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Virtual field trips

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Virtual field trips

Abstract

This review focuses on the advantages and disadvantages of virtual field trips and the lack of hands-on experience vs. traveling virtually through the World Wide Web. This study concentrates on the use of virtual field trips for students inside the classroom. Several descriptions of advantages and disadvantages are reflected in this review to provide a credible implementation in exploring the world. This can be done without even going outside or spending a lot of money, through virtual field trips which can be materialized inside the classroom without going farther from the school. This paper defines the qualities of an effective virtual field trip. This paper also examines the current information arguing the pros and cons of virtual field trips.

VIRTUAL FIELD TRIPS

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ABSTRACT

This review focuses on the advantages and disadvantages of virtual field trips and the lack of hands-on experience vs. traveling virtually through the World Wide Web. This study concentrates on the use of virtual field trips for students inside the classroom. Several descriptions of advantages and disadvantages are reflected in this review to provide a credible implementation in exploring the world. This can be done without even going outside or spending a lot of money through virtual field trips, which can only be materialized inside the classroom without going farther from the school. This paper defines the qualities of an effective virtual field trip. This paper also examines the current information arguing the pros and cons to virtual field trips.

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INTRODUCTION

What would it mean to a group of second grade students in Guttenberg, Iowa, studying the Arctic, if they virtually traveled to visit an Eskimo family? They could see the white snow, icebergs and learn about the Eskimos' way of life and their existence.

As part of a school's technology committee, the reviewer was asked to explore available software and technological needs of the elementary technology program. As schools are forced to cut programs due to the lack of funding, extracurricular activities have been the first things to be omitted. Sports, art classes and field trips are becoming rare. These items are no longer included in many school budgets. The reviewer's school was facing a budgeting dilemma this year. Due to decreasing field trip availability, the reviewer agreed to look into virtual field trips.

Virtual field trips involve using a computer screen to travel to places you would not visit otherwise. Many question whether or not virtual field trips are as enjoyable and worthwhile for the students since they are not physically experiencing it. This review will focus on the advantages and disadvantages of virtual field trips. Do students want to sit in the classroom and participate in a virtual field trip or would they like to physically go to a specific place?

A virtual field trip is a field trip to another environment whether real or simulated, using the Internet. It is more than just a visit to some pictures on a web site. Some virtual field trips are live endeavors to different places like a museum or nature center. A virtual field trip engages the students in an experience that would not usually happen in the classroom.

Virtual field trips (VFT) can provide opportunities for students that were not available in the past. Students studying the solar system can take a virtual walk on the moon. The possibilities are endless for students to travel, study, and experience things through virtual field trips. Virtual field trips allow students to gain more information about the outside world when they do not have the financial capacity to visit such places. It enables the students to have a better understanding of past events that are expensive when done in real life. Educators made it a point to visit the Internet instead of conducting expensive field trips and excursions as a way of dealing with the financial obligations some field trips require (Robins, 2008) While it is true that VFTs cannot stimulate the excitement of the students on a real-life excursion, the teachers are relieved to have the option to travel with their students virtually to places that one could never imagine they could attain in a real life encounter.

This review is important due to the fact that educators need to be aware of the different options they have for exploring the world. They are able to use these different opportunities to show students things they would not otherwise experience. This review will explain the purpose of virtual field trips, how the school, students and educators will benefit from virtual field trips, and different resources for educators to use when choosing virtual field trips.

Educators and professionals can use the results of this review to make informed choices about integrating virtual field trips into their curriculum. The information provided about virtual field trips can be effective in meeting the needs of the target audience, professionals and educators.

This review will explore the following research questions:

- What is the purpose of a virtual field trip to students and educators?
- What benefits will the school receive and who will be benefited?
- How will virtual field trips expedite an educator's approach towards better education?

METHODOLOGY

The reviewer first discovered virtual field trips in a professional seminar titled, “Webquests and Virtual Field Trips.” This seminar sparked the reviewer’s interest in virtual field trips and all the possibilities they provide. The reviewer searched the following data bases: Infotrac, Google Scholar, EBSCOhost, ERIC (Educational Resources Information Center), and Northern Iowa’s Rod Library Catalog, known as UNISTAR to explore and evaluate books, journals, magazine, and newspaper articles. The following descriptors were used in the search: (a) advantages and disadvantages; (b) virtual field trips for elementary; (c) virtual field trips and creation; (d) virtual field trips; (e) virtual field trips vs. physical field trips; (f) elementary field trip expenses; and (g) alternatives to field trips.

Evaluation of the journal articles, authors, publications, and Internet websites was completed through their content, currency, source, coverage and relevance to the topic. The articles and websites used in this literature review proved to be credible through these criteria to ensure that the sources were reliable and answered the proposed questions.

The reviewer found some sources that did not completely cover the topic, but were supplemental to other sources. A large number of sources were used to ensure that there was enough information to present a thorough analysis of the topic. Source dates ranged from 2003-2010. Sources from 2003 were compared with current sources to note the changes in virtual field trips and their usage. The majority of resource information focused on the advantages and disadvantages of virtual field trips.

ANALYSIS AND DISCUSSION

The purpose of virtual field trips is to provide experiences that would otherwise be unattainable due to cost, time and travel. Virtual field trips are expeditions that are conducted virtually, over the Internet so that students can learn directly from experts in far away places without ever leaving their classrooms (Zanetis, 2010).

Just like traditional field trips, virtual field trips take a number of different forms. They can involve touring a historic site, witnessing scientific experiments or processes at museums or organizations, watching live demonstrations in the field, and attending folk festivals or other events, but are not limited to these examples. They are different from the traditional variety because they are delivered over the Internet using technology (Zanetis, 2010).

Virtual field trips are not delivered in real time. They are typically websites that include text; audio, or some even have video resources about specific topics. Examples of virtual field trips are web pages that are committed to a topic, a streaming video tour of a particular location, or a podcast of a host guiding you through a collection of photos (Zanetis, 2010).

Virtual field trips are a means of virtual communication for students to see things in real time where they can interact with their educators, officials or tour guides during the presentation. In today's era, the Internet is an important factor to enhance the educational level of the students through virtual field trips where students find it impossible to even see in the real world (Manzo, 2009).

There are many factors to consider when conducting a virtual field trip. First, the educator must ensure that the topic must fit in accordance to school regulation. There are

many links where educators can make their own virtual field trips to meet their standards. To assure the quality of the virtual field trips, the reviewer must see to it that the organizers are experts with accurate and relevant information about the subject matter and worthy to be presented in classrooms (Tsubata, 2007).

Schools, students and educators can receive benefits from experiencing a virtual field trip. Virtual field trips can provide a broader education for students and give more options to educators to enrich lesson plans in specific content areas. Jan Zanetis, the author of the article, *The Beginner's Guide to Interactive Virtual Field Trips*, reports that since their schools have started participating in virtual field trips, she has seen a lot of changes in teaching and learning. She states the following:

Virtual field trips empower teachers, librarians, administrators, and IT staff to create significant opportunities for their school to focus on a world beyond the chain link fence. And I have witnessed over and over students asking questions of museum curators, wildlife naturalists, NASA instructors, historians, and peers located beyond our state borders. (2010, p. 22)

Students can have more opportunities to research, explore and experience places and things that were not possible prior to the existence of the Internet. In connection with the different examples of virtual field trips mentioned previously, virtual field trips are tours of specific topics or locations that are presented through different Web pages strung together and organized by grade-level. Often they are only a collection of static information pages with many graphics, but have evolved into more advanced tours involving more aspects of technology. Virtual field trips are an effective way to tell a story by putting together relevant sites using hyperlinks for the teachers and students to

follow. Virtual field trips started appearing with the advent of the World Wide Web around 1995 and have become popular since 2000 (LEARNZ, 2009).

Virtual field trips incorporate technology that makes it possible to engage all students in resource-rich, multimedia and hypermedia learning environments. They are to be used for classroom instruction, not as a replacement for, but in correlation with effective, concrete, experiential learning that uses hands-on inquiry strategies (Tuthill & Klemm, 2002). In a virtual field trip students can use graphical, text, auditory and numerical information to explore. The students can pick and choose the media that best suit them as learners. Virtual field trips can add variety to instruction and motivate students to learn new things. This can also prepare them for lifelong learning in technology of computer science (Tuthill & Klemm, 2003).

Teachers are beginning to introduce the virtual field trip experience to their students because going on traditional field trips have become problematic. Teachers have refrained from conducting actual field trips due to long preparation time, scheduling problems, liability, shortage of funding, transportation problems and the poor quality performance of some tour guides. Virtual field trips are a method of making virtual exploration through the web. Certain links are organized on a website, which correlates to a particular theme. One only needs a computer and Internet access to travel on a virtual field trip (Smedley & Higgins, 2005).

Planning

One of the strategies to have a more convenient situation in planning for a virtual field trip is to have an array of videos for the students to choose which trip to take so that it will be scheduled for the next meeting. This kind of approach will excite the students about what they will experience on their next virtual field trip. As always, planning ahead is a good method in every undertaking. Elementary students are always excited to go to places that are unreachable at their young age so virtual field trips are most welcome. Though the older generation also finds it worthwhile to go on a virtual field trip, the younger generation benefits more due to limitations of field trips or excursions that need overnight travels (Robins, 2008).

Virtual field trips can be great experiences for students. Many issues need to be considered before a virtual field trip can be determined, such as topic and grade-level appropriateness. Virtual field trips need to meet district standards, reliability of sources, and have good student involvement, motivation and accessibility. In order to have a smooth-sailing sequence of virtual field trips, directives should be followed as recommended by virtual field trip organizers. It is more advantageous for the educator to draft a lesson plan about the destinations s/he is going to travel and be guided accordingly (Robins, 2008). These directives can be in the form of worksheets used during the student's interaction on the virtual field trip travel. Students are required to jot down what they learned on their trips and identify the essence of what concepts are to be applied from the knowledge they gained (Mandel, 2010). Many sources, ideas, and activities can be gathered, especially when the topic deals with climates and topography around the world. This type of topic is exciting for the children but educators must consider that

content subjects differ from each other; thus the use of worksheets can be necessary to guide and support students through the planned learning objectives. The highlight of this matter is that the parents will also be informed about their child's school activities. (Mandel, 2010).

Virtual field trips need to meet the district standards to be educationally appropriate for students. The teacher needs to plan ahead and determine which standards will be met through the content-specific field trip. Clayton Ridge Community School District's Goals (2007) provide educators with the information they need to align their curriculum to meet the needs of students:

The curriculum and instructional program will provide for the individual needs and learning styles of each student in order to achieve their learning potential. The staff and teachers will be designed, and maintained, [sic]to provide students worldwide access to learning opportunities in preparation for the 21st century. (Clayton Ridge Community School District, 2007)

Many websites list the standards that are being met using a specific virtual field trip. Teachers can use these as they develop their VFTs to ensure accountability for their students' learning and to prove the relevance of using a virtual field trip.

Virtual field trips are indeed ideal for younger elementary students because they are more accessible rather than going on a physical trip. Educational trips are more exciting, especially when you visit different sites where the beauty of nature seems irresistible! Some of the exciting places that are worth visiting are the following: The Tower of London, The Zoo in San Diego, The Grand Canyon, The Ruins of Pompeii, Death Valley, or the White House (Carlin, 2009).

Resources

Internet4classrooms (2009) is a website that has lists of many different virtual field trips. Just by searching the Web, educators are able to find thousands of resources. A web search will produce thousands of possibilities. Some trips simply consist of links on a web page and some use a type of navigator or buttons to move through an actual live tour. Live tour or real-time field trips are organized by selected educators through the virtual field trip guide for teachers and students to follow which way to go. The videos should be presented as part of the learning process for the students, so careful selection of virtual field trips must be given preference. Virtual field trip duration varies in length so it must also be checked (Foley, 2003b).

There are various credible Websites that the literature recommends that educators use as their sources for proper guidance. One of these is the Metacrawler. It is a reliable site wherein several search engines can be easily located. For instance, when searching for virtual field trips, just click on the search engines and a list of search engines for virtual field trips will be displayed so there is no need to consume more time in researching (Mandel, 2010).

Some trips simply consist of a list of links on one web page, while other trips use some type of navigator (or buttons) to move through the tour. Following current pedagogy; in its best implementation, a VFT is a real-time guided field trip that is supported by interactive pages on the web that have been selected by educators. These pages are arranged in a thread that teachers and students can follow in either lineal or broad searching. The live links with experts on-site in real-time is a key aspect in creating a real experience for students. For example with LEARNZ virtual field trips students

have asked questions of scientists in Antarctica, mining staff underground and even electrical engineers on the top of wind turbines (Tramline, 2007).

When conducting a virtual field trip it is effective to group the students in pairs so they can have good interaction while watching and comparing ideas (Robins, 2008). The following links are good examples for the students to follow for credible research and worthwhile visits. These trips, if taken physically, cannot actually be reached without spending large amounts of money. Virtual field trip links that are worth adding to lesson plans are as follows:

1. John Muir Exhibit http://www.sierraclub.org/john_muir_exhibit/ – This is an exhibit about the exact story of Muir’s life with complete text and video effects;
2. Secret of Easter Island <http://www.pbs.org/wgbh/nova/easter/>- This is a reflection of the beautiful scenery of this island;
3. Virtual Geologic Field Trip to Griffith Park
<http://www.laep.org/target/technology/secondary/griffith/>- This is about geology and earthquakes that are worth studying but too dangerous for students to actually visit;
4. Explore the Estuary <http://www.estuarylive.org/>- This is a video tour about the water world;
5. Minnesota Orchestra European Virtual Tour
<http://www.minnesotaorchestra.org/education/tour.cfm> – This is in connection with music and tours in Europe specifically made for the teachers and students;

6. The Jason Project <http://www.jasonproject.org/>– This is about different travels that are full of excitement while inside the classroom. This includes the activities of the crew on the space station .
7. Reach the World <http://www.reachtheworld.org/>- This is actual travel of the crew on a 43-foot sailboat with teachers and students in separate centers.
8. PolarHusky <http://www.polarhusky.com/>– This is a recording of expeditions via dog sledding specially made for children’s education around the world.
9. Goals: Global Online Adventure Learning <http://www.goals.com/>- These are exciting virtual field trip adventures specifically made by educators with the use of modern technology.
10. Virtual field trips
<http://www.theteachersguide.com/virtualtours.html#Museums>- This is a list of virtual trips to various museums for the students to explore.
11. Virtual field trips <http://www.uen.org/utahlink/tours/>– This is a link where students and teachers can make their own virtual field trips (Carlin, 2009, p. 37).

The Jason Project is one of the best links for teachers and students to visit because of its unique way of doing the research. It provides the educational opportunities for the viewers to see and study. The Jason Project is considered the ‘granddaddy of online exploration.’ It provides online information for teacher training intended for the classroom with specific curriculum units. The Jason Project includes scientific exploration with online information, teacher training on the content, and curriculum units that are aligned with national science, geography, and technology standards. It provides

curriculum that engages the learners. For example, “students visit and compare the National Oceanic and Atmospheric Administration's Aquarius Underwater Laboratory with the National Aeronautics and Space Administration's International Space Station” (Starr, 2000, p. 3).

Lesson Plans

Lesson plans are a vital curriculum area when preparing to instruct students. The lesson plans need to be thorough. Educators must provide explicit objectives that teach what they want the students to gain in knowledge. The lesson plan needs to align with district and state standards to prove its worthiness and efficiency (HotChalk, 2010). It is important for educators to draft lesson plans to meet the needs of students and provide consistency throughout the virtual field trip. The educator can customize some virtual field trips. Students can pick the information used for their topic depending on time, age, and focus on the material. The lesson plans serve as guidelines for the educators to have distinctions on what kind of topic are best for their students (Mandel, 2010).

Listed are some of the sites that can be used to develop a lesson plan on a specific topic or curriculum content (Robins, 2008):

1. Death Valley

<http://www.can-do.com/lessons98/Canyon.html>. This is a lesson plan for a virtual field trip specifically to Death Valley in California. It is specially set to fit the classroom curriculum with an introduction before proceeding to their virtual field trips. The advantage is that the organizers provided follow-up interactions like submitting questions to the makers while discussing about their ‘destinations.’ The parents and others who are present may interact by

comparing what they have learned online with what others have learned in an actual field trip and other information from books and magazines.

2. San Diego Zoo

<http://www.mhschool.com/socialstudies/2000/teacher/teachres/weblesson/weblesson.php3?program=4&state=&grade=4&unit=6&chapter=11&lesson=1>.

This is a lesson plan intended for a virtual field trip to the San Diego Zoo.

Before the presentation, a list of terminology is provided in relation to animals and their habitats for students to incorporate from different online dictionaries.

With this kind of approach, the students will be able to understand more about the things they saw on their virtual field trips.

3. CyberSmart Education Company

<http://student.plattsburgh.edu/cwood001/teachingvocabularytusingvirtualfieldtrips.htm>. This lesson plan includes a large selection of virtual field destinations provided by CyberSmart Education Company so that students may select virtual field trip destinations. They may first choose those locations they know they may not be able to visit physically and present their choices to their educators. This is advantageous for younger students like the kindergarteners.

Tramline is a resource that is beneficial to educators. It has developed a package software application called *TourMaker* (Foley, 2003c). A field trip created with *TourMaker* will tell a story and guide students through a sequence of Web pages on the topic selected by the educator. For each Web page within the virtual tour, the student is provided with a page on which the educator can write custom information and instruct the

students to complete a task based on the information that was presented. Students can progress through the tour easily using the *TourMaker* software (Foley, 2003c). Unlike other virtual field trips, *Tourmaker* serves as an assistant to the educator because it displays the information in an easy to read format. *Tourmaker* will lead the educator and the students to even study different races and cultures of other nations using maps and corresponding videos that provide a clearer vision of the main subject (Tramline, 2007).

Another product by *Tramline* is the *Teacher Resource Tour*. It has one of the best sites for teachers to conduct a virtual field trip specifically in the fields of natural environment and conservation. There are several lesson plans for the students to follow so that there will be different modes of interactions after the execution of their virtual field trips. Using the *Tramline* technology to conduct a virtual field trip for the students is easier. This will enable the educators to have an easier access to the Internet due to the fact that the software authors have provided tools that are convenient for the educators to follow. Well-arranged lists of links are set with titles and descriptions of topics with corresponding themes. The educators can then recommend these links to their students for their next virtual field trip. *Tramline* has the virtual field trip set-up for educators and as stated, provides tools and easy navigational techniques to proceed through the endeavor of the virtual field trip (Tramline, 2007).

Well-organized sites offer students and teachers easy access to outstanding VFT opportunities. According to Global SchoolNet (2007), "...students will have a unique experience of sharing in an Online Expedition. Students who participate in basic decision-making take charge of their education. Geography, economics, biology, and

other subjects acquire a fascinating, real-world aura. An Expedition via the Web is an adventure of the intellect” (p. 4).

One expedition that was created by Global SchoolNet, and is freely accessible to anyone, is *The North Pole Solo*. Wave Vidmar, an adventurer and voyager, attempts to be the first American to voyage solo to the North Pole. Students can access the information and field dispatches from Wave’s expedition. Wave’s expedition displays a 60-day adventure that included his struggles as he walked, skied, and swam 660 miles across the frozen Arctic Sea ice (Global SchoolNet, 2007).

WebQuests

Webquests incorporate some of the same concepts as virtual field trips. They allow educators and students to experience new information via the Internet. Webquests have a task that needs to be completed by students. The task can be a question that needs to be answered. WebQuests provide engaging and doable tasks that elicit higher order thinking of some kind. It's about doing something with information about a specific topic. When students progress through a WebQuest, they are completing a task that we would do at a job, but they are doing it at school to gain knowledge and information in a different format than looking up information in an encyclopedia (March, 2002).

A WebQuest is an inquiry-oriented activity in which some or all of the information with which learners interact comes from resources on the Internet, optionally supplemented with videoconferencing (Dodge, 1997). WebQuests are arranged on the Internet with organized Web pages that include educational topics to choose from. WebQuests bring together the most effective instructional practices into one integrated student activity that includes strategies to increase student motivation, develop thinking

skills, and enhance the cooperative learning process (Schrock, 2009).

Some virtual field trips are written using the WebQuests format and structure. They have a lot of things in common; they are both accessible at any time once uploaded to the Internet, they provide efficient use of a learner's time, and the students spend more time focusing on using information rather than searching the Internet (Tramline, 2007).

Gorghiu, Gorghiu, González, and Santa's (2005) study found the following about the use of WebQuests:

The WebQuest technique involves cooperative learning and forces students to work on projects in groups. The results of its impact in the classroom proved that WebQuest is an important source of inspiration for the teachers, a suitable teaching and learning method and a way for integrating Internet in learning. One of the greatest gains of the Webquest implementation was obtained in pupils' motivation and cooperative work. (p. 5)

Webquests as virtual field trips are important resources for educators. They provide an effective tool and strategy used when planning and organizing curriculum.

Advantages

Virtual field trips offer a number of advantages for the typical educator. They can provide experiences that students would not otherwise be able to experience. For students, virtual field trips can be a welcome and exciting break from day-to-day classroom activities and a memorable, experience that will help retain the curriculum (Zanetis, 2010).

A virtual field trip is a guided exploration through the Web that organizes a collection of pre-screened, thematically based web pages into a structured online learning

experience (Foley, 2003a). The introduction of virtual field trips to the classroom can be advantageous to both the educator and the students. Educators and students benefit from a never-ending search of humankind, the environment, new discoveries, things of the past, the galaxy and the Milky Way, the nine heavenly bodies, the whole universe and various sciences. These can all be molded into a single experience through virtual field trips. The Internet has become the lifeline in any field of study, business industries, sciences, and human resources. Virtual field trips enable students to have easier access to locations with fewer expenses in a more convenient way (Weathers, 2007). Sometimes students need to travel days to reach a certain destination that is not appropriate for elementary students without companions. Virtual field trips can bring the students to a different time, even before they were born, or to the smallest thing on earth, and even as far as the Milky Way, and the whole universe (Weathers, 2007).

There are many advantages in taking a virtual field trip instead of physically going on a field trip. VFTs provide experiences most likely unavailable in today's challenging economy. Schools will spend less money using virtual field trips. VFTs can assist budget strapped schools in meeting the provision of the *No Child Left Behind Act of 2001* (NCLB) that requires an emphasis on the core subjects of math, reading and language arts (U.S. Department of Education, Office of the Deputy Secretary, 2004). Educators must meet the NCLB, state and district requirements, and virtual field trips can be a fun and exciting way to do that.

The web provides the trip for the students anytime so long as there is electrical power. The students can always enjoy virtual field trips at their own convenience so even if it's gloomy outside, the students can still enjoy their virtual field trips (Carlin, 2009).

Virtual field trips allow teachers to provide life experiences without money, time constraints, or listening to the boring speech of the tour guide. In video, the speaker gives a clearer illustration with the subject closely focused. “Today, nonprofit organizations offer virtual field trips from sites across the country into the classrooms and libraries” (Tounget, 2005, p. 24). Educators and students benefit by the joint efforts of many concerned virtual field trip organizers who provide free educational first-hand information to the educators and students. *Globalearn* is a group of non-profit educational companies who gather information regarding their travels around the world via satellite to their website (Tapscott, 2009). The virtual field trips give more concise information about the outside world where students cannot afford to travel in real life. The organizers are mostly Peace Corps members and philanthropists, as well as scientists who are also willing to learn more about the past and present, especially on remote places, old relics, or different bodies of water and terrestrial activities (Tapscott, 2009).

Another advantage to virtual field trips is accessibility. Virtual field trips allow both students and teachers to visit destinations that would otherwise be inaccessible. Distant places across the country are expensive to access; it is imperative for the educator to provide necessary references, in addition to their class discussions, to give more content on the distant subject matter topic. Virtual field trips are cheaper compared to actual field trips and excursions so even the low-income districts or charity schools can join and study together. Some are even offered for free. Other complicated topics that involve past events require historical records for the students to understand; this is where virtual field trips can play an important role. Some of the past events that students need to know are: the battlegrounds of the Civil War, or the Rocky Mountains on the West Coast.

If the students are located on the other side of the globe, it will be impossible to reach those places without spending a large amount for a single trip. This explains why educators go on virtual field trips.

In connection with the previous discussion, virtual field trips can provide students with an opportunity to travel virtually to the wilderness of Africa where they can study the wildlife and the land's abundant natural resources. Africa is one among the many places that young students would really love to travel but is not advisable for young students without any chaperons. Therefore, the best way to enjoy the wilds without risk is through virtual field trips. Virtually, one can see a close up interaction of a newborn lion cub and other wild animals that are rarely seen in urban places (Tramline, 2007).

Virtual field trips can be advantageous for the students because there are more sources on various educational topics that can be found on the Internet by using several shortcuts that are well polished and designed for respective grade levels. There are multiple sources to choose from that are extremely comprehensive and highly advanced field trips with video and audio sections to make the trip more entertaining (Carlin, 2009). Whether simple or complicated, virtual field trips can lead the students to another dimension in different places just within your reach, right in front of the computer screen. By conducting virtual field trips in school, the educators provide many benefits for the students. It is another kind of approach for the students to learn how to gain more knowledge by using the Internet and the advance technology of learning by using the computer (Johnson, 2009).

Safety is another advantage when considering virtual field trips. Student safety is always a concern on real-world field trips. Supervision, allergies, and environmental

considerations are stressful items for teachers to consider when planning a field trip.

Some students may not be allowed to go on field trips due to health and safety concerns.

Virtual field trips take away that anxiety. In conducting actual field trips the students need to have chaperons for the safety of the students; in conducting virtual field trips, the teacher does not have to bother about this issue. All the teacher needs to do is to have prior planning for the virtual field trip and inform the parents (Robins, 2009).

The advantage of a virtual field trip is that it can be used to meet the objectives of the curriculum and district standards. Many virtual field trip websites have standards that are close or match up to most district standards for specific content areas. Some virtual field trips can be modified so educators only have to tour the parts that are relevant to their specific content-related topic.

Virtual field trips are enriching adventures for students, which should first be explored by teachers before they present the trips to their students. Visual presentation is one of the best approaches in which the student can have a clearer vision rather than just listening to their educators. The many unreachable locations that address science-based topics that are worth student study include the following examples: (a) scientific research about ecology and conservations, (b) endangered species of the earth, (c) fierce creatures, (d) natural wonders, (e) rainforest, (f) fish in the ocean, (h) volcanoes, (i) wildfire, and (j) natural calamities like typhoons, tornadoes and hurricanes. These are important subject areas that are worth studying but cannot be reached easily, especially by younger students (Devlin-Scherer, 2003)

Some virtual field trips offer ideas for student projects, provide lesson plans, teach how to do art processes, present images of art pieces, display timelines of historical

periods, and give background information on artists, inventors, historical figures, or scientists. For example, the Metropolitan site has a current video selection on Making Illuminated Manuscripts that illustrates this process. Video guides to accompany different collections are also available on some Websites (Devlin-Scherer, 2003). The virtual trip may be colorful to view places where no child could go without causing havoc. Virtual field trips are safe for the students even without escorts.

There are three types of sites where students can find virtual field trip lesson plans: (a) Commercial sites; (b) Informational sites; and (c) Educational sites. Commercial sites are used to promote various locations. The educator would either pay for using the virtual field trip or it might be a visual tour used for clients to see in preparation for their actual visit to places they have chosen. Information sites are sites used for public information or propaganda or for educational purposes that students and teachers would like to choose for their virtual field trips. Educational sites are sites constructed by teachers and students intended for classroom activities with time limits (Starr, 2009).

Another advantage in conducting a virtual field trip is the process wherein the educator can incorporate multiple topics in one lesson. The educator will need to choose the kind of topics to be covered by the students. The educator first needs to decide whether the class covers one subject or multiple topics. The group can then go to their respective virtual field trips in one sitting, which of course cannot be done in any physical field trip in such a short period of time. For instance, the whole section may be divided into four groups:

1. One will click on a site that will cover the way hurricanes develop, and other critical weather conditions, like tornadoes and thunderstorms. They only have to select a website with topics about typical northern hemisphere hurricanes. There, they will study, observe, investigate and discover the meteorological steps on what caused those sudden changes of weather conditions.
2. Another group may choose to observe how active volcanoes work and the aftermath after its eruption. They can click on The Hawaiian Volcano Observatory where they are provided with a close observation about the real situation.
3. The next group may go to 'Bright Edges of the World: The Earth's Evolving Dry lands.' This site is illustrated with pictures, videos, and several texts of different dry lands describing its harshness, the animals, the plant life in those areas, and the effects of man's encroachment.
4. The last group may go to the heart of the rain forest in the deep jungle of Brazil by using the Amazon Adventure where they will experience the unusual living conditions within that environment.

The situational analysis to be assigned to them would place them in that same situation and explore how they would react. After traveling to different destinations, the students will be given time to gather what they have observed during their virtual field trips and reflect on what they have learned in their respective worksheets for evaluation (Mandel, 2010).

Virtual field trips are useful for educators and students because they do not need to be in the present, but rather a situation of the past that needs to be understood and analyzed. These are expeditions that children inside the classroom would never be able to

experience otherwise. Virtual field trips spark inspiration in students and learners that can send them across the world or even off this planet.

Disadvantages

Virtual field trips have disadvantages as well. Virtual field trips cannot take students physically to a destination. It is more beneficial for students to travel to Africa where they can hear, smell, taste, touch and see the culture and environment. An actual lion roar would forever be embedded into the minds of students, whereas, an audio clip of a lion roar is less experiential for the students.

Tuthill and Klemm (2002) found “the narratives of professional VFTs are written by a variety of professionals to address general interests of a large and diverse audience, hence the reading level may be inappropriate to your students” (p. 458). Educators need to be aware of limitations of virtual field trips. Meeting the needs of students must be considered when conducting a virtual field trip.

According to Tounget (2005) “A virtual field trip will never replace the smell of a cold fish being fed to hungry seals or the prickly feel of a sea star” (p. 24). Traditional field trips are exciting life experiences for students. They get to bring a lunch of their choice, wear field trip clothes, and ride a bus to a place they have probably never been before. It is a day out of school, freedom! Virtual field trips lack full sensory input because it cannot provide input for the five senses like physically traveling and experiencing it can. Students learn through smelling, tasting, touchy, hearing and seeing. They soak up the environment. A virtual field trip typically can only offer the opportunity to see and hear.

Another disadvantage in taking a virtual field trip is the inability to communicate with staff or tour guides at the field trip location. Students use their facial expressions and body language to express their confusion, interest, and excitement during a field trip. Tour guides or persons with expertise in the content area you are visiting are also a great resource, and the inability to ask questions about the topic is a disadvantage to the students. The teacher needs to have a large knowledge base of the content and trip to provide additional information if questions arise. This is a disadvantage because teachers have to build a knowledge base of the content area well beyond what they would for an average lesson plan or actual field trip (Westmoore, 2008).

The World Wide Web is constantly changing and many of the virtual field trip links can quickly become inaccessible or out of date. “For example, a museum is a location that is constantly changing. Museums often change their exhibitions, feature a local artist every few months, or rotate special collections” (Robins, 2008). Even the most up-to-date Websites are still behind. Teachers need to be aware of the endless new information being added to the Internet. Time also presents itself as a negative limitation when considering a virtual field trip. The educator will have to spend time reviewing the virtual field trip to align standards and plan (Nix, 1999).

Students may not be comfortable using the hardware or software needed to explore a virtual field trip. Virtual field trips and their need for hardware and/or software can be costly if it has to be specially purchased for the classroom (Tuthill & Klemm, 2002). Hardware and materials, such as computers must be available in classrooms and used by teachers and students in order for virtual field trips to occur. According to a National Center for Education Statistics survey which was referenced in the article by

Tuthill & Klemm (2002), by 1999 most teachers reported at least one computer in their classrooms, and that more than half of these computers were connected to the Internet. Half of the teachers who had computers available in their schools used them for classroom instruction. “Seventy-eight percent of teachers report that lack of computers is the main reason not using computer technology in their classrooms” (Tuthill & Klemm, 2003, p. 189).

Virtual field trips have many disadvantages for students and educators. Hardware, software, materials, and access to the Internet are just a few that limit students and educators from having a meaningful expedition. The World Wide Web offers ever-changing material on which educators do not always have the time to stay up-to-date. They must make sure information they provide for their students is appropriate and current. Virtual field trips have limitations that must be considered by educators and students.

CONCLUSIONS AND RECOMMENDATION

This review explored the following research questions:

- What is the purpose of a virtual field trip to students and educators?
- What benefits will the school receive and who will be benefited?
- How will virtual field trips expedite an educator's approach towards better education?

The findings bring together information that informs educators on the effective use of virtual field trips.

Virtual field trips provide students and educators with an expedition of locations that students probably would not be able to experience due to time and money. They hold a lot of promise for educators and students. Imagine students visiting Africa on a cold, windy day in December from their classrooms in Iowa. They can virtually experience a different kind of harsh environment that Africa safaris have to offer. Students will see wildlife in their own element and explore different tundra that can stimulate students' motivation to learn more. The winter months at school can be long and cold in Iowa, so providing students with these expeditions allows them to stay motivated and inspired to learn.

Virtual field trips can provide a good foundation for teachers as well as for the students to become comfortable in using technology and learning worldwide. They are an exciting way to enhance student learning. Teachers can get excited about planning, organizing and finding content covered by specific virtual field trips. Being able to virtually visit places that are thousands of miles away gives students the opportunity to take pride in gaining knowledge from across the world that would not be accessible for them to experience physically.

To conduct a virtual field trip instead of having a physical field trip should not be considered a disadvantage, but rather a solution to a problem like conducting a study, which would require days to travel. A virtual field trip is the most practical way to gather facts without spending so much time and money (Longer & Gottfried, 2009). The use of a Smart Board or projector should be used as part of the virtual field trip together with individual computers or using a flat screen. Using individual computers will make the virtual field trip more exciting if the students are divided into groups or pairs, so they can interact and discuss while they are virtually exploring the outside world.

Virtual field trips can be great alternatives to enhance student learning without even conducting actual physical field trips. Although nothing can replace physically touching, seeing, or smelling an actual location and object, virtual field trips offer more information that students otherwise would not get to experience physically.

The benefits of virtual field trips allow educators and students to stay motivated, inspired and increase students' creativity and drive to learn about faraway destinations and their different way of life. Educators should grasp this opportunity to use virtual field trips in their classroom in order to enhance their teaching levels and to give additional knowledge to the students. It would be interesting to see if students who traveled virtually read better, had a more advanced vocabulary, or a better comprehension of the content knowledge (Rosenhall, 2008).

A virtual field trip can be a journey into history. Current events are usually done and read in the morning news and on online home pages in the computers. Therefore, educators should not be over dependent on what the Web can offer. As an elementary teacher, the reviewer agrees that students need to experience field trips. Virtual field trips

are a great way to supplement field trips or replace a field trip that can no longer be funded. The reviewer would first choose to physically take the students on a real-life field trip, but if that option were not available, a virtual field trip would be a worthwhile experience.

Teachers can stay up-to-date with endless new information being added to the Internet. Teachers must choose sites that have active organizers who take the actual trips by themselves to give authentic and realistic reports for the benefit of those students who are depending so much of what information they could gather during their virtual field trip.

The reviewer acknowledges that students and educators need to actually get out there and be able to engage all their senses. On the other hand, school budgets and gas prices have caused hard times, and certain extra things are being cut from the school curriculum. It is recommended that teachers explore virtual field trips that correlate to a specific content area, tie the virtual field trip to their standards and curriculum, and enhance their students' learning. There are many virtual field trip opportunities that are available to teachers, which are in accordance to district standards and meet the benchmarks.

Teachers should take the chance to explore different virtual field trips that will allow them to take students to different places around the world. It must be taken into consideration that things happen first before they are documented. That is the reason events recorded for educational purposes are a little bit late in relation to those that are actually happening. Researchers, scientists, and archeologists record first-hand information via satellites and hope to give a record of the information of the actual

expeditions. They have to keep concise track of the current time to get the information recorded in a timely manner.

Educators can provide a better education for students by using the resources available to motivate students to want to learn. Educators use virtual field trips to provide an interactive, hands-on approach to education and teaching curriculum. This is the way education is progressing. Educators and professionals gain access to exploration and experience more easily on virtual field trip experiences. With the right evaluation and planning, virtual field trips can be a great addition to any curriculum. Teachers do not have to start from the beginning because there are many organizers that are educators who have strived to find a solution for what was once a difficult problem left to be solved by the teachers.

In conclusion, virtual field trips have more advantages for students than disadvantages. With teacher planning, preparation and organization, virtual field trips can be great supplements for the classroom curriculum instead of physically conducting trips to actual destinations.

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