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Bringing the Real World in: Reflection on Building a Virtual Learning Environment

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ABSTRACT *We reflect on translating participatory and experiential learning methodologies into an online teaching environment through a Virtual Learning Environment (VLE) that simulates the 'real-world' contexts of international development in order to develop an applied critical understanding of gender analysis and gender mainstreaming. Rather than being prescriptive, the paper aims to contribute to the growing body of literature that emphasizes the potential of using online technologies for providing opportunities for experiential and work-integrated learning. Our experience leads us to conclude that VLEs provide opportunities to facilitate knowledge contextualization and prepare students for an uncertain and complex world of work.*

KEY WORDS: ELearning, virtual learning environment, gender analysis, gender mainstreaming

Introduction

The introduction of a Graduate Certificate in *Gender Mainstreaming Policy and Analysis*, focusing on gender responsive public policy and practice, to be offered in both campus-based and distance learning modes, presented us with an opportunity to develop two new core topics. Integral to the development of these topics was the creation of a Virtual Learning Environment (VLE) that translated and adapted participatory and experiential learning methodologies used by gender and development trainers for an online learning space. The Graduate Certificate caters to a diverse student body drawn mainly from government and non-government organizations (local and international). Most of our students are seeking to update or improve their existing professional skills and qualifications for a career in multilateral development agencies, government planning authorities and non-government organizations. These organizations are, increasingly, calling for graduates who are proficient in conceptualizing and integrating gender considerations into policy-making, project design and implementation, and monitoring and evaluation.

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The Graduate Certificate, offered by Flinders University, Adelaide, Australia, is a part-time 18-unit programme, completed over four semesters. Students must complete two core and two elective topics. Each topic is worth 4.5 units, which equates to 9 h per week of study time. Here, we focus on the core topics DVST 9031 'Gender Analysis' and DVST 9032 'Gender Mainstreaming' as they presented us with the opportunity to create a VLE that could be used across both topics dealing with different but related concepts, tools and techniques. DVST 9031 introduces key concepts and frameworks used by practitioners working in international aid agencies, non-government organizations, government agencies and community-based organizations, to unpack gender issues in policies, programmes and projects across a range of sectors from health to transport and infrastructure. DVST 9032 considers various components that make up a strategy called gender mainstreaming. The purpose of this strategy is to embed gender equality considerations into the work of organizations to achieve equitable and sustainable economic and social development outcomes. Since 2008, DVST 9031 and 9032 have been offered in semester 1 (March–June) and semester 2 (August–November) respectively. The average class size of 15 increased to 30 in 2011, when these topics became core components of the Master's in International Development and Master of Health and International Development.

In this study, we discuss students' evaluations of adopting the VLE as a platform for learning. They substantiate our argument that online learning spaces can provide students with opportunities to develop an applied critical understanding of key concepts. Our case study offers relevant insights for any human geography subfield where students can achieve a critical understanding by applying concepts and frameworks within specific real-world contexts without having to leave the (virtual) classroom. More broadly, it shows how eLearning technologies can help to re-conceptualize the design of teaching, learning and assessment (Rice, 2009) based on a constructivist view of learning that emphasizes collaboration, reflection and awareness of multiple inequalities. This is particularly important for disciplines producing interventionist practitioners, because, as Harvey (2000, p. 560) argues, to "remake the world's geography in emancipatory and practical ways . . . requires a deep knowledge of what kind of geographical world we are intervening in and producing." We begin by outlining why we adopted a VLE approach and describe the learning environment we created.

Innovation Drivers

Three important considerations have shaped our decision to create a VLE: a constructivist view of learning, the increased demand (and push) for learning that prepares students for work and the internationalization of teaching and learning. We will discuss each in turn.

Drawing on a constructivist view of learning, we believe that "knowledge is constructed by the individual through his or her interactions with the environment" (Rovai, 2004, p. 80). Facilitating this process requires adopting a participatory learning approach that has been defined as "engaging students in the construction of products requiring practises that embody complex concepts, necessitate collaboration, and contextualize learning within contexts in which problem solving and inquiry are fundamental aspects of the learning process" (Barab *et al.*, 2001, p. 48). Collaboration alone is not enough. We need to be reflective practitioners as well—exchanging ideas and reflecting on them both individually and collectively with our peers. Turning the lens both inwards and outwards to evaluate experience is an important part of building a knowledge base. This involves turning the

lens inwards and onto the classroom itself because in many ways the teaching team and student body are a microcosm of the outside world: replete with inequities, power imbalances, diversity in skill sets, languages and cultural backgrounds.

Another aspect of a participatory learning approach is encouraging praxis—the ability to put into practice what we have learned and to come up with creative and equitable responses and solutions. The importance of praxis is best articulated by Freire (1972, p. 41) who emphasizes that action and reflection are inextricably linked as “reflection without action is sheer verbalism or armchair revolution and action without reflection is pure activism, or action for action’s sake.” The efficacy of this participatory learning model has been clearly (and repeatedly) demonstrated by our experience outside the university, primarily in projects that aim to develop the capacity of government and non-government organizations both in Australia and internationally to undertake gender analysis and implement gender mainstreaming.

The second innovation driver stems from “demands by employers for work-ready graduates, and demands by students for employable knowledge and skills” (Patrick *et al.*, 2008, p. v). This is particularly true for development studies graduates who enter a labour market that is, as Woolcock (2007, p. 63) puts it, “a huge incomplete and asymmetric information problem, with employers unsure as to what type of skills they are getting, and students unsure about how to present the skills they do have, or who is likely to be most receptive to them.” In addition, Howard (2011, p. 12) suggests that there has been a paradigm shift with “curriculum designers no longer believing [that] classroom education is a largely cognitive form of learning while professional practice is largely skill-based learning.” There is a growing demand for development studies graduates to be skilled in the implementation of international conventions, protocols and declarations like the Millennium Development Goals (MDGs). Gender analysis skills are recognized as crucial to meeting not only MDG 3, which specifically focuses on promoting gender equality and empowering women, but also the other seven MDGs.

In response to pressure from employers and other key players including students (Lynch *et al.*, 2008), universities have developed policies for work-integrated learning to encourage the incorporation of vocational practica (work placements, field visits and so forth) into university courses (Cooper *et al.*, 2010). In development studies, this usually means the provision of vocational practica in developing countries. However, it is expensive to provide students with first-hand experience in developing countries, and it is often logistically difficult to organize. Where placements have been organized there is evidence to suggest that students are frequently under-prepared for the challenges they face in applying their theoretical knowledge. Placing students in the field without adequate preparation also creates ethical problems affecting all concerned and has the potential to be very detrimental to their learning as well as to the organizations and communities they visit (Blouin & Perry, 2009; Schwartzman, 2010). Nevertheless, the value of experiential learning and student-led active learning in improving learning outcomes has been highlighted by a number of studies (Edwards, 1989; Marinova & McGrath, 2004; Gilbert, 2005; O’Neill & McMahon, 2005). Davis *et al.* (2006) emphasize the need to build learning environments that allow students to experience the complexity and ambiguity of the real world in order to develop “tacit learning and capacity of practitioners to sit with messy, confusing problems that defy technical solution” (Schön, 1987, p. 3). Therefore, we wanted to explore how to leverage innovations in distance education technology to build a learning environment that enabled students to grapple with the

complexity of unpacking gender inequality issues and developing strategies to achieve greater equity.

The third innovation driver was bridging geographical distances and bringing diverse and dispersed student bodies together. At our university, Development Studies has been at the forefront of efforts to internationalize the university's curriculum because promoting an awareness of international difference and similarities in global issues lies at the core of all topics taught in this discipline. When distance learning was introduced in Development Studies at our university a decade ago, it was attached to existing on-campus topics and, as a result, distance learning students and on-campus students were treated and taught as two distinct and separate groups. Somewhat paradoxically, at graduate level our on-campus students are mostly international students from developing countries while the distance learning students are mostly domestic students (Australian and New Zealand citizens or Australian permanent residents) currently living interstate or in other countries, including a small cohort who are volunteering or working in a developing country in the field of international development.

eLearning technologies, with their potential to bridge geographical distances and bring diverse and dispersed student bodies together, provided us with an opportunity to enhance internationalization through the creation of common virtual places for more collaborative learning partnerships between distance and on-campus students. Conway-Gomez and Palacios (2011, p. 265) argue that transcending geographical distances and divides is essential in "preparing students to compete and participate effectively in a global workplace that is bringing people together from geographically distant locations and diverse cultural backgrounds." Students' dispersed locations also bring diversity in geographical and cultural knowledge that is required to understand and question the unequal geographies of international development.

The Virtual Learning Environment (VLE)

The technology push argument suggests that rapid advances in the development of technology affords greater opportunities for innovations. For many educational institutions this has translated into augmenting investments in distance education technologies to reach an ever increasing and dispersed student body (Harasim *et al.*, 1995). In addition, the potential of using these technologies to implement principles of constructivist approaches to teaching and learning has been highlighted in a number of studies (Jonassen *et al.*, 1999; Stacey, 1999; Weatherley & Ellis, 2000).

Thus, we wanted to create a learning environment which was a "safe laboratory that is sufficiently messy and evocative of real-world experience" (Marsick, 1998, p. 129). This virtual laboratory would stimulate participatory learning by providing scaffolding for peer-to-peer learning, working in teams, negotiating and cooperating, advocating for strongly held views and reflecting on the process of learning itself—not just the content of the topics. We believe that a meaningful learning environment is one that is active and interactive; constructive (provides space for reflection); authentic (reflects the complexity of the real world and embedded in a real-world context) and cooperative (provides opportunities for peer-to-peer learning; Jonassen *et al.*, 1999). For us, the "safe laboratory" takes the form of a VLE that exemplifies a situated learning approach (Brown *et al.*, 1989), defined "as the notion of learning knowledge and skills in contexts that reflect the way the knowledge will be useful in real life" (Collins, 1998, p. 2).

The VLE we built is a highly realistic “virtual surrogate of the actual work environment” (McLellan, 1994, p. 8). At the heart of the VLE are two fictitious organizations, modelled on real-world international development aid institutions. The International Development Organization (IDO) is a non-governmental organization dedicated to eliminating poverty in the Asia-Pacific region. The second organization, Gender Associates, is a women’s fund, modelled on UN Women, which provides financial and technical assistance to innovative programmes and strategies to foster women’s empowerment and gender equality. To embed our students within these organizations, authentic-looking websites were created—articulating organizational profiles through annual reports, organizational mandates, policies and structures. The fictitious websites were developed after extensive online research of web pages belonging to well-recognized non-governmental organizations (e.g. actionaid, Oxfam and World Vision) and international aid agencies (e.g. UN Women, AusAID and USAID). Our aim was to identify key components needed to reflect authenticity. Existing supporting documents available on these web pages were adapted, modified and rewritten to suit our purposes. It took us approximately a year to develop the websites with support from an eLearning designer who was an integral part of the teaching team and provided technical support in designing, implementing, maintaining and updating the VLE.

A simple online role-play, outlined in the topic handbook, available to students once they enrolled in the topics, serves as the foundation for teaching. On-campus students play the role of IDO staff based at the head office in Adelaide and distance learning students play the role of staff based in one of IDO’s field offices in Cambodia. In their role as staff members, students are informed by the organization’s CEO (topic instructor/lecturer) about upcoming grants/research opportunities from the Gender Associates. They are directed to prepare themselves for availing these opportunities by participating in IDO’s Continual Learning Programme. This programme comprises learning packages that integrate relevant reading materials with structured student-led learning activities involving critical reflection on readings, responding to reflections made by their peers and working in cross-cultural teams to complete assigned tasks that they are likely to encounter in the real world. Some examples of team tasks include developing factsheets for other IDO staff on gender analysis and gender mainstreaming techniques; writing a white paper recommending gender mainstreaming strategies for IDO; writing grants to be submitted to the Gender Associates for funding or undertaking a gender analysis research project of existing policies related to education/health/volunteering that has been commissioned by the Gender Associates. A unique feature of this online role-play is that students are engaged in it for the entire semester, rather than the role-play being an activity introduced for a limited period of time (Maier, 2007). The time-line flow chart (Figure 1) shows the development of our semester-long role-play.

The technological platform that supports and enables the role-play uses synchronous (FLO Live—a virtual meeting platform) as well as asynchronous web tools (email, threaded open discussion boards and private online journals). FLO Live, a virtual meeting software allows students to collaborate in real time using voice-over-Internet protocols. FLO Live’s applications facilitate small group discussions; debriefing and discussions within a larger group; collaborative editing of documents; seminar presentations; brainstorming ideas using white boards and note-taking using a text chat and notes areas. This helps to further build and reinforce a sense of community and connectedness which alleviates feelings of isolation, a stress factor for online students (Hara & Kling, 2001). In

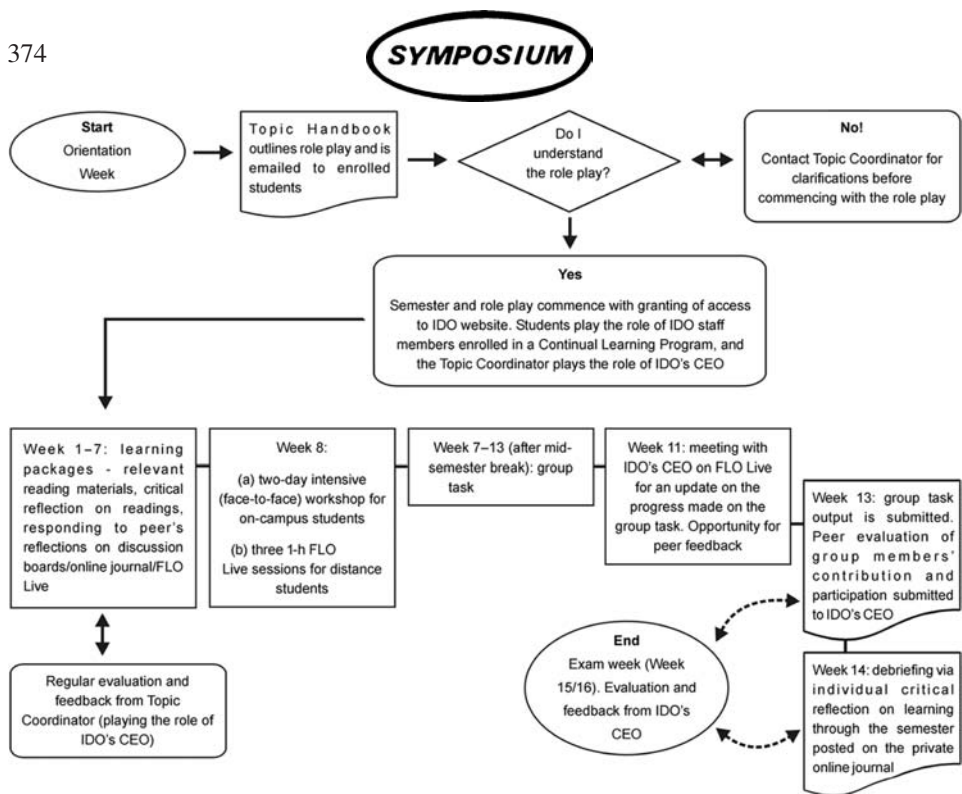


Figure 1. A time-line flow chart showing the development of the semester-long role-play.

developing our VLE, we build on a strong tradition of using role-plays and simulations in teaching Geography and Development Studies (Mendler *et al.*, 2002; Prinsen & Overton, 2011). Virtual field trips (Stainfield *et al.*, 2000; Serafin, 2005), virtual placements (Cornelius *et al.*, 2008), online role-play (Howard, 2011), simulated public enquiries (Livingstone, 1999) and environmental management simulations (Hirsch & Lloyd, 2005), to name a few, have made innovative uses of technology to support experiential learning.

Evaluation

Having outlined our reason for using a VLE and describing the platform, we turn our attention to students' evaluation of this approach—what they see as the benefits of such an approach to learning. In this section, we present some examples of student reflections as articulated on discussion boards, in journal entries, emails and comments on FLO Live as well as their feedback on completed Student Evaluation of Teaching (SET) surveys.¹ From these reflections/evaluations, three key points emerge that characterize our VLE—the importance of authenticity, the value of collaborative learning and the need for a space that promotes individual learning. The importance of these characteristics in designing VLEs has been highlighted by other studies as well (Cobb *et al.*, 1998; Richardson & Turner, 2000; Lee, 2003; Walker, 2009).

The Value of Authentic Contexts, Activities and Assessments

Shepard (1989) and McLellan (1994) point to the importance of embedding learning in a real-world context as a useful way of linking and connecting theory to practice.

Developing authentic activities and tasks, which require students to demonstrate their mastery over content by application to real-world situations, also gives them opportunities to use their own experiences and work collaboratively with their peers. A majority of the students found it a valuable experience to engage in the online role-play. Examples of comments from students, listed below, support Lynch *et al.*'s (2008, p. 140) view that "learning needs to be closely tied to the situation of the learners. Learners need to be able to apply, experiment and reflect on new ideas and approaches in real situations."

Being a part of the IDO was fantastic as we were able to participate in learning as though we were part of an organization. Often there is disconnect between university learning and the real life application of learning that you need in a job. (Anonymous SET for DVST 9031)

I found the structure of the course, whereby we undertook the role of IDO Team Members, a useful way of engaging with the course material. I found the final assessment piece of the funding application a much more useful exercise than writing an essay as it allowed me to use some of my professional experience to complete the task, and in addition the task required me to imagine I was working within real-world contexts and constraints, and therefore gave me a better grasp of what it might be like to develop an actual gender mainstreaming program. [A (female) distance learning student's journal entry for DVST 9032]

Supporting Collaborative Learning and Reflection

Threaded discussion boards, online journals and the virtual meeting platform (FLO Live) are the principal tools in the VLE that facilitate collaborative peer-to-peer learning which simulates curiosity and independence in learning as students are exposed to different ways of thinking and seeing the world. This often challenges them to re-evaluate and reflect on their own views and values. Thus, students engage in deep learning by "constructing meaning from a personal perspective and then refining and confirming this understanding collaboratively within a community of learners" (Garrison & Anderson, 2003, p. 13). Many of our students have highlighted this type of learning as one of the most engaging aspects of these topics:

The great thing about the discussion board is that I can see what other people think, and have found that it has been helping me to look at things a little differently, which I've really enjoyed. [A (female) distance learning student's journal entry for DVST 9032]

I found the weekly readings and discussion board postings often challenged my existing ideas about what constituted gender concerns and prompted me to formulate opinions about concepts or ideas I had previously little or no stance on. It was an enlightening process to solidify ideas and then rationalize them with examples to a diverse group of peers who sometimes had extensive experience in the field. I definitely felt that my knowledge was enhanced by the input of others, given the diverse backgrounds and experiences of the other students. [An on-campus (female) student's journal entry for DVST 9031]

This suggests that asynchronous discussions encourage reflection as students do not feel the pressure to respond immediately to peers but can take time to think about how they wish to respond thereby enhancing the quality and depth of the discussions (Power & Power, 1992; Davidson-Shivers *et al.*, 2000). While others, such as Kanuka and Anderson (1998), have voiced concern that contentious issues on discussion boards can go unchallenged and that such online interactions do not result in the construction of new knowledge, we find the opposite, as the following comments from students indicate:

Through the interactions with other students on the discussion boards, I have been challenged to mentally shift my thinking on gender relations as being only about the husband-wife relationship, to other relationships of power within families. It brings another dimension to my work, and highlights the complexities of gender work. [A distance learning (female) student's journal entry for DVST 9032]

I found your posts [peer] really interesting, especially looking at the definition of the term 'balanced'—words can have some many 'meanings' depending on who uses them, for what purpose and in what historical context. The example of the Pakistani women highlights this well—I believe we need to also ask which Pakistani women are represented here, who is talking for them and in what context. I think we need to question all assumptions that are made about women's lived experiences because often they are constructed by dominant discourses that do not allow 'space' for women's voices. [An on-campus (female) student's discussion board posting for DVST 9031]

According to some of our students, the discussion boards serve another function as well—they help create a sense of community. According to Cutler (1996, p. 326), "the more one discloses personal information, the more others will reciprocate, and the more individuals know about each other, the more likely they are to establish trust, seek support, and thus find satisfaction." This extends the learning beyond the classroom and allows students to continue engaging in critical dialogues and act as change agents within their spheres of influence:

I have commenced the process of becoming a White Ribbon Ambassador.² The power of the learning within this course is the on-going reflection of what issues like inequity and discrimination mean for my daughter and consequently for me as a father, in addition to being a male who, regardless of having a daughter, son or neither, should seek equity and equality. [A (male) distance learning student's discussion board posting for DVST 9031]

Last week I met with the Office for Women to give them feedback about their draft Women's Plan. I was able to use my new found knowledge to talk to them about their plans (or lack of as the case was!) to undertake gender mainstreaming as part of their Women's Plan. [A distance learning (female) student's journal entry for DVST 9032]

The issues we discussed on the discussion boards not only taught me about gender mainstreaming, but has also affected my everyday life and the way I think about

gender, the roles and women and men and how our societies work. [An on-campus (female) student's journal entry for DVST 9032]

We do not differentiate between on-campus and distance learning students in that both groups largely work through the online role-play as either head office or field staff. However, on-campus students participate in a face-to-face intensive at a pivotal time within the role-play. This is presented to the students as a one-day IDO workplace training workshop. The distance learning students (as a group) also complete the same workshop but over several sessions using FLO Live. At first glance, this might appear as if we are working against our interest to bring external and internal students together. However, two strategies have been adopted to link the learning taking place in these two settings. The topic instructor (the CEO), who conducts both sessions, is able to create linkages via feedback to both groups about similarities and differences between workshop activities and learning. Second, both groups are encouraged to post on the discussion board their respective experiences and learning from the workshops. This provides both groups of students with the opportunity to share and extend the dialogue beyond just the workshop activities. We have also successfully experimented with using FLO Live to bridge the gap between our on-campus and distance learning students. Keeping the frame of a one-day IDO workplace training workshop, all students and the topic instructor are logged into FLO Live, with the internal students and the topic instructor actually face-to-face in a computer laboratory mimicking a videoconferencing set-up. We have received positive feedback about this model from many students:

I found the web conferencing sessions to be really useful in expanding how I thought about gender analysis. I was really inspired by the other people in the class, as a lot of them had such great experience and knowledge, and I was glad to be able to learn from them as well. [A distance learning (female) student's journal entry for DVST 9031]

I enjoyed the FLO Live sessions, being able to actually talk with my team members was rewarding and beneficial. I think it is a fabulous tool and enables a diverse range people to become engaged in University learning. [An on-campus (female) student's journal entry for DVST 9032]

When it comes to supporting collaborative and individual learning/reflection, Lin *et al.* (1999) suggest that social reflection, where peers ask for explanations/clarifications, provide different viewpoints or even challenging arguments, is underutilized and can serve as a supplement to individual-level reflection. We address this issue by using multiple online tools that seamlessly integrate a space for both individual and social reflection.

Supporting Individual Learning

Our topics are taken by a diverse cohort of students. For some students, the concepts and issues we discuss in our topics are very new while others are familiar with them or have spent some time contemplating them. This latter group tends to be more vocal on the discussion boards. For those who are encountering these concepts for the first time, it can be a trifle intimidating. While the discussion boards and FLO Live support collaborative

learning, the private journals shared only with us, the topic instructors, provides a space for students to record reflections on their journey through the topics. This helps us coach and scaffold learning at critical times, for instance, clarifying confusions that may arise regarding key concepts. The journals also help us deal with any personal issues that students are facing that might affect their participation and allows us to provide necessary support to help them cope with the demands of the topics.

While the majority of students have appreciated and enjoyed the role-play, a few have expressed their reservations to this form of teaching:

I did not really enjoy the role-play activity throughout the unit; I found it distracted me from the learning and I felt I would have preferred to just have been a student, rather than playing a particular role. I liked the practical application of knowledge, but I feel as though this could have been achieved with or without the role-play in place. [A distance learning (female) student's journal entry for DVST 9032]

Most of these students also expressed a preference for face-to-face classroom teaching rather than taking topics online, indicating that virtual learning in general, rather than the specific form it takes in our topics, may have been the root cause of their concerns. Interestingly, these students nevertheless expressed an appreciation of the collaborative learning and reflection opportunities embedded in the topics:

I felt as though many of the topics would have been better discussed in a classroom setting rather than through online learning. The challenges I faced were more to do with my own ways of learning and engaging, and less with the material. But I liked the weekly discussion board postings and enjoyed the FLO Live sessions. I definitely felt that my knowledge was enhanced by the input of others, given their diverse backgrounds and experiences. [A distance learning (female) student's journal entry for DVST 9032]

Overall, evaluations by students have been very positive. This method of teaching has been used since 2008. Aggregate responses to SETs for DVST 9031 and 9032 (2009–2010)³ are shown in Table 1.

Table 1. Summary of key responses on the SET surveys

Common SET questions	Cumulative percentage of responses (scores of 5 and above) Total number of students 31 Total number of completed evaluations received 25
Activities within the topic provided relevant learning experiences	88
The teaching materials and resources were helpful in directing my learning	84
This topic helped me develop my thinking skills (e.g. problem solving, analysis)	96
Overall I was satisfied with the quality of this topic	89

Lessons Learned

While a majority of the feedback from students has been very positive, a small minority of our distance learning students do not find the synchronous mode of the VLE useful or engaging. These students are frequently located in areas where the speed of the Internet connection is relatively slow. While FLO Live works with dial-up connections, our experience is that without broadband access the experience of using this platform can be frustrating. These students usually end up completing the topics using the asynchronous modes (emails, discussion boards and journals) and rely more heavily on individual work. This poses a challenge for us as topic instructors. What do we do to ensure that these students get the same quality of learning out of the course?

First, we acknowledge the need for flexibility. Those who cannot participate in the FLO Live sessions complete the same tasks on their own and share this using the discussion boards. This provides opportunities for peer feedback. Second, we see the divide in access to technology as a trigger for learning—in the real world, there are differences in access to technology which significantly impact which voices are heard and which are not. Hence, our students must come to some kind of agreement on how to ensure that team members who cannot participate in the FLO Live group meetings are not excluded. We find that students can be quite creative. Many keep minutes of their meetings which they share via email. Others prefer to set up a separate threaded discussion board for their group meetings with one person taking the responsibility for collating and synthesizing the discussions that took place on FLO Live.

A small minority of our on-campus students, who are required to undertake a higher percentage of their work online than is customary, have provided feedback that they would like more opportunities for face-to-face interactions. To meet these expectations, as mentioned earlier, we run a one-day face-to-face intensive in the guise of an IDO workplace training workshop. We are now considering extending this to 2 days.

Dealing with issues of access and individual learning styles means that we need to find a balance between individual and collective assessments. All discussion board postings and individual reflection papers/journal postings are individually assessed while group tasks such as participating in the FLO Live discussions and group presentations/papers are both individually assessed and peer-evaluated. We are interested in assessing both the process and the product as well as in “evaluating individual progress relative to each student’s starting point” (Brienbaum & Douchy, 1996, p. 47). This is one area where we can improve. An alternative we are exploring is the use of portfolio assessment “defined as any method by which a student’s work is stored over time so that it can be reviewed in relationship to both process and product” (Reeves, 2000, p. 108). In fields such as art, portfolios have been a widely accepted means of assessment as they allow instructors to focus only not just the end product but the steps and draft products involved in the completion of a task (Cole *et al.*, 1995; Adeyemi, 2008). Web-based technologies such as e-portfolios offer us the opportunity to link student reflections (made on discussion boards/journals) to the different stages leading to the completion of authentic tasks through the use of annotated entries. Reflecting on learning thus becomes an integral part of completing a task rather than a stand-alone exercise.

We found that thinking through the complex issues of assessment, the various synchronous and asynchronous components of the VLE and how they fit together, and alignment between the course objectives, students learning objectives and the VLE,

required a team-based approach to teaching. Our team comprised two subject matter specialists (the authors of this paper) and an eLearning designer to achieve the required balance of skill sets. These inputs were fundamental to designing a holistic and tightly knit experience that makes it easy for our students to engage in the role-play. Synergies between the eLearning designer's social construction of technology approach (Bijker *et al.*, 1987) and our social constructivist approach to teaching (Schuman, 1987; Duffy & Jonassen, 1992; von Glasersfeld, 1995; Kafai & Resnick, 1996; Greeno, 1997) were also essential for the effective design and delivery of the topics.

There are a few points to be noted here regarding the team-teaching approach and team teaching in an online context. Both pose challenges for universities, particularly administrative issues such as funding and calculating workload. The assumption that a team member does half the work and, therefore, deserves only half the credit or no credit at all (if it is not their 'primary responsibility') is fallacious, as is the argument that teaching online requires less work. Based on our experience, we find that the up-front developmental work, as well as the on-going work involved in maintaining coherence (Visser, 2000; DiBiase & Rademacher, 2005), means that our customary workload is often exceeded (Palloff & Pratt, 1999; Schifter, 2000). A university's teaching policies should recognize that successful team teaching in a distance education format requires on-going support, resources and monitoring (Walther-Thomas *et al.*, 1996). A best practice suggested by Walther-Thomas (1997) is the involvement of Faculty administrators in the development of co-teaching initiatives in order to ensure that issues such as workload and resources are adequately addressed. DiBiase and Rademacher (2005, p. 156) highlight the importance of institutional support, arguing that without the assistance of instructional design specialists, technical support and student support services to deal with technical issues, course instructors "are likely to face greater workloads and less satisfied students."

As technology develops, we are able to create more and more complex and interactive online role-plays. However, their success depends on the authenticity of the experience. This means that considerable research is required during the curriculum development phase. Our online role-play is based on consultations with key industry stakeholders, multilateral development agencies, government planning authorities, non-government organizations, advocacy groups and the private sector. They enable us to identify key theoretical concepts and skills considered vital for research or employment as a gender and development practitioner. Our experience of creating realism echoes that of Howard (2011, p. 20), who points to some challenges in adopting this style of teaching, including planning and creating "a coherent story, changing the role of the teacher from scholar to facilitator, making available a variety of resources for students to use in problem solving and taking into account the reality that some participants have difficulty in taking responsibility for the learning process and simply want answers."

Conclusion

Teaching development studies, especially topics such as gender analysis and gender mainstreaming, is challenging as we need to facilitate knowledge contextualization and prepare students for an uncertain and ever more complex world of work which requires them to utilize creative as well as analytical capabilities. This meant that we had to innovate not just *what* we teach but *how* we teach. To influence, motivate and inspire students to learn about gender analysis and gender mainstreaming while gaining an insight

into working in the complex, messy and political world of international development, we created a VLE evocative of the real world. The VLE provides students with the opportunity to build their skills and acquire a critical understanding of ‘doing’ gender analysis and gender mainstreaming by mimicking the institutional context of real-world international aid agencies and development organizations. It has helped us create a dynamic classroom which brings on-campus and distance modes of teaching together, thereby bringing on-campus and distance learning students into collaborative learning relationships. The VLE replicates the growing reliance on information and communication technology to assist professionals who are often geographically dispersed in working on different stages of the policy, planning, implementation and evaluation cycles evident in the field of development. This shifts the instructor’s input from merely information-giving to facilitating student-led learning, troubleshooting, managing expectations and, in the process, reinforcing collaborative learning.

Our experience has highlighted some significant points for consideration. Technical considerations such as Internet connection speeds cannot be ignored as they can impact a student’s experience of the VLE. However, as we have suggested, this can serve as a trigger for learning as topic instructors can encourage students to find creative ways of dealing with the issue. Topic instructors also need to be flexible in accommodating the needs of students who are facing connectivity issues. Dealing with other technical issues related to designing, implementing and maintaining, the VLE necessitates the active participation of eLearning designers as integral members of a teaching team. We also found it helpful that the two subject matter experts had varying degrees of skill, ranging from basic to advanced, in using eLearning technology. This helped considerably in identifying technical issues that some students might face and pilot-testing solutions prior to the commencement of semester to provide a seamless VLE experience. The positive feedback from the students points to the success of the immersive experience we were able to create. This largely stems from the efforts put into researching and creating an authentic role-play that not only promoted collaborative learning but also provided a space for individual reflection. For us the ability to critically apply knowledge to ‘real-world’ gender equity issues and inspire students to take informed action is essential to the achievement of gender equity initiatives at local, national and global levels. This is, perhaps, the most important point we would like to emphasize—the need for a well-grounded, clearly articulated pedagogy to underpin the use of eLearning innovations.

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Notes

1. A centrally administered online student survey undertaken at the end of each semester for each topic taught in that time period.
2. White Ribbon Ambassadors are men who have pledged to never commit, excuse or be silent about violence against women.
3. This table is based on SET data from DVST 9031 (2010) and DVST 9032 (2009 and 2010). In 2009, DVST 9031 was not evaluated by a SET Topic Evaluation. In 2008 SETs for DVST 9031 and DVST 9032 were undertaken manually and questions were not standardized (a) across the topics and are not comparable to the SETs for 2009–2010 as they were on a different scale. At the time of writing this article 2011 topics are currently underway hence aggregate SET score across the topics are unavailable.

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