A Second Life for KAU Practicum Courses

Computer science undergraduates create virtual worlds in Second Life
Research Group

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Presentation Content

- Introduction
- Rationale and Objective
- Questions of the Study
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Introduction

Virtual Worlds, Second Life, Education

- Multi-user virtual environment
- Analog geographical space
- Graphical avatar
- High-level interaction → Social
- Virtual community
Introduction

2012
Learning Resources for EFL

2013
Usability & Collaboration

2014
Instructional Design & Training
Rationale and Objective

harnessing the capabilities of virtual worlds within the framework of best-practice instructional design can improve the quality of Practicum courses.

investigate how a Project-Based Training Program in Second Life can support the acquisition of competences constituting core requirements in Practicum Courses
Questions of the Study

Does SL constitute a suitable learning environment for teaching/learning the “Professional Development Skills” component in KAU’s Practicum courses?

How far does SL support the project-based learning component in KAU’s Practicum courses?

Does students’ engagement with a field-specific project in SL contribute to their motivation and overall satisfaction with the Practicum course?
<table>
<thead>
<tr>
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<th>Literature Review</th>
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<tbody>
<tr>
<td>1</td>
<td>Campbell (2009): SL for Problem-based learning. Pre-service teachers were trained to “develop an activity that could be taught to a high school class,” and reported how those pre-service teachers were open to the technology and highly engaged.</td>
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<td>2</td>
<td>Esteves et al (2009) reported the relative success and potential of implementing a problem-based learning model in SL to help learners acquire programming skills.</td>
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Methods - *Data Collection*

01 Learner Profile Survey

02 End-of-Session Reflection

03 Weekly Reports

04 End-of-Program Survey & Report
Methods - *Data Collection*

The aim was to collect data on students’ learning styles and preferences which might have affected their progress in learning.
Methods - *Data Collection*

The aim was to encourage individual student’s reflection on her per-session experiences and provide comments and (maybe) suggestions on the program.
Methods - *Data Collection*

Weekly Reports

The aim was to encourage groups to reflect on how the program components were suitable or otherwise distracting, and whether or not they were progressing in accomplishing the assigned tasks.
Methods - *Data Collection*

**End-of-Program Survey & Report**

**End-of-Program Survey**
61 Likert-scale items, which measured students’ overall satisfaction with the Program.

**Report**
Filled by group members explaining their project rationale, & documenting their accomplishment with a video recording.
Methods – *Participants*

- IT: 37%
- IS: 20%
- CS: 43%
Methods – *Instructional Design*

**Project-Based Model**
Learners were expected to gain knowledge and master competences by working for an extended period of time to investigate and respond to complex questions, problems, or challenges (Jones et al, 1997; Thomas et al, 1999).

**Course Design**
The design stage involved setting up the Training Program’s Objectives, Learning Outcomes, Timeline, Content, Structure, Instructional Strategies, and Assessments. Basically, the five-week, Training Program consisted of two mandatory components.

**Instruction & Assessment**
Instruction Methods included brainstorming, open discussions, written reflection, etc. Assessments were structured, in-world Tasks and Quests which students had to fulfil after each session, and which reinforced the skills they have been introduced to.
<table>
<thead>
<tr>
<th>Orientation</th>
<th>Session I</th>
<th>Session II</th>
<th>Session III</th>
<th>Session IV</th>
<th>Session V</th>
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<tbody>
<tr>
<td>One-week</td>
<td>First Week</td>
<td>Second Week</td>
<td>Third Week</td>
<td></td>
<td>Fifth Week</td>
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<tr>
<td>Onsite Session/Tech Guide</td>
<td>Time Management Professional Development 1 hour</td>
<td>Decision Making Professional Development 1 hour</td>
<td>Effective Leadership Professional Development 1 hour</td>
<td>Project Meetings</td>
<td>Project Evaluation by Practicum Supervisors, Group Supervisors, and Peer-evaluation</td>
</tr>
<tr>
<td>Content/Requirements/Groups/Learner Profile</td>
<td>Project Meeting (1) 1 hour</td>
<td>Project Meeting (2) 1 hour</td>
<td>Project Meeting (3) 1 hour</td>
<td></td>
<td>End-of-program survey Final Report</td>
</tr>
<tr>
<td>In-World Tour</td>
<td>In-world Quests End-of-session Reflection Weekly Report</td>
<td>In-world Quests End-of-session Reflection Weekly Report</td>
<td>In-world Quests End-of-session Reflection Weekly Report</td>
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</table>

**Time Management**
- **Professional Development**
  - 1 hour

**Decision Making**
- **Professional Development**
  - 1 hour

**Effective Leadership**
- **Professional Development**
  - 1 hour
Findings – 1- **Evaluation of Professional Development Component**

- PD modules have clear objectives
- PD topics are important in Practicum Courses
- PD training in SL was effective
- PD topics have a great impact on DL project
- Effective, SL-based teaching methods were used
Findings – 2- Evaluation of Project Component

SL project improved students’ programming and designing skills

SL project related to field of study

SL project introduced students to programming for VRs.

SL is motivating and suitable for extermination

Deciding on SL project ideas was easy

Extra building hours in SL

VR Projects have value for KAU
Findings – 3- Learners’ Support

- All supporting materials and training content were provided.
- Project supervisors have provided students with complete support during task execution, project builds, and follow-ups, giving them timely incentives (feedback and prizes).
Findings – 4- Overall Program Evaluation

- Students benefited from SL training
- Students enjoyed SL experience
- Students support VR training
- SL training allowed for self-expression
- Students want to follow up on their SL projects and invest in them
Discussion

* Highly positive evaluation of the Professional Development component of the Training Program in SL

* The project-based learning model was engaging, motivating, and contributed to the development of new, field-related skills

* Students struggled with Quests and guided tours in SL because they were not used to this learning model regardless of the environment
Project-based learning need a total and motivating engagement with hands-on experiences and challenges.

For the computer-science students who enrolled in this Training Program, the skills they learn become 3D and visually appealing. Your desired text here.

Virtual worlds like SL offer a learning space where such challenges can be designed in an authentic way.

Untapped educational potential, Virtual Worlds.
What do I need to be able to start using VRs as learning environments?
Recommendations

1. Faculty should be trained on effective instructional design for Virtual Worlds.

2. Faculty should be prepared for instruction in VR which includes setting up their roles as learning facilitators, and considering student evaluation.

3. Faculty should make the learning resources available to students in-world.
Virtual Worlds Produced by Students

- Muslim Scientists’ VR
- Tourism VR
Virtual Worlds Produced by Students

Prophet Muhammad VR

Digital Library VR
Selected References


Thank you for listening ....

For comments & suggestions contact us at ddlg.training@gmail.com