

**Project Name**

Using Visual Communication Tools to Enhance Teaching and Learning

**Principal Investigator** Harrison Yang

**Campus** Oswego, State University College at

**Year of Project** 2012

**Tier** Tier One

**Overview Summary**

Design, implement, evaluate, and disseminate an innovative and replicable training model of integrating visual communication tools for teacher candidates at SUNY Oswego, including a training approach to better prepare technology integration across curriculum.

**Outcomes Summary**

A large output of student portfolio examples, data, publications and press articles are [available](#).

**Project Abstract****Needs Assessment**

The rapid technological change and proliferation of information resources are lineaments of our contemporary society. Digital and social technologies, especially visual communication tools, are changing the way we interact within the teaching and learning process. On the one hand, students are digital natives (also known as Generation Y, boomlets, echo boomers, millennials, or net generation) who rise in an age of media saturation and convenient access to digital technologies, they have distinctive ways of thinking, communicating, and learning. They are visually oriented, technologically savvy, and they see technology as an essential part of their lives. On the other hand, educators have long been concerned with using visual communication tools to promote knowledge visualization. Knowledge visualization focuses on transferring insights and creating new knowledge in groups. Beyond the mere transfer of facts, knowledge visualization aims to further transfer insights, experiences, attitudes, values, expectations, perspectives, opinions, and predictions by using various complementary visualizations. As a result, using visual communication tools in teaching and learning has

become one of the most exciting, dynamic, and yet challenging fields that we have been facing.

There are a variety of visual communication tools, which are deeply embedded in the lifestyles of digital natives, such as Animoto (a video creation and hosting tool), Jing (a screen capture and screen casting tool), Prezi (a presentation creation and hosting tool), Mindmeister (an collaborative online mind mapping tool), Glogster EDU (an collaborative online learning platform for interactive posters), etc. These visual communication tools are currently ranked on the Top 100 Tools for Learning (source: <http://c4lpt.co.uk/top-100-tools-for-learning-2011/best-of-breed-tools-2011/>). While visual communication tools are expanding and the numbers of users are increasing, the question of how best to apply visual communication tools into real world teaching and learning has been raised. Teachers lack accurate information, necessary skills, and timely guidance on emerging visual communication technologies. They are often ill prepared and under trained to use these tools in the classroom. In return, implementations are often superficial or misused, leading to rapid decline. To better prepare pre- and in-service teachers to implement visual communication tools in classrooms, there is a critical and urgent need for teacher preparation programs to provide broadly applicable training and workshops for their teacher candidates.

### Goal and Objectives

The goal of this project is to design, implement, evaluate, and disseminate an innovative and replicable training model of integrating visual communication tools in education to teacher candidates in Curriculum and Instruction MSED program at SUNY Oswego. This goal will be accomplished by the following objectives:

1. Selected visual communication tools will be explored with participants of this project.

Visual communication tools with pedagogical implications, easy to use, and cost effectiveness will be carefully selected to expand each participant's technology skills and knowledge. All participants will be provided with hands-on experiences in exploring well-selected visual communication tools. Technical assistances, step-by-step manuals, and just-in-time guides will be provided during the hands-on sessions.

2. Selected teaching cases which parallel objective one will be organized as a training approach for participants to better prepare technology integration across curriculum.

Best practices, case studies, artifacts, and other related resources of how visual communication tools have been applied for classroom teaching and learning will be provided to and discussed among all participants.

Participants will have a better understanding of empowering their own students with visual communication tools and create exciting new learning activities for promoting problem solving, critical thinking, and collaboration skills among their students.

3. Task teams will be developed for working on collaborative projects.

Small groups of participants will be organized into 6 task teams (3 teams in fall 02, and 3 teams in spring 03).

Each team consists of 3-4 participants (at least one pre-service teacher and one in-service teacher when appropriate). Each team will design and develop a group project that integrates visual communication tools in classroom learning activities and encourages K-12 student achievement of the Standards. In addition, all teams will share their ideas, methods, progress, and products through SUNY Learning Network.

4. The project will be tracked and evaluated for continuous improvement, adaptation, expansion as well as replication.

Formative assessment of technology, content, and related materials will be administered that allows for immediate adjustments. Summative assessment of participants' perceptions, attitudes, and skills on technology integration will be administered that allows for follow-up improvement and expansion. Participants' outcomes, team projects, and other artifacts will be evaluated and collected for further replication and dissemination.

### Significance

The above needs, goal, and objectives relate directly to the first three points in the purpose of the Innovative Instruction Technology Grant. This project has great significance in that it is the first time a training model of integrating visual communication tools in Curriculum and Instruction MSED program at SUNY Oswego. The project will lead to this unique and replicable pedagogical model ready for replication in education programs at

other SUNY campuses.

### **Reports and Resources**

- [EDU-506 Computer Applications & Resources in Teaching](#)
- [Pre-Post Data Sheet](#)
- [An Integrated Approach to Developing Visual Literacy](#)
- [Technology grant to power innovative teaching projects](#)
- [Presentation at ICHL](#)
- [Publication in LCNS](#)

### **Assessment, Understanding, Monitoring Student Progress**

- Outcomes Assessment

### **Faculty Development**

- Faculty Digital Literacy

### **Instructional Design**

- Student Learning Support