and task-driven learning. As Franziska revealed in (2) lines 1-2, some students might have initially felt overwhelmed by the demands imposed by this multiscale storyline and might have solicited Franziska’s assistance, but none of the twenty-four students, who were so immersed and involved in their joint quest to solve the mystery, took a break during a one-and-a-half-hour session.

...some students were a bit over challenged by doing this, so they needed a bit more help than I originally thought, but it was anyway it was very nice to see how they how they engaged, how they got immersed into the whole thing. I had one class with 22 boys and only two girls and I’d never seen this class so concentrated. We had a 90 minute session and they had a break in between but nobody left the room, nobody wanted to use the break, they just stayed there and wanted to go on talking to the priest and looking for the code.

Franziska perceived and evaluated the meaning potential that a student-inspired quest could have had in creating new action-driven opportunities for engagement, interaction, and further action and new joint goals. In return, even though some students had initially struggled with the complexity of the enacted tasks in the game-driven virtual setting, they were so intensively engaged in their embodied experiences and the meaning-potential that these action-driven tasks generated that they persistently continued to pursue their joint goal of solving the mystery.

(2) Virtual investigations with real learning implications

Students’ participation in transformative play where they were constantly engaged in collective interactions, actions, and negotiations also enacted further affordances for transformation. In excerpts (3) and (4), Franziska provided a synoptic overview of how she utilized second-order resources, such as fabricated letters from Professor Jones to his aunt (lines 1-3) or written instructions in an e-mail from Amazon’s vice-president to thrust students out of the classroom to a virtual environment with new virtual identities, roles, and task-driven goals. Second-order resources also formed the pillars upon which affordances were enacted for joint actions, goals, and interactions. Each group had slightly different tasks, but all tasks were designed to enact affordances
for meaningful joint engagement through embodied action-instigated experiences. Whether asserting the role of a private investigator (excerpt (3)) or a debt collection agent (excerpt (4)), students embarked on a joint mission: to investigate the disappearance of the residents of Chatterdale.

(3) F: 1 …Involved is also Professor Jones who is a kind of mystery hunter, who was suspicious that some aliens were involved, and he wrote letters to his aunt, and suddenly he: there were no more letters, so the aunt went to this private investigation company and asked them to send people there to look for him

Each group of students perceived the action potential of these second ordering resources and jointly collaborated to unravel the perplexing puzzle of Chatterdale.

(4) F: 1 Therefore: \texttt{Mr.\ big \ vice-president} of Amazon sent his debt collection agents to Chatterdale on a debt finding mission. So these people who Well, the group who formed this team, the \texttt{debt collection agents} of Amazon.com, I distributed an email to them, yeah? So there they it just said that people from Chatterdale don’t pay their bill anymore. There is a list of people who should have paid. Go there immediately and find them and report about the status… And then they locked in there. They had their assignment find those people. They had the role. They had the context, and each of the teams had a slightly different assignment. So for all of them it was the same: find out what is going on there, but they had slightly different roles

As Franziska indicated in excerpt (5), lines 1-4, the two Norwegian students and two Austrian students in each team needed to collectively strive to unravel the clues by first locating the hotel and then exploring the different clues. Students also needed to exercise collective agency and take initiatives by soliciting information from the two survivors: an intoxicated Chatterdale resident and a local priest (lines 4-5). Both survivors were played by real actors. Consequently, students engaged in dialogic interactions in the target language, English, with their peers and the actors. They also engaged in deductive reasoning to collectively explore the clues, determine their actions, and reach their collective goal to be the first group to solve the Chatterdale mystery. The rich participation trajectories were contingent upon students’ interactions, collaboratively set goals, conscious choices, and participation in this dynamically emerging scenario. Students needed to engage in interactions in English in order to unravel the multiscale plot, which included the verification of Professor Jones suspicions of the existence of aliens (line 7), the aliens return to Chatterdale to retrieve their salient power source (lines 8-9), and the Chatterdale residents’ disrespect against this sacred place, which resulted to the residents’ and Professor Jones’ imprisonment in the secret cave (line 16), and the aliens’ series of miscalculations and mistakes in imprisoning all Chatterdale residents (lines 11-14). Students were engaged in an emergent and ongoing scenario which required first-order languaging to instigate and participate in verbal interactions, goal-driven actions, enact a group identity, and set new goals in unraveling this extraterrestrial mystery.

(5) F: 1 …Then they went to Chatterdale. They had this mixed teams, two Austrians, two Norwegians, and they had to: In this email, there: was the start-up point was indicated. For example, first go to the Health hotel and talk to my friend there, yeah? And they found a hint there, and then they found two survivors one
drunken guy in the bar, and one priest in the church. And those two obviously survived and nobody really knows why. And then later on, they found out that indeed Professor Jones was right there were aliens who had used this location thousands years before and they had stored some secret source of power there. And when they [aliens] came back to fetch these power balls, they saw that there was a village there and they thought that people there spoiled this holy place, and therefore they teleported them away. But the alien who operated the teleporter, made a mistake with the set co-ordinates, so all the people who were below ground, like the priest in the catacombs and the drunk guy in the cellar were not taken by this teleporting radiation, so there is a reason why they survived… And then finally, the students found Professor Jones who had found out about this, who found the secret cave…

Engagement in first-order languaging was also the primary goal of this game-driven scenario. Franziska situated this scenario in a virtual space where student-instigated verbal interactions in English would galvanize their actions, perceptions, and generate new cultural meaning by solving this mystery. Composing a reflective written report, in the form a newspaper article, a billing report, or a report for the railway damage, also prompted students to jointly collaborate to generate this final piece of writing.

(3) Unraveling the Chatterdale riddle: Situating content in an ecosocial system

The Norwegian and Austrian students were teamed-up in this ecosocial system of the virtual village of Chatterdale where their learning of the target language was not contingent upon traditional institutional curricula or scripted dialogues in assigned textbooks to promote verbal interactions in English. Instead, as Franziska noted in excerpt (6), the learning landscape was transformed by the meaningful participation in a sociocultural environment where Austrian students teamed-up with Norwegian students to engage in verbal interactions in English to collectively explore this string of clues and solve this extraterrestrial riddle.

(6) F: 1 What I liked about it was, of course, this teaming up with Norwegian students because I think this is really one of the big advantages of the virtual worlds that you can draw language courses out of this artificial classroom, where everybody speaks German, but now we do as if we could do only English, and this is so artificial. But as soon as you are in this world and your peers only speak English and Norwegian, you just have to speak English. And It was very nice to see how the students got into this. How they were a little bit shy at the beginning and then later on it came very natural to them.

This traditional ESL classroom in Austria was subject to the limitations arising from the physical set-up of the classroom, where the students were facing their teacher, and the geographic limitations which inhibited interactions with other second or foreign language learners. All students spoke German (lines 3-4) and were learning English in a rather artificial, non-authentic context. In this new virtual game-driven environment, Austrian students used first-order languaging by being immersed in these embodied experiences, jointly determining their actions, understanding the importance of using the target language to successfully solve this riddle, and finally to compose a newspaper article,
a report for the Amazon vice-president justifying the billing and other related costs, a report on the damage of the Chatterdale railway, and offer suggestions to resolve the situation. As Franziska indicated in a follow-up e-mail, “the writing assignment was closely linked to the fictitious identity of each team.” Here, it could be argued that Franziska’s design of the game-play script also promoted identity construction in a virtual environment as a path to enact new affordances for joint collaboration, meaningful participation in actions, verbal interactions, and learning. Even though the students hesitated at the beginning because they were “shy,” they were gradually immersed in this learning excavation (lines 7-8). The game-driven scenario did not inhibit students’ learning. To the contrary, this historical game-driven learning experience transformed students’ learning in distinctive ways by enacting affordances for dynamic and emergent engagement in collaborative actions and interactions to successfully achieve their goal. Instead of recalling grammatical structures, pragmatics, or etiquettes in dialogic interactions, students engaged with content in historically and culturally changing ways that are not afforded by traditional classrooms. Their engagement in joint actions was constructed on meaningful game-driven quests with real learning implications in culturally and historically emerging virtual communities (see Gee, 2003, 2007 for a discussion on content in game-driven contexts).

(4) Chatterdale as an interactive contextual experience

The virtual game-play experiences in Chatterdale redefined context, collaborative engagement, and transcended learning in interactive, embodied experiences where students and instructors needed to contemplate the material, cultural, and technological values, constraints, and contradictions of the virtual context. As Franziska discussed, engaging with such a virtual environment was a novel experience for the students: “...For many of them [the students], this whole idea of being thrown into such a quest was quite new.” In this contextualized virtual learning experience, students needed to develop and apply in practice a set of skills required to control their avatar, navigate through Chatterdale, use the oral and written modes of communication to interact with their peers (lines 2-3), tune out distractions, and focus on the task (line 5). It is a cognitively taxing process, where students needed to explore and interact with the environment, its wide multiplicity of artifacts, content, and their peers, but at the same to master the socially, historically, and culturally acceptable rules and constraints of their participation. As Franziska advocated in excerpt (7), the participation trajectories often drew on real-life social, cultural, and learning values (lines 10-11). However, to collaboratively participate in actions, purposeful game-driven activities, and verbal interactions, students needed to overcome these contextual constraints, make conscious choices, and focus on their joint goals (see Zheng et al. 2012 and Zheng, 2012 for a discussion on students’ participation in collaborative actions). Students needed to direct their attention, identify, and to pick up the second-order resources, such as fabricated letters from Professor Jones, as path to enact affordances that would galvanize students’ collaborative actions, dialogic interactions, and would guide them in solving this virtual extraterrestrial riddle.

(7) F: 1 ...They [students] have to handle the environment. To make sure that they see properly, that their avatar walks where they want him to walk. They have to manage communication with their peers, via text chat, via voice. Uhm maybe in a noisy environment where others speak as well, maybe with voice not being very clear. And on top of all of these, they have to find hints. Uhm see what’s lying around. There is a letter lying on the floor in front of the post office, for example. And it’s a bit difficult to understand, but in a virtual world often people don’t see this le: letter laying [lying] there, because there is so much else going on at the
9  same time. So they really have to get a bit into this and learn to behave in the
10  virtual world as they would in real world as well.

For Franziska, access and engagement with the virtual village Chatterdale did not suffice for active and productive language learning experiences, but students should also pay attention to and take up those contextual affordances that would engage them in productive game-driven learning activities (see Van Lier, 2004 for a discussion on access, engagement, and attention).

Discussion

Game-driven learning experiences should be envisaged as part of an ecosocial environment where participation, exploration, and engagement with the semiotic resources enacts affordances for understanding, evaluating, and determining their potential and constraints for learning, collaboration, and design of meaningful and engaging scenarios. Van Lier (2004) strikes a core when he deftly notes that “A learning environment is not one in which a teacher throws linguistic signs around like an eccentric billionaire might throw dollar bills, nor one in which bills of various linguistic denominations are doled out piecemeal by a grammar miser” (p. 81). Game-driven learning activities in a virtual learning environment should be designed and integrated as part of learning by drawing on those critical connections between students’ interests, instructional goals, objectives, and intended outcomes. In this study, Franziska’s teaching experience in Chatterdale indicated the role students could play in the decision-making process of designing the game-driven learning scenarios. Consequently, to address the first research question of the study, students’ expectations of encountering a virtual community with its local residents formed the grounds for designing more immersive game-driven learning experiences. However, Franziska used her imagination, innovation, and creativity to enrich the plot and devise a scenario that was aligned with students’ interests, learning needs, and imaginations. She did not reach a conclusive decision beforehand instead she relied on her students’ inquiries. Involving students in the decision-making process of the game-driven activities contributed to the design of more immersive and pedagogical potent learning activities. As an instructor, Franziska proved to be very perceptive and attentive to her students’ interests and learning needs, which guided her in finally designing with her Norwegian partner the mystery plot in Chatterdale that captivated her students’ interest. In terms of the second research question, students were immersed in different virtual roles and ventured out on a quest searching for clues and evidence that could shed some light to Chatterdale residents’ disappearance. Their roles were no longer bound to the traditional classroom participation trajectories or roles, but were more engaging, collaborative, and active. The students not only participated in virtual learning community of Chatterdale, but also had to jointly set goals, engage in action, identify further clues, and put the pieces of the puzzle together. All these jointly enacted actions were afforded by students’ verbal interactions. As Zheng et al. (2012) indicates, such game-driven experiences require agency to set goals, actions, and verbal interactions (see also Zheng, 2012; Barab et al., 2009). Barab et al. (2009) also show that “Rather than working on problems in which they must imagine the implications of their decisions (as in most project-based works), students experience consequentially” (p.77). Franziska discussed how the activity was designed to engage students in a constant flow of events where students needed to instigate, participate, and coordinate collaborative actions. These engagement trajectories were contingent upon students’ verbal interactions and collaborations. In reference to the third research question, regarding content transformation, Franziska reflected on the importance of not simply transforming engagement in language learning where all students spoke German but attempted to learn English. In Chatterdale, students had to actually initiate and
participate in verbal interactions in English because most of their Norwegian partners did not speak German. Initially, the game-driven environment appeared to be artificial but as the quest became meaningful and immersive, students became engaged in socially and historically collaborative and emerging practices and communities. Gee (2003) asserts that “it is in these social practices that ‘content’ is generated, debated, and transformed via certain distinctive ways of thinking, talking, valuing, acting, and, often, writing and reading” (p.21). In the process, Franziska illustrated the importance of identity construction in this emerging scientific scenario virtual learning experience. Finally, to address the fourth research question, Franziska demonstrated that contextualizing students’ learning experiences in this ecosocial environment was cognitively demanding, often generating tensions with engagement with the multiplicity of semiotic resources which can often act as distractors (see Thorne, 2003 and Hadjistassou, 2012 for a discussion on contradictions in virtual settings). However, as students overcame these contextual constraints and contradictions, their engagement with context was deeper and more meaningful than a traditional classroom context. Students also focused on the affordances that opened the path to participate in game-oriented experiences. To borrow van Lier’s (2004) powerful claim, in this ecosocially enacted environment, “context… [was] the heart of the matter” (p.5).

**Conclusion**

Moving content, context, and language learning to virtual realms can expand learning in an ecosocial environment where imagination, game, learning, joint participation, and interactions afford transformative learning experiences. As Franziska indicated in this study, the nature of game-driven activities and the dynamics involved in the design and actual implementation of these activities are rather complex and multifaceted and require student feedback, engagement, and active participation in captivating scientific scenario plots. The virtual Chatterdale village transcended the imaginary scientific scenarios of extraterrestrial activity and enacted affordances to experience, engage, and jointly undertake multiple actions to unveil the extraterrestrials involvement in mysterious disappearances. However, whether involving quests or collaborative explorations, language teachers should be well aware of the benefits, constraints, and contradictions of teaching, learning, and collaborating in virtual environments like OpenSim. At the same time, they should also be aware that involving students in such fantasy role-playing and problem-solving activities can enact affordances for active engagement, instigation of and participation in collaborative actions, actual verbal interactions in the target language, which are often required to reach a particular goal, and can immerse students in an exploratory quest with real language learning implications.
References


