Internet Field Trip: Conception and Development

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INTRODUCTION

A field trip is typically a group excursion to a place away from their normal environment for performing firsthand research on a topic. Field trips have been widely used in teaching and learning, and have been considered as the effective way to promote students' active and inquiry-based learning. As Prather (1989) noted, "compared to other traditional teaching techniques, field trips may provide an especially rich stimulus setting for content learning and may excel in generating a natural inclination to learning". Similarly, Woerner (1999) indicated that field trips offered excitement, adventure, and visual, auditory, kinesthetic, olfactory, and gustatory experiences for students to learn about the real world and how it worked.

However, despite their advantages and popularities, actual field trips do have a number of limitations, including issues of logistical and preparation problems, such as the difficulty of making accurate assessments in advance on risk, timing, and weather; relatively high cost; difficulties faced by disabled students; too many objectives in the "lesson" and the site is too overwhelming on a single actual trip; and the lack of right places with certain subject areas, and so forth. (Bellan & Scheurman, 1998; Stainfield, Fisher, Ford, & Solem, 2000; Woerner, 1999). As a result, the literature suggests that Internet field trips can be designed and developed for teaching and learning.

BACKGROUND OF INTERNET FIELD TRIPS

An Internet field trip, also known as a virtual field trip, is a journey taken via the Internet site without making a trip to the actual site. Foley (2003) defined an Internet field trip as a guided exploration through the Internet that organized a collection of prescreened, thematically based Web pages into a structured online learning experience. Although Internet field trips cannot completely replace the sensory experience of actual field trips, they may sensitize a student's sense of touch, smell, and sight to the plethora of the stimuli to the encountered at the actual site (Bellan & Scheurman, 1998). Stainfield, Fisher, Ford, and Solem (2000) indicated that an Internet field trip should not be an attempt to create a virtual reality, and should be "simply an attempt to place further autonomy in the user's hands, by allowing observations to be made without being on the actual site or having a lecturer at hand to explain." Related studies have found that Internet field trips could provide a variety of advantages on teaching and learning. They can be accessed and repeated from place to place and time to time; can allow the teacher to focus on one specific aspect of the trip at a time; can give students great flexibility to learn at their own pace and explore things to their own depth; can take students to sites and subjects they would not otherwise go; can have an easier management and lower cost of production; can be safe and free of hazards; cannot be lost; can increase students' information literacy; can improve technology integration; can provide integration of the multiple aspects of the field trip into a number of different curriculum area and tap into more expert resources on a single topic; can allow for commonality of experiences by all participants; and so forth. (Hosticka, Schriver, Bedell, & Clark, 2002; Stainfield, Fisher, Ford, & Solem, 2000; Tramline, nd).

Beal and Mason (1999) classified the use of Internet field trips into four categories. Firstly, Internet field trips can be used for the post-field-trip activity. This type of Internet field trip is designed to help students synthesize what they have learned on an actual class field trip. Secondly, Internet field trips can be used for the pre-field-trip activity. This type of Internet field trips is designed to help students prepare an upcoming actual field trip. Thirdly, Internet field trips can be made by others. This type of Internet field trip is adopted to help students gain information about areas they are unable

Table 1. Features of effective Internet field trips (Source: Woerner, J. J., 1999)

The Internet field trip should have:
• a specific focus or objective(s) that is clearly stated • an integral part in the classroom learning • a pre-trip orientation with concrete activities • a navigator to guide students easily around the field trip site • a post-field-trip follow-up with activities and debriefing
The students should be able to:
• move around at their own speed and select what is meaningful to them to see and experience • interact with the field trip environment and use multiple sensory modalities • have access to content experts who understand the events, processes, and concepts illustrated at the site • make observations, collect and analyze data, and construct their own explanations • compare their observations and explanations to those made by other students and field "experts"
The online features should:
• be rich in context and aesthetically pleasing • have a navigator to guide students easily around the field trip site • have online resources that provide easy access to the content • relate the focus or objectives to the curriculum content of the site • use the unique features of the Web • accommodate multiple modalities and learning styles • facilitate independent investigation and cooperative group work • contain suggested off-line student activities • contain appropriate links to related sites

to visit as a class. Finally, Internet field trips can be used to present a teacher-created field trip. This type of Internet field trip is used to provide students with information about areas their teacher has visited.

CHARACTERISTICS OF EFFECTIVE INTERNET FIELD TRIPS

As with an actual field trip, students taking an Internet field trip will explore the virtual spaces, make observations, test ideas, collaborate with peers, collect things, learn prerequisite concepts, and deal with the questions at hand, and so forth. (Woerner, 1999). To avoid aimless and chaotic attempts, an Internet field trip must have effective features to support students' learning. There are a growing number of studies on identifying features of effective Internet field trips. Woerner (1999) compiled these features as indicated in Table 1.

DESIGN AND DEVELOPMENT OF INTERNET FIELD TRIPS

A valuable and effective Internet field trip is not simply a fun game or a change-of-pace event for learners who have been pushed through homework assignments, lectures, and tests. It is imperative that the Internet field trip project is accountable and it incorporates high standards, rigorous challenges, and valid assessment methods. A review of the literature supports the following model of TIED (target, implementation, evaluation, and development) for classroom teachers to design and develop their Internet field trips (see Figure 1).

The model of TIED serves two ends. The first end is to provide a guide for in-service teachers to outline the major issues they face in designing the educational Internet field trips on their own, to shape the process and constrain some specific choices, and to prevent the situation that in-service teachers are simply busy