PROJECT STATUS: Completed

March 2015

**#155 Mobile and Augmented Reality Resources for Learning**

By utilizing mobile media and place-based augmented reality techniques (i.e. games), this project will create multilingual learning opportunities for PSU students, as well as provide multilingual experiences to Portland metro area residents and visitors to the region.

**ACHIEVEMENTS**

- Project achieved the following outcomes:
  - Developed mobile activities/games in three languages (English/ESL, French, and Spanish, as agreed upon in the initial project Memorandum of Understanding), plus one additional language (Japanese), that align with and augment existing World Languages and Literature and Intensive English Language Program course curricula. Approximately 200 PSU students have participated in the building and use of Augmented Reality activities associated with this project.
  - Developed two distinct PSU campus tours, one general tour in English, French, and Spanish, and one focused on PSU sustainability projects in English, French, Japanese, and Spanish.
  - Submitted two scholarly articles for publication that report on the learning outcomes associated with place-based/mobile activities.
  - Designed and implemented a data management system with Academic and Research Computing to enable continued scientific/learning sciences research on mobile Augmented Reality activities.
  - The free ARIS Mobile App for iPhone is available at the Apple iStore.
  - Please see the end-of-project report and summary of project artifacts for additional information.

**PROGRESS**

LEAD: Steve Thorne, Associate Professor of Second Language Acquisition, World Languages and Literatures, College of Liberal Arts & Sciences

PROJECT MANAGER: Hans VanDerSchaaf

COLLABORATORS: Dept. of World Languages and Literatures, Dept. of Applied Linguistics and Intensive English Language Program

www.pdx.edu/oai/provosts-challenge
PROJECT STATUS: Completed

February 2015

#155 Mobile and Augmented Reality Resources for Learning

By utilizing mobile media and place-based augmented reality techniques (i.e. games), this project will create multilingual learning opportunities for PSU students, as well as provide multilingual experiences to Portland metro area residents and visitors to the region.

ACHIEVEMENTS THIS PERIOD (12.01.2014-02.01.15)

• Completed project!
• Project achieved the following outcomes:
  • Developed mobile activities/games in three languages (English/ESL, French, and Spanish, as agreed upon in the initial project Memorandum of Understanding), plus one additional language (Japanese), that align with and augment existing World Languages and Literature and Intensive English Language Program course curricula. Approximately 200 PSU students have participated in the building and use of Augmented Reality activities associated with this project.
  • Developed two distinct PSU campus tours, one general tour in English, French, and Spanish, and one focused on PSU sustainability projects in English, French, Japanese, and Spanish.
  • Submitted two scholarly articles for publication that report on the learning outcomes associated with place-based/mobile activities.
  • Designed and implemented a data management system with Academic and Research Computing to enable continued scientific/learning sciences research on mobile Augmented Reality activities.
  • The free ARIS Mobile App for iPhone is available at the Apple iStore.
  • Please see the end-of-project report and summary of project artifacts for additional information.

GOALS FOR NEXT PERIOD (02.02.15-03.08.15)

• Not applicable.

KEY DECISIONS

• Not applicable.

OPEN ISSUES

• Not applicable.

LEAD: Steve Thorne, Associate Professor of Second Language Acquisition, World Languages and Literatures, College of Liberal Arts & Sciences

PROJECT MANAGER: Hans VanDerSchaaf

COLLABORATORS: Dept. of World Languages and Literatures, Dept. of Applied Linguistics and Intensive English Language Program

www.pdx.edu/oai/provosts-challenge
PROJECT STATUS: On Schedule

December 2014

#155 Mobile and Augmented Reality Resources for Learning

By utilizing mobile media and place-based augmented reality techniques (i.e. games), this project will create multilingual learning opportunities for PSU students, as well as provide multilingual experiences to Portland metro area residents and visitors to the region.

ACHIEVEMENTS THIS PERIOD
(10.20.14-11.30.14)

• Finished development of sustainability tour of PSU campus in French and Russian.
• Finished submission of second scholarly article for publication.
• Continued work to prepare grant submissions for external funding.
• Finished work to build internal partnerships for sustainability of project.
• Initiated project close-out.
• Finished setting up payments for remainder of project funds.

GOALS FOR NEXT PERIOD
(12.01.2014-02.01.15)

• Finish development of PSU-general multilingual AR tour of campus.
• Complete project!
• Finish end-of-project report and gathering project artifacts.

KEY DECISIONS

• None.

OPEN ISSUES

• None.

PROGRESS

www.pdx.edu/oai/provosts-challenge

LEAD: Steve Thorne, Associate Professor of Second Language Acquisition, World Languages and Literatures, College of Liberal Arts & Sciences

PROJECT MANAGER: Hans VanDerSchaaf

COLLABORATORS: Dept. of World Languages and Literatures, Dept. of Applied Linguistics and Intensive English Language Program
PROJECT STATUS: On Schedule

October 2014

#155 Mobile and Augmented Reality Resources for Learning

In By utilizing mobile media and place-based augmented reality techniques (i.e. games), this project will create multilingual learning opportunities for PSU students, as well as provide multilingual experiences to Portland metro area residents and visitors to the region.

ACHIEVEMENTS THIS PERIOD (6.2.14-10.19.14)

• Continued development of PSU-general multilingual AR tour of campus (English, French and Spanish).
• Finished development of sustainability tour of PSU campus for English, Spanish and Japanese.
• Implemented data management plan for research and for making files available for students for pedagogical purposes, including working with Academic & Research Computing to build interface.
• Continued work to prepare grant submissions for external funding based on the ‘proof of concept’ project will have achieved by this point.

GOALS FOR NEXT PERIOD (10.20.14-11.30.14)

• Finish development of PSU-general multilingual AR tour of campus.
• Finish development of sustainability tour of PSU campus for French and Russian.
• Select cross-platform virtual tour development platform for the PSU general campus tours.
• Continue work to prepare grant submissions for external funding.
• Continue work to build internal partnerships for sustainability of project.
• Initiate project close-out.

KEY DECISIONS

• None

OPEN ISSUES

• In order to integrate general campus tours with the recently released PSU app, we will need to have technical guidance on cross-platform virtual tour development platforms (i.e., consulting with specialists at OAI). Project has reached out to University Communications and is waiting for feedback.

LEAD: Steve Thorne, Associate Professor of Second Language Acquisition, World Languages and Literatures, College of Liberal Arts & Sciences

PROJECT MANAGER: Hans VanDerSchaaf

COLLABORATORS: Dept. of World Languages and Literatures, Dept. of Applied Linguistics and Intensive English Language Program

www.pdx.edu/oai/provosts-challenge
PROJECT STATUS: On Schedule

June 2014

# 155 Mobile and Augmented Reality Resources for Learning

In By utilizing mobile media and place-based augmented reality techniques (i.e. games), this project will create multilingual learning opportunities for PSU students, as well as provide multilingual experiences to Portland metro area residents and visitors to the region.

ACHIEVEMENTS THIS PERIOD (4.28.14-6.1.14)

• Alpha tested new AR game with Spanish, French and Japanese language students.
• Finalized Project Management Plan.
• Revised and adjusted budget to assure alignment with project activities.
• Continued work to build out self-guided sustainability tour of PSU campus in Spanish and English.
• Met with Academic & Research Computing to discuss where to store data and the possibility of building an interface for organizing and managing data.
• Met with University Communications to solicit guidance on cross-platform virtual tour development platform.

GOALS FOR NEXT PERIOD (6.2.14-10.19.14)

• Finish development of PSU general multilingual AR tour of campus and introductions to campus resources for incoming students (English, French and Spanish).
• Finish development of sustainability tour of PSU campus (English, Spanish and Japanese).
• Implement data management plan for research and for making files available for students for pedagogical purposes, including possibly working with Academic & Research Computing to build interface.
• Select cross-platform virtual tour development platform for the PSU general campus tours.
• Continue work to prepare grant submissions for external funding based on the ‘proof of concept’ project will have achieved by this point.

KEY DECISIONS

• Began conversations with European colleagues who are developing parallel mobile and place-based educational interventions (i.e., University of Southern Denmark; University of Gothenburg), with possibilities for future collaboration.

OPEN ISSUES

• In order to integrate general campus tours with the recently released PSU app, we will need to have technical guidance on cross-platform virtual tour development platforms (i.e., consulting with specialists at the Office of Academic Innovation). Project has solicited technical support from Modo Labs through University Communications and is waiting for feedback.

LEAD: Steve Thorne, Associate Professor of Second Language Acquisition, World Languages and Literatures, College of Liberal Arts & Sciences

PROJECT MANAGER: Hans VanDerSchaaf

COLLABORATORS: Dept. of World Languages and Literatures, Dept. of Applied Linguistics and Intensive English Language Program

www.pdx.edu/oai/provosts-challenge

PROJECT STATUS: On Schedule

June 2014

# 155 Mobile and Augmented Reality Resources for Learning

In By utilizing mobile media and place-based augmented reality techniques (i.e. games), this project will create multilingual learning opportunities for PSU students, as well as provide multilingual experiences to Portland metro area residents and visitors to the region.

ACHIEVEMENTS THIS PERIOD (4.28.14-6.1.14)

• Alpha tested new AR game with Spanish, French and Japanese language students.
• Finalized Project Management Plan.
• Revised and adjusted budget to assure alignment with project activities.
• Continued work to build out self-guided sustainability tour of PSU campus in Spanish and English.
• Met with Academic & Research Computing to discuss where to store data and the possibility of building an interface for organizing and managing data.
• Met with University Communications to solicit guidance on cross-platform virtual tour development platform.

GOALS FOR NEXT PERIOD (6.2.14-10.19.14)

• Finish development of PSU general multilingual AR tour of campus and introductions to campus resources for incoming students (English, French and Spanish).
• Finish development of sustainability tour of PSU campus (English, Spanish and Japanese).
• Implement data management plan for research and for making files available for students for pedagogical purposes, including possibly working with Academic & Research Computing to build interface.
• Select cross-platform virtual tour development platform for the PSU general campus tours.
• Continue work to prepare grant submissions for external funding based on the ‘proof of concept’ project will have achieved by this point.

KEY DECISIONS

• Began conversations with European colleagues who are developing parallel mobile and place-based educational interventions (i.e., University of Southern Denmark; University of Gothenburg), with possibilities for future collaboration.

OPEN ISSUES

• In order to integrate general campus tours with the recently released PSU app, we will need to have technical guidance on cross-platform virtual tour development platforms (i.e., consulting with specialists at the Office of Academic Innovation). Project has solicited technical support from Modo Labs through University Communications and is waiting for feedback.

LEAD: Steve Thorne, Associate Professor of Second Language Acquisition, World Languages and Literatures, College of Liberal Arts & Sciences

PROJECT MANAGER: Hans VanDerSchaaf

COLLABORATORS: Dept. of World Languages and Literatures, Dept. of Applied Linguistics and Intensive English Language Program

www.pdx.edu/oai/provosts-challenge
#155 Mobile and Augmented Reality Resources for Learning

In By utilizing mobile media and place-based augmented reality techniques (i.e. games), this project will create multilingual learning opportunities for PSU students, as well as provide multilingual experiences to Portland metro area residents and visitors to the region.

ACHIEVEMENTS THIS PERIOD
(3.10.14-4.27.14)

- Created Russian language version of core augmented reality (AR) game.
- Created and tested an alpha version of the English language PSU campus tour focusing on sustainability projects.
- Finalized and submitted Human Subjects paperwork so that effectiveness research can begin.
- Created the text for a self-guided sustainability tour of the PSU campus in collaboration with the Vikings Visitor Center - complete for English and Spanish.
- Created and finalized Project Plan (detailed work plan/timeline).

GOALS FOR NEXT PERIOD
(4.28.14-6.1.14)

- Alpha test new AR game with Spanish, French and Japanese language students.
- Implement data management plan for research and for making files available for students for pedagogical purposes.
- Secure sponsor approval of Project Management Plan.
- Revise and adjust budget to assure alignment with project activities.
- Build out self-guided sustainability tour of PSU campus in Spanish and English.

KEY DECISIONS

- Consolidated research methodology in view of video taping AR game activities.

OPEN ISSUES

- In order to integrate general campus tours with the recently released PSU ap, we will need to have technical guidance on cross-platform virtual tour development platforms (i.e., consulting with specialists at OAI).

PROGRESS

www.pdx.edu/oai/provosts-challenge
PROJECT STATUS: On Schedule

March 2014

#155 Mobile and Augmented Reality Resources for Learning

In By utilizing mobile media and place-based augmented reality techniques (i.e. games), this project will create multilingual learning opportunities for PSU students, as well as provide multilingual experiences to Portland metro area residents and visitors to the region.

ACHIEVEMENTS THIS PERIOD (2.3.14-3.9.14)

- Pilot tested the ESL version of core AR game with a full Intensive English Language Program (IELP) class cohort.
- Gathered extensive video data to analyze player actions and improve interface, tasks, and playability. Analysis now in-progress.
- Created Spanish language version of core AR game.
- Created Japanese language version of core AR game.
- Completed translation of Russian content for core AR game.
- Chinese translation of content of core AR game in-progress.
- Thorne met with Viking Student Information center personnel (Nicholas Running) regarding the development of self-guided AR versions of PSU tours for students and visitors to campus. Positive meeting and we are moving forward with a collaboration.
- Human Subjects paperwork, necessary for carrying out research, is in-progress and partially drafted.

GOALS FOR NEXT PERIOD (3.10.14-4.27.14)

- Alpha test new AR game with Spanish language students.
- Create Russian language version of core AR game.
- Create and test an alpha version of the English language PSU campus tour focusing on sustainability projects.
- Finalize and submit Human Subjects paperwork so that effectiveness research can begin.
- Create and finalize Project Plan (detailed work plan/time-line).
- Create and finalize Project Management Plan (brief document covering project scope, roles, and change management process).

OPEN ISSUES

- In order to integrate general campus tours with the soon-to-be-released PSU ap, we will need to have technical guidance on cross-platform virtual tour development platforms (i.e., consulting with specialists at OAI).

KEY DECISIONS

- None.

LEAD: Steve Thorne, Associate Professor of Second Language Acquisition, World Languages and Literatures, College of Liberal Arts & Sciences

PROJECT MANAGER: Hans VanDerSchaaf

COLLABORATORS: Dept. of World Languages and Literatures, Dept. of Applied Linguistics and Intensive English Language Program
PROVOST’S CHALLENGE

PROJECT STATUS: On Schedule
February 2014

#155 Mobile and Augmented Reality Resources for Learning

In By utilizing mobile media and place-based augmented reality techniques (i.e. games), this project will create multilingual learning opportunities for PSU students, as well as provide multilingual experiences to Portland metro area residents and visitors to the region.

<table>
<thead>
<tr>
<th>ACHIEVEMENTS THIS PERIOD (12.15.13-2.4.14)</th>
<th>GOALS FOR NEXT PERIOD (2.3.14-3.9.14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Continued storyboarding campus tour of PSU sustainability projects.</td>
<td>• Alpha test new AR game with Spanish language students.</td>
</tr>
<tr>
<td>• Nearly completed a Spanish version of the existing English and French AR game.</td>
<td>• Create and test an alpha version of the English language PSU campus tour focusing on sustainability projects.</td>
</tr>
<tr>
<td>• Expanded mobile resources for use by the Intensive English Language Program (IELP) in coordination with IELP instructors.</td>
<td>• Complete and submit Human Subjects paperwork so that effectiveness research can begin.</td>
</tr>
<tr>
<td>• Continuing to plan and coordinate with the University of Oregon’s Center for Applied Second Language Studies. Have had two face-to-face meeting with the director of that center (Julie Sykes).</td>
<td>• Create and finalize Project Plan (detailed work plan/time-line).</td>
</tr>
<tr>
<td>• Continuing to plan a “game jam” - an intensive development period where faculty and students from the OUS system can creatively interact and produce mobile resources for learning.</td>
<td>• Create and finalize Project Management Plan (brief document covering project scope, roles, and change management process).</td>
</tr>
</tbody>
</table>

KEY DECISIONS

• None.

OPEN ISSUES

• None.

LEAD: Steve Thorne, Associate Professor of Second Language Acquisition, World Languages and Literatures, College of Liberal Arts & Sciences

PROJECT MANAGER: Hans VanDerSchaaf

COLLABORATORS: Dept. of World Languages and Literatures, Dept. of Applied Linguistics and Intensive English Language Program
PROVOST’S CHALLENGE
PROJECT STATUS: On Schedule
December 2013

#155 Mobile and Augmented Reality Resources for Learning

In By utilizing mobile media and place-based augmented reality techniques (i.e. games), this project will create multilingual learning opportunities for PSU students, as well as provide multilingual experiences to Portland metro area residents and visitors to the region.

ACHIEVEMENTS THIS PERIOD (11.15.13-12.15.13)

- Several additional language sections within WLL, including Spanish, Hebrew, German, and Russian, have agreed to participate in the project beginning in the Spring term (2014).
- Began coordination with relevant PSU representatives regarding general campus tours to acquire sanctioned texts, points of interest and University priorities.
- Focused on resolving technical issues and began evaluating cross-platform development environments.
- Thorne (faculty lead) presented a keynote address based on this project at the “Learning in the Age of Hyper Connectivity” conference, Universitat Autònoma de Barcelona, Barcelona, Spain, November 27, 2013.

GOALS FOR NEXT PERIOD (12.15.13-2.2.14)

- Continue storyboarding campus tour of sustainability projects and create and test an alpha version of the English language product.
- Create Spanish version of the existing English and French AR game. Implement with Spanish language students.
- Expand mobile resources for use by the Intensive English Language Program (IELP) in coordination with IELP instructors.
- Plan and coordinate with the University of Oregon’s Center for Applied Second Language development period where faculty and students from the OUS system can creatively interact and produce mobile resources for learning.
- Complete and submit Human Subjects paperwork so that effectiveness research can begin.
- Create and finalize Project Plan (detailed work plan/timeline).
- Create and finalize Project Management Plan (brief document covering project scope, roles, and change management process).

KEY DECISIONS THIS PERIOD (11.15.13-12.15.13)

- Candidate cross-platform mobile development environments have been identified and are being evaluated.

OPEN ISSUES

- None.

LEAD: Steve Thorne, Associate Professor of Second Language Acquisition, World Languages and Literatures, College of Liberal Arts & Sciences
PROJECT MANAGER: Hans VanDerSchaaf
COLLABORATORS: Dept. of World Languages and Literatures, Dept. of Applied Linguistics and Intensive English Language Program
#155: Mobile and Augmented Reality Resources for Learning

By utilizing mobile media and place-based augmented reality techniques (i.e. games), this project will create multilingual learning opportunities for PSU students, as well as provide multilingual experiences to Portland metro area residents and visitors to the region.

Project Status: On Schedule

Achievements this period (5.2013-11.15.13)
- Initial AR game design and development focuses on PSU’s sustainability and green technologies projects.
- To date, the alpha version of three games are complete: Intensive English Language Program; intermediate courses of French; and for general campus use.
- The French version of the AR game was tested in a French 200 level course on November 14th. The instructor sent the faculty lead (Thorne) this message: “Grand succes! Ils ont adore le jeu!” [Grand success! They loved the game!]
- Thorne has given two invited talks about this Mobile technologies project.
- Thorne recently (2013) published a journal article as a result of project.

Goals for next period (11.16.13-12.15.13)
- Several additional language sections within WLL, including Spanish, Hebrew, German, and Russian, intend to participate in the project beginning in the Winter and Spring terms (2014).
- Integrate mobile learning resources with AR games for use in specific courses and curricula.
- Begin coordination with relevant PSU representatives regarding general campus tours to acquire sanctioned texts, points of interest and university priorities.
- Storyboard general campus tours, then translate into multiple languages.
- Focus on technical issues.

Key decisions this period (5.2013-11.15.13)
- Focus AR game design to highlight PSU’s sustainability projects.
- Design mobile AR games and activities in alignment with existing curricula, particularly WLL and IELP courses.
- Continue technical development using ARIS (arisgames.org), an open source iOS platform authoring environment.

Open issues
- None at this time.

Lead: Steve Thorne, Associate Professor of Second Language Acquisition, World Languages and Literatures, College of Liberal Arts & Sciences

Project Manager: Hans VanDerSchaaf

Collaborators: Dept. of World Languages and Literatures, Dept. of Applied Linguistics and Intensive English Language Program