Virtual Field Trips for Early and Middle Childhood Educators

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Establishing a Need

With the advent of instructional technology (e.g., Internet and distance learning), virtual field trips substantially reduce or eliminate the logistics (e.g., transportation, permission slips, fees, and chaperones) associated with arranging physical field trips (Cooper & Cooper, 1999, 2000). Additionally, access to supplemental instruction content located at a prohibitive physical distance from the learner’s home schools can widely enhance learning (Griffin & Symington, 1997). Field trips have also been shown to promote long-term recall (Falk & Dierking, 1997). As there is typically no commute involved with a virtual field trip, virtual field trips enable the learner to have access to and experience a wider range and variety of instructional content than those typically provided for in physical field trips.

Because of the Internet medium of virtual field trips, teachers can now expand and enhance their student’s learning beyond the walls of the traditional classroom using this form of technology. Teaching strategies will include judging which virtual field trip choices are DAP, how to appropriately integrate the information into an early Childhood Education Program (ECED) Program, and methodologies that will them to extend their student’s learning after experiencing a virtual field trip. In the process, teachers will provide their students with interactive learning experiences that will enable them to construct new knowledge, touch upon all students’ specific learning modalities, and enrich their learning in a developmentally appropriate manner.

Theory and Assumptions

The workshop for early childhood is designed and based on Developmentally Appropriate Practice (DAP) (Bredekamp & Copple, 1997), and supported by the National Association for the Education of Young Children (NAEYC) Position Statement on Technology for young children between the ages of three and eight years of age. The theoretical basis that supports virtual field trips and the use of technology in early childhood education emanates from the work of Seymour Papert and Jean Piaget (Haugland & Wright, 1997). The National Science Foundation (NSF) advocates the use of technology in Education America for the 21st Century (NSF, 1983). The NSF further recommends that children both learn through and with computers, and that computers be utilized to learn about computers.

Locating, Evaluating, and Selecting Virtual Field Trip Content Providers

Generally, locating a virtual field trip and/or content provider can be accomplished in three ways textbooks, Internet searches, and searchable databases. Two such texts used by the workshop presenters include Gail and Garry Cooper’s Virtual Field Trips and New Virtual Field Trips.
Both Cooper texts provide subject heading categories which may be of use to educators searching for a particular content area such as the Civil War or Marine Life. As new field trips are being frequently developed, Internet searches using a search engine (e.g., wisenut or teoma) can be utilized to locate specific providers and/or instructional content. Lastly, PacBell’s Videoconference Directory (http://www.kn.pacbell.com/wired/vidconf/directory.html) or the University of Akron’s K-12 Distance Learning Resources (http://www.uakron.edu/distance/k12) are two examples of virtual field trip searchable databases. Additional information and/or questions may also be directed to the content provider, with contact information generally listed on the web site.

Evaluating the content of a virtual field trip is similar to that of evaluating a textbook for classroom use. Typically the content, method of delivery and supplemental print instructional materials (where applicable) are under the control of the third party content provider. In some instances, virtual field trip content providers may provide access to print materials prior to purchasing the field trip or may have demos or previews of individual virtual field trips. As an example, the Cincinnati Zoo web (http://www.cincyzoo.org) site contains print materials to accompany their virtual field trips. These documents are downloadable in platform non-specific format (i.e., Adobe Acrobat). The Southwestern Wisconsin Instructional Network Group (SWING) web site (http://www.swing.k12.wi.us/) currently has links to selected virtual field trip previews using Apple Computer’s QuickTime format (http://www.apple.com). Both methodologies allow the classroom instructor to review content and delivery methodologies to ensure that the virtual field trips can be effectively integrated into the curriculum and meet intended learning objectives.

For the educator wishing to utilize a model to evaluate virtual field trips, Kirkpatrick (1996) provides a Four-Level Model of Evaluation, which serves as a summative assessment of training programs. These levels include 1) reaction, 2) learning, 3) behavior, and 4) results. Student reaction to a particular learning program as well as instructor reaction can be used to judge the overall impact of the virtual field trip. Learning, defined as “a measure of the knowledge acquired, skills improved, or attitudes changed” (Kirkpatrick, 1966, p. 55) can be measured by traditional assessment techniques. In some instances, print materials included by some virtual field trip content providers can serve as summative assessment (e.g., objective tests). Behavior, typically residing in the affective domain, can be impacted by the virtual field trip’s subject area (e.g., multicultural awareness). Lastly, results, as an overall effect on student learning, can be tied to standardized tests (e.g., Ohio Proficiency).

Integrating Virtual Field Trips into K-8 Curriculums

Physical field trips without direct ties to curriculums and/or learning activities can only be considered as forms of entertainment. In a similar fashion, learners can perceive virtual field trips without proper integration as a form of media entertainment. While curriculum integration is more than merely showing a video during class, lesson plans designed to effectively integrate virtual field trips into the curriculum are perceived as one method ensure that the virtual field trip is not merely a from of classroom entertainment.

It is important to realize that using computer technology with young children is a process of exploration and discovery, (Haugland & Wright, 1999). As children progress from kindergarten...
through the primary grades, they not only should be provided with opportunities to make choices about computer experiences but, the teacher should also use the computer for more directed activities that match grade-level learning objectives as outlined in the educational standards at both the state and local levels. Meeting these benchmarks for education in an appropriate manner requires providing children a holistic approach to learning through their educational experiences.

Because young children learn holistically, their learning experiences should be integrated during their early years of development therefore; there is no need for them to distinguish learning categories through separate subject areas. The relevant principle of instruction throughout early education is that curriculum should be integrated across subject areas. Integration of curriculum is accomplished in a variety of ways. Curriculum may be planned around themes or projects based on children’s interests (Bredekamp & Copple, 1997). When developing curriculum, all developmental domains of young children should also be taken into consideration. Young children learn through relevant direct experiences and interactions within their environment. Therefore, an appropriate classroom environment must be designed and equipped with learning centers in which children learn through discovery, exploration, interactions with each other, and with hands-on experiences. In today’s world, as computer technology becomes more capable and pervades more aspects of society, it is imperative to integrate it into the curriculum. More information is deemed important to learn than ever before and the base of essential information grows constantly (Roblyer & Edwards, 2000). An integrated curriculum can be enhanced through the use of virtual field trips. Appropriately chosen virtual field trips are capable of enhancing students’ learning by providing them with experiences that are relevant, engaging, and meaningful to their personal construction of knowledge, (Katz & Chard, 1989).

Learning Theories

Educators credit theorists John Dewey, Lev Vygotsky, Jean Piaget, Jerome Bruner, and Seymore Papert with some of the fundamental premises of constructivist thinking. The following is a capsulation of each theorist’s viewpoint.

- Dewey is known for laying the theoretical groundwork for many characteristics found in today’s educational system. He is primarily credited with laying the groundwork for the progressive movement in American education. Dewey’s ideas support constructivist models of teaching and learning.

- Vygotsky’s work on human development and the social cognitive theory along with his twin concepts of scaffolding and the zone of proximal development are important for constructivists.

- Piaget in internationally known for his complex theories on cognitive development in children. Piaget believed that through interaction within their environment, children are active participants in the construction of their own knowledge.

- Jerome Bruner, like Piaget, was also interested in children’s stages of cognitive development but emphasized “Learning through Discovery.” Bruner felt that children were more likely to understand and remember concepts they discover in the course of their learning.
Papert, an American student of Piaget has profoundly influenced the field of educational technology. He felt that students could advance in their intellectual abilities more quickly with the right kind of environment and assistance. Papert also believed that children should play a big part in “teaching themselves”. Papert was the developer of LOGO. (Roblyer & Edwards, 2000).

**Classroom Environment, Climate, and Management**

Classroom environment is a term that refers to a couple of very important dynamics within the educational context of a classroom: 1) the climate of the classroom, and 2) the management of the classroom. Classroom climate is a term that is used to refer to the teacher and classroom characteristics that promote student’s feelings of safety and security, together with a sense of success, challenge, and understanding. Classroom climate is important because it encourages both motivation and achievement. Students learn best in a general atmosphere that is safe and orderly and that promotes success on tasks of worth and substance (Eggen & Kauchak, 1997). In a healthy classroom climate, students are viewed and treated as competent people and they understand the requirements of learning tasks, perceive them as challenging, yet believe they will succeed if they make reasonable effort (Brophy & Rohrkemper, 1987). Classroom management refers to the combination of teacher strategies and classroom organizational factors that lead to a productive leaning environment. This includes established routines, classroom rules, teacher responses to student behavior, and instruction that promotes a climate conducive to student learning (Eggen & Kauchak, 1997). The characteristics and outcomes of effective classroom management are as follows:

- Increased achievement
- Improved motivation
- Preventive strategies for behavioral problems
- Positive Physical environment
- Establishment of procedures
- Creating effective rules
- A teacher that listens and cares
- Communication with students
- Organization and planning (Eggen & Kauchak, 1997).

**Pre and Post Instructor Activities**

To ensure that learners benefit the most from a virtual field trip, instructors would do well to familiarize themselves with the selected virtual field trip. This includes the subject/content area, but how the material is presented, learning activities, types and method of interaction, and what resources are provided. In addition, Cox-Peterson and Melber (2001) recommend orienting the students to the virtual field trip to “reduce the novelty effect (which) can hinder the learning process” (p. 18). Properly designed and implemented set induction is one method to accomplish this pre-instructor activity. Summaries and conclusions as well as ‘closing’ activities address post instruction activities. Tie to the curriculum may be accomplished by means of print materials available from the virtual field trip content provider (where applicable). Teacher implemented age-appropriate closing activities can also be used to both integrate the virtual field trip into the curriculum as well as reinforce student learning. Cox-Peterson and Melber (2001)
suggest the use of multimedia presentation, which both organizes and captures the essence of the virtual field trip.

Lessons Learned

Deploying virtual field trips in the K-8 learning environments requires a significant amount of preparation on the part of the instructor. Perhaps, one of the major concerns of educator is the quality and relevance of virtual field trips as this is solely under the control of the content provider(s). Therefore, an important initial step for educator is to thoroughly evaluate both the content and forms of interaction used by content providers. Relevance to lesson plans and intended learning objectives provide a sound basis for selecting a particular virtual field trip. Reactions to a particular virtual field trip from educators as well as students can be used to assess the overall impact. All things considered, the questions to ask oneself are similar to that of purchasing a textbook or attending a concert: “Would I pay to access this virtual field trip”? and “What measurable impact will this virtual field have on student learning?”

References


**Biographical Sketches**

**Steve Mitchell** is pursuing a doctorate in Curriculum and Instruction at The University of Akron. He has taught undergraduate and graduate courses in instructional technology, delivered topical lectures in distance learning history, use and application facilitated adult vocational seminars in end-user computer applications, and served as a distance learning graduate assistant. Steve holds a bachelor's in Engineering and master's in Education. Mr. Mitchell is the co-author of *Creating Alternative Student Assessments for Distance Learning Environments,* with L.M. Pachnowski, Ph.D. Distance Learning 2000, Madison, WI and *Using Real-Time Chat to Increase Student Interaction in Web-Enhanced Instruction* with M. Bacic, MS. *Learning Technology,* July 2000, 2(3).

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