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Creating Meaningful Learning Opportunities Online

Hafdís Guðjónsdóttir, Svanborg R. Jónsdóttir & Karen Rut Gísladóttir

In recent decades, the use of information and communications technology has provided opportunities for student-centered education that enables students to control and influence their own learning. The impact of technological change has also presented new challenges for educators as they teach increasing numbers of courses online. These new settings sometimes create tensions for students and teachers (Oliver, 2003) but also offer opportunities for new ways of learning and teaching.

This calls for new thinking in teacher education. As teacher educators at the School of Education of the University of Iceland (UI), our response to these opportunities and changes has been threefold. We developed an engaging online learning environment, expanded our constructivist teaching approach, and created a collaborative self-study of our practice. In this article we will present findings from the self-study, describe how we organized a course on inclusive practices taught in a blended format (i.e., online, along with intensive on-campus sessions), and discuss the successes and challenges we have met. We focus here on how we developed the online learning environment, students' activities, and interactive communication.

Context & constructivist pedagogies

The UI School of Education has offered distance education for undergraduate and graduate students for more than two decades. The undergraduate programs have offered both campus-based and distance courses, and the graduate programs have offered mixed distance study that includes three to five days of intensive sessions on campus per term in what are often referred to as blended/hybrid courses (Jakobsdóttir & Jóhannsdóttir, 2011). One such course is *Working in Inclusive Practices (WIP)*. There have also been changes in the programs, so course sections now consist of students from several majors who have a wide range of teaching experience and different school-level concentrations.

Distance learners and online courses

Findings from research on hybrid courses at the UI School of Education indicate that students who choose to pursue their studies online differ from those who choose traditional face-to-face courses on campus. Online students tend to be older, live farther away from campus, and have a heavier workload (Jakobsdóttir & Jóhannsdóttir, 2011). These findings also indicate that younger students and students who live farther away tend to want fewer meetings on campus and prefer to use the time there more for discussion and collaboration and less for listening to presentations. In a further study on the quality of these blended courses, findings indicate that students had concerns about the organization

the class schedule, conflicts between courses, cost, poor use of students' time, and confusing overall organization of the courses (Jóhannsdóttir & Jakobsdóttir, 2012).

The importance of using new technologies in a structured way and giving students opportunities to participate through teleconferencing or online conferencing emerged prominently in these findings and became an important factor for us as we developed WIP. We believe that intensive sessions on campus are important for networking, collaboration, and hands-on work. A study conducted at the University of Akureyri on an online course that students could take any time during the term, at their convenience, showed that most students were satisfied with the opportunity to study that way. They also reported that it can be lonesome to study online; therefore, it is important that teacher educators respond to students' questions both regularly and quickly. However, half of the students did not want to have more than one course per term organized this way (Björnsdóttir, 2012).

These findings indicate that students want diverse course formats as well as flexibility in their studies. This situates teacher educators at the forefront of creating learning environments that respond to diverse learners and their resources—the personal qualities and strengths that emerge from and shape a person's life experiences and actions (Rodriguez, 2007)—and to “walk the talk” as they develop inclusive practices.

When student teachers decide to enroll in online teacher education programs, they have to learn new ways of studying, including participating in virtual collaboration and forum discussions. However, if the changes needed to support learning are not accepted and facilitated at the institutional level, there can be tensions and frustration (Jóhannsdóttir, 2014). The teacher education department needs to acknowledge the emerging paradigm by adjusting rules and the division of labor in accordance with the new model (Jóhannsdóttir, 2014).

Supporting competence for teaching in inclusive schools

Our focus on inclusive education (IE) and innovation education was central to the creation of the course. Both are social constructivist approaches. Learning through social interactive processes and developing community through cooperative group discussions has become part of our teaching practice. Through reflection and dialogue, students gain the opportunity to develop new understandings and shape their learning (Farren, 2009; O'Donahue, 2003; Shor & Freire, 1987).

Inclusive education (IE) is an educational policy that involves consistently developing a system that offers equitable learning opportunities that build on students' resources. It is based on universal inclusion, accessibility, and the participation of all students. Diversity in the student population is embraced; all students are welcome at school (European Agency for Special Needs and Inclusive Education, 2014; UNESCO, 1994, 2008). However, accessibility to the school system is not enough; all students must have the opportunity to participate in a meaningful way. Inclusive schools therefore require teachers who have the competence and values to build on all students' resources and who are ready to institute inclusive practices (Guðjónsdóttir et al., 2007; Reynolds, 2001). As candidates enter

teacher education programs, they bring valuable resources—their talents and skills, built on their experiences, knowledge, and beliefs—to their studies. Our intention is to draw upon these resources as we establish a learning environment that supports students in making meaning and taking action in their teaching settings (González, Moll, & Amanti, 2005).

Innovation education

In 1999 innovation education was introduced in the curriculum of Icelandic compulsory schools (Ministry of Education, Science, and Culture, 1999). Innovation education—or innovation and entrepreneurial education (IEE), as it is called in Iceland (Jónsdóttir & Macdonald, 2013)—is about applying creativity and knowledge to meet needs or solve problems that learners identify and consider important. IEE inherently involves social constructivist pedagogy with culturally sensitive approaches that link students' learning to everyday life (Gunnarsdóttir, 2013). The aims of IEE are to help people develop the capacity for action and critical and creative thinking through dealing with real-life issues (Jónsdóttir & Macdonald, 2013).

We introduced IEE into the course as a creative approach that encouraged inventive ways to deal with difficulties and issues of living in the modern world, and in particular with being a student teacher and becoming a responsive educator. The core pedagogy of IEE has been defined as emancipatory pedagogy, where learners are creative explorers and the role of the teacher is to be a facilitator rather than an instructor (Jónsdóttir & Macdonald, 2013). Inclusive practices call for teachers who have the pedagogical competence to respond to diverse groups of students. Teachers need to have a strong grasp of content areas, understand child development and individual differences, and be committed to the education of all students. Their competence lies in their ability to use their knowledge to create learning spaces where diverse students can benefit from their education (Guðjónsdóttir, 2000). Through the approaches and the pedagogy of IEE, our goal was to help teacher candidates develop creative teaching skills and create learning opportunities for diverse groups of students in inclusive schools.

Self-study in a blended course

The purpose of this study was to see how we could create an online learning environment as part of our course on teaching diverse groups of students in an inclusive practice. Our intention was to give the students opportunities to participate in meaningful learning moments in a diverse group, applying creativity and knowledge to solve problems that they identified as they worked in inclusive settings. The goal of the study was to understand and learn about the opportunities the online space affords. Thus, the research question was: How can we create meaningful learning opportunities online? We wanted to learn how to create a constructivist teaching and learning community online within the blended course we taught during the spring term in 2013 and 2014.

A self-study methodology grounded in an understanding of the action-reflection-learning-action cycle guided our inquiry (Bodone, Guðjónsdóttir, & Dalmau, 2004). However, we not only reflected on our practice but also generated questions about our teaching and how we could respond to the

challenges we faced teaching online (Korthagen & Kessels, 1999). By focusing on our collaboration, planning, and teaching as well as on students' participation and learning, our understanding of the affordances of online teaching began to emerge. To understand our practice more deeply and to support our findings as self-study practitioners, we attend to the voices of our students to see if they provide evidence for our claims (Pinnegar & Hamilton, 2010).

We examined what we were doing, and how and why, in order to further understand our practice and to foster our development in becoming critical and responsive at the same time. Our intention was to offer students quality education that was practical and empowered them as professionals. In addition to the three of us, groups of students that included both experienced teachers and student teachers participated in the study.

The course is an elective and takes 13 weeks. It is taught online, along with five intensive days on campus in four sessions (one two day session). The data we gathered over the two years of the study included minutes and recordings of the meetings we held to prepare for the course and to analyze it, as well as of our professional discussions; e-mail communications; tickets out of class (TOCs); documentation from the online program; and students' assignments, discussions, and projects.

As we discussed and critically reflected on the teaching and learning, the data analysis took shape. Each of us looked at the data with an open mind and coded it by marking incidents and issues that interested us or spoke to us. In the next step, we focused on looking for evidence of constructivist pedagogy—how the learning environment was responding to student resources and providing opportunities for learning. Then we further analyzed the data together, combining and expanding the emerging findings in light of the research questions, through discussions and writing. We thus constructed an understanding and a description of the learning environment we had created.

Creating learning opportunities online

Two different groups of students participated in the class; some attended the blended course and others chose or needed to take the course completely online. We refer to the first group as blended distance students (BDS) and the second group as online distance students (ODS).

We wanted to respond to the students' diverse needs by organizing an active and supportive learning environment online as well as on campus. Our response was twofold: (a) we maintained the online learning environment for both groups of students during the in-between online sessions, and (b) we designed an additional learning space for the ODS in place of the on-campus sessions.

Designing learning environments

In the course, we introduced various teaching methods, different approaches to gathering information about students, and a variety of ways of designing inclusive learning environments. In addition, we emphasized collaboration with parents, colleagues, professionals, and paraprofessionals. To meet

the course objectives, we focused on teaching approaches and educative assessments known to be effective with diverse groups of students. However, we intended not only to introduce the students to different teaching methods, but to use those methods in our own teaching as well. One of our students said:

The way you organized the lessons was informative; instead of letting us just read about multiform teaching strategies, you used them in class. After each day we listed the strategies and it was surprising how many you used and convinced me that it is possible to use many different strategies in our teaching. (Haraldur, self-evaluation report, 2014)

The course is grounded in students' independence, responsibility, and participation, and we organize lectures, projects, collaborative work, discussions, formal assignments, and educative assessment accordingly. During the four intensive sessions on campus, we designed a learning environment that was active, creative, hands-on, and supportive, and we encouraged students to make use of the resources within the group. Students responded positively to this approach; as one commented, "It has been educational to attend the sessions on campus, work on the tasks and projects, and to connect with the students in a dialogue or work" (Jóhanna¹, course evaluation, 2014).

In planning the course, we built on and expanded each other's ideas. For example, in one meeting Svanborg suggested building on students' resources and Karen suggested we could ask students to write a case history that begins "I remember." Hafdís took that idea further, pointing out how to use that story for us to analyze the resources students drew on in the case they described. Students appreciated the versatile teaching and learning methods we offered:

I have got a lot out of the face-to-face sessions and the discussions have been interesting, and the multiple teaching strategies will certainly help me in my future teaching job. (Johnathan, course evaluation, 2014)

This was not a surprise, and it is consistent with our previous experience. However, as we reflected on these responses, we felt it was important for the ODS's learning experiences to be similar to the BDS's. In spring 2013 we decided to develop assignments for the ODS that were like the creative hands-on projects and discussions on campus. We developed this approach over two years; it creates valuable learning opportunities for the ODS and gives us an opportunity to follow their learning progress.

Online environment for all

The in-between online sessions consisted of discussion threads about the topics we were focusing on,

¹ All student names used in this essay are pseudonyms

readings, and presentations. During online sessions students worked independently on different assignments and presented them on the course site either individually or in groups. Initially we were not prepared to post all the small assignments and projects from the on-campus sessions, but in 2013 we decided to respond quickly to the students that did not attend on-campus sessions and uploaded each presentation. We also created different folders for turning in the hands-on assignments. This made the online learning environment, Moodle, more complex than we had planned. The students pointed out that our Moodle site was becoming confusing; one student described her experience:

In spite of being very satisfied with the course as a whole I found the system online confusing. There was a lot going on in Moodle both in discussions and [when we were] turning in tasks and projects. I was constantly afraid I would miss something. (Póra, self-evaluation report, 2013)

This view was common among the ODS because they had to turn in a number of hands-on assignments and various small projects that the BDS finished during on-campus sessions. We have responded to these comments by working on overcoming the limitations of the Moodle environment.

Between the intensive on-campus sessions, all the students used Moodle to discuss different themes, connecting reading materials to their own experience. This turned out to be a challenge. Even though students presented their thoughts, it seemed harder to develop them into real discussions. One student described her experience:

It is very hard for me to start discussions on Moodle. I also do not find the so-called discussions to be real discussions. Often I was just repeating what the last person had said and I found that a bit pointless. (Linda, self-evaluation, 2014)

As we analyzed the data in spring 2014, we decided to respond to the issue of online discussions and develop a different format for the following year. Our idea was to create a space for students to write articles about education and post a few at a time for responses and discussions.

Transferring active learning on-campus to online learning

As we realized the importance of the hands-on tasks in on-campus sessions and of the positive feedback from students, we wanted to create similar learning experiences for the ODS.

Activities on campus and on line

All the presentations were recorded and uploaded to Moodle along with their accompanying slides. We modified the activities and created discussion threads. At our meetings, we talked about those changes and our rationales for them:

H: In the last on-campus session we saw that students who attended were engaged in the tasks we provided. And the TOCs also showed that they felt active and engaged.

K: Making the online tasks is enacting the nature of our pedagogy; it is about whether the tasks are engaging and creative and empower students.

S: We are transferring the experience to online students. It is about caring about those students enough to give them similar learning experiences as [the ones] we designed for the on-campus sessions. (meeting, February 2014)

One of the tasks transferred from on-campus to online learning was using recyclable materials to convey the message taken from a film about a teacher who connected with her students through writing. All of our students watched it before attending the on-campus session, and in class they reflected on it, analyzed it, and related it to what kind of teachers they wanted to become. Our classroom became lively, and students were creative as they used recyclable materials to represent how the work of the teacher affected their own thinking. We wondered how to transfer this opportunity for thoughtful learning to the online class environment and whether the ODS would respond to this assignment. In her journal, Svanborg wrote:

I wonder how the ODS will do this task—will they resist it? And will they experience the same creative buzz I saw with the students doing this in small groups on campus?

The ODS followed the instructions and, in their various locations, used recyclable materials, made their representations, and uploaded a picture of the outcome (Figure 1) accompanied by a written description of it. Sigríður wrote:

The teacher is immersed in reading the students' journals. You can also see the diverse group of students in her class with a journal in their hands; they are actively writing in their journals. I wanted to show how the writing in the journals taught the students to be open and talk about their experience and how writing got them to trust the teacher. (Moodle task, 2014)

In discussing the outcome of the online activities, Hafdís pointed out that the ODS seemed to welcome the opportunity to work online, display their projects, and explain their process. She described how the response to these online tasks surprised her and said that they were worth pursuing. She could feel the engagement and found it exciting that the students understand and construct their



Figure 1 Sigríður's interpretation of the film

knowledge in different forms (meeting, May, 2014). We felt the students' excitement as we studied their creations, and we have continued to structure these tasks for the online learning environment.

One of the things we did was to open up a forum for all the students to develop their own professional working theory (PWT). PWT builds on three components: practice, theory, and ethics—that is, on the often hidden foundation of everything teachers do or wish to do in their teaching. To support students in critically reflecting on their work, participating in discussions about theory, and developing a personal statement, we used the PWT instrument, which consists of three pages of questions about the three components. During the on-campus sessions, the BDS interviewed each other about their reflections on practice, theory, and ethics. The ODS interviewed one another in pairs, using online programs for a video call or a cloud meeting. They recorded their interviews and used the information they collected as they pulled together their personal PWT. This activity supported students in communicating and reaching out to each other as they worked on their task.

Supportive online learning environment

The ODS appreciated the online learning environment. Salvör was one of those who felt it had empowered her:

I listened to all the recordings of presentations and they were well organized. They were immediately uploaded and that was very helpful as I could then [do the] work right away and turn [it] in on Moodle. I am used to studying online and found it rather easy to do those lesson-tasks alongside listening to teachers' presentations. I loved reflecting on and contemplating the different issues and tasks such as making artifacts and things with my hands. (self-evaluation report, 2014)

Other ODS expressed similar views, and many of those students were grateful for the quick responses and feedback. Guðrún said, “It was very easy to get assistance from the teachers online, they helped me when I was stuck and answered my questions quickly” (self-evaluation report, 2014). Linda, who was teaching while she was pursuing her studies, said she noticed that the course changed her thinking about inclusive schools and that she now looked at her students differently: “I started to look at each group as a whole with collective strengths and resources, rather than just focusing on their individual shortcomings” (self-evaluation report, 2014).

Throughout the course, we developed different hands-on creative tasks; one of them was having students use Lego blocks to interpret their experience of the course. This was a challenge for both the BDS and the ODS. However, both groups became engaged in the activity, highlighting their individual and collective experiences. The ODS photographed their symbolic Lego interpretations to upload on Moodle along with written statements about them. Describing her Lego representation of the course (Figure 2), Sigrún explained:

In the middle the teachers drive a yellow car representing the knowledge for students delivered in different directions. The lines symbolize the routes to learning materials that the teachers opened in order to meet and respond to different needs in the student group. The wheel represents the freedom we had choosing the topic for our final assignment and how we presented it.



Figure 2 Sigrún's interpretation of the course

Behind the teachers, I sit in front of a yellow window representing my computer screen. The plant

shows that even though I was at home I experienced good connections with the teachers that responded quickly.

Indicators of the ODS's engagement and experience of the online environment were also evident in other data. Anna wrote:

I evaluate this course as very good, highly educational and well planned. I have learned a lot as I described in this report in detail and I have been able to take it completely as a distance course as my situation does not allow traveling to Reykjavík to every on-campus intensive session and for that I am very grateful. (self-evaluation report, 2014)

These statements and other data show how the ODS approached their tasks in creative and thoughtful ways. However, there were also incidents that shed light on various challenges that students encountered, such as loneliness in doing projects by themselves, missing face-to-face interactions with fellow students and teachers, and having to express themselves in different ways.

Throughout the term, we wondered how well we did in creating an active learning environment online. We found it to be daunting but also exciting as it offered the potential for our growth and development as teachers.

Travelling from past to future

Our intention was to design a dynamic, hands-on course on inclusive education that used IEE approaches and built on student resources. Our previous experience in organizing online discussions had generally been successful; students participated in meaningful conversations that sometimes were led by the students themselves and sometimes were led by teachers. However, this time was different. The students felt that the discussions became more like reports or summaries of the readings, with little continuity or flow, and that they didn't learn much from participating in the online exchanges. The dialogue and critical reflections we aimed for didn't occur (Farren, 2009; O'Donahue, 2003; Shor & Freire, 1987), so in spring 2015 we created an online platform with guided discussions among smaller groups of students about articles they wrote and posted. We are learning that this better reflects students' critical thinking. In addition, because students found the Moodle environment to be increasingly complicated, in spring 2015 we began to reorganize it, providing more structure. We intend to continue improving it.

According to our findings, students were satisfied with the on-campus sessions. They liked having face-to-face classes, interacting with other students and teachers, experiencing multiple teaching strategies, participating in hands-on activities, and receiving direct support. We decided to adapt the versatile teaching methods and various tasks for an online environment by adding a learning space for the ODS. This was a challenge, but it also led to solutions that expanded student learning opportunities. We found this experience exciting as we had to learn new ways of teaching and often spent

considerable time during our meetings figuring out how to achieve this goal.

For online teaching to be successful, its development has to be facilitated at the institutional level, and teacher educators need to be supported in tackling the new learning system and overcoming frustrations (Jóhannsdóttir, 2014). The UI School of Education can accordingly support the development of online teaching by acknowledging the extra work needed to create comparable tasks for both on-campus and online students, allowing additional time for meeting with students in blended courses, and providing online platforms that are more interactive (e.g., by enhancing Moodle).

In spring 2015, when we used the model of implementing on-campus tasks online for the third time, we succeeded in responding quickly to the ODS, much as we do when we teach in face-to-face sessions. Through the self-study, we have come to think that the next step might be to offer online meetings with small groups of ODS after the on-campus sessions.

It was interesting to experience how the ODS responded to the modified activities. Using innovation education helped students apply creative thinking and solve problems instead of avoiding the tasks. We aimed to view our students in their totality, build on their resources, and encourage them to draw on those resources as they become responsive teachers in inclusive practices (Guðjónsdóttir et al., 2008; Rodriguez, 2007). In order to allow the ODS to experience the same or similar activities as those we had designed for on-campus sessions, we transferred those activities to an online environment and learned valuable lessons for our future work from this experience.

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