The Effect of Web-Based Streaming Media on Destination Image and Knowledge

Acquisition in a Presentation of Music of the World

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INTRODUCTION

This study is a comparison of Web-based media used to teach musical and extramusical concepts supporting travel and tourism to non-music majors. Despite the growth of the Internet, few studies exist concerning its impact on the user. From the viewpoint of a music educator, the Internet provides a new avenue for the dissemination of information on the music of the world. The Music Educators National Conference National Standard number nine (Consortium, 1994) states that music should promote "understanding music in relation to history and culture" (p. 45). The present study allows music from multiple cultures to be displayed in a format accessible to the world. National Standard number eight also promotes "understanding relationships between music, the other arts, and disciplines outside of the arts" (p. 45). Streaming media allows a workable format for musicians to present their craft to the world.

A link between music educators and the travel industry is one way of promoting the understanding of the relationship of music to another discipline. Destination marketing depends largely on the way prospective visitors perceive the image of destinations and the marketing stimuli designed to promote the destinations, or "destination image". Effectively disseminating destination images to tourists plays a vital role in successful tourism development. Since music is an integral part of the atmosphere of any locale, a person's perceptions of music of a culture can influence the mental images that person has about a place.

For example, a music lover from a far-away place begins totally unaware that Chicago is the origin of Blues music. One day, he watches his local news that reports the

annual Blues festival is coming to Chicago. At this point he becomes aware of the name Chicago, but only at a surface level. Later, he desires related information about Chicago's Blues festival, including the schedule and activities of the festival, the weather, transportation system, where he can stay and the price, as well as where he can dine. His interpretations yield motivations to visit Chicago. It is very possible that the preference may turn into an actual visitation.

Travel decisions are made when positive destination images and constructed mental images of potential travelers are matched. What portraits will appear in individuals' minds when they hear African rhythms or Chinese melodies? It is difficult for individuals to visualize the reality of places based only on the limited information provided by tourism operators.

PURPOSE

This study is a report on the effects of two distinct sets of WWW (World Wide Web) pages on the knowledge acquisition and destination image formation of the participants. Both sets of pages present similar information, but one set contains information in the form of traditional text and graphics, while the other set contains the information supplemented by dynamic images in the form of streaming media, including music clips. The subject of the WWW pages is a presentation of music from four distinct areas of the world (i.e. China, Africa, Latin America, and Europe). The relationships among image formation and knowledge acquisition, and an explanation the roles of dynamic image can play in music education are explored.

RESEARCH QUESTION

Is there a significant difference in the participants' knowledge gain or destination image across forms of information presentation?

Subquestions:

1. How will the differences in presentation relate to musical understanding and appreciation?

2. How will the differences in presentation relate to knowledge acquisition of geography and culture?

3. How will the differences in presentation relate to participants' attitudes toward possible future vacations to each of the areas represented?

4. How will the differences in presentation relate to participants' attitudes toward technology?

LITERATURE REVIEW

According to Allan Tuchman (1998), senior research programmer at Computing & Communications Service Office, University of Illinois at Urbana-Champaign, streaming media is " video or audio that plays as it comes across the network, much as a conventional TV or radio. No waiting for a full file download and any serious network congestion or outage will impact your viewing of the video content" [sic] (p. 3). Sites are more useful and attractive to the potential travelers if they provide sound bites and web videos (dynamic images) introduce places (Schlosser & Kanfer, 1995).

The most effective way of leaning a concept is to combine both image and verbal information together (Reez, 1992). Research supports the fact that people remember images better and longer than texts, and that images help people to understand abstract ideas and concepts (Shepard, 1967; Standing, 1973). Sites will be more appealing to the potential viewer if they are filled with pictures, sound bits, film clips, etc. (Cockburn & Wilson, 1996).

From the viewpoint of the travel agent, the effect of streaming media on the potential traveler would need to be weighed against the cost of providing such a service to determine its feasibility. Individuals actively seek visual or aesthetic information to make "more informed" judgments when making the decisions required for a pleasure trip (Vogt, Fesenmaier, and Mackay, 1993). The emergence of web-based streaming media provides an alternative channel for the tourism industry to delivery destination-related information in the

forms of dynamic images and sounds, and this allows potential travelers to get more flavorful information to form more vivid destination images.

Many researchers (e.g. Pearce, 1982; Woodside and Lyonski, 1990; and Goodrich, 1978) have demonstrated that there is a positive relationship between positive perceptions of destinations and decision-making. The importance of image formation is especially relevant to tourist development because a tourist's image is generally very resistant to change once it has been formed (Gunn, 1972). Stringer (1984) concluded that images are a "crucial basis of choice and decision making in tourism". Each destination should have its own unique and compelling image with correspond to travelers' mental images. Hunt (1975) stated that a positive image motivates travel to the given destinations by promising positive rewards from travel there.

METHODOLOGY

The project is an experimental study comparing two distinct sets of Web pages. The subject of the Web pages is an illustration of music from four distinct areas of the world (i. e. China, Africa, Latin America, and Europe). The two sets differ in that one set of pages contains video and audio in the form of RealMedia files.

POPULATION

The participants in the study are a group of undergraduate Leisure Studies majors (N=~40) at a major Midwestern university. Because of their interest in travel and tourism, the participants are assumed to have acquired more knowledge about world cultures and geography than the general population. No assumptions have been made about the participants' knowledge of music. Permission for using human subjects was obtained from the Institute Review Board (IRB) of the University and the department of Leisure Studies. The setting for the experiment is a college computer laboratory at the University. Since the participants attend a university in which the use of computers and the Internet are commonplace, the use of the technology is assumed to have neither a disruption or novelty effect on the data collected.

PRETEST

The participants are first divided into two groups using a computerized random number generator. After being made aware of their legal rights as mandated by the IRB, the participants are given a pretest to determine levels of knowledge acquisition and other factors affecting the experiment. The purpose of the pretest is three-fold: The primary use of the pretest is to determine that the random selection resulted in groups with similar knowledge bases. If the initial knowledge bases of the participant groups are found to be statistically significantly different, then this difference must be factored into the final statistical procedures.

A secondary purpose of the pretest is to present questions which will be repeated in the posttest in order to determine any significant differences in the group means between the two tests within each subgroup. The differences in these means can then be compared to judge the relative effectiveness of the presentation methods. Care has been taken that questions in the pretest do not directly reflect on material in the presentation, so as not to bias the respondents by foreshadowing the exact nature of the material to be presented.

A tertiary purpose of the pretest is to collect demographic data to be used in determining relationships among knowledge gains and personal characteristics. Demographic data includes information on age, gender, education, musical experience, and nationality.

TREATMENT

The treatment phase of the experiment consists of two sets of WWW pages. Both pages contain similar information, but in two different formats. The first set of pages contains information in the form of text and graphics with interactive links to encourage user participation, with no audio or video.

The second set of WWW pages also contains some traditional web design, but highlights the use of streaming media to present information. These pages have music clips as well as moving images to support the textual and graphic information.

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The subject of the WWW presentation is music of the world. The presentation has been designed to reflect music that a traveler might hear in a journey to different parts of the world. Since musical genres are so varied across the globe, the display is limited to four areas of the world. Representing the Far East, one portion of the presentation reflects the music of China. Chinese music is shown through the traditional classical Chinese music tradition.

Another section of the presentation highlights the music of sub-Saharan Africa. An exploration of native African rhythms is the centerpiece of this section. The Americas are represented by a presentation of Latin American music, complete with video clips from actual dance clubs. The European folk tradition is represented through a discussion of Celtic music.

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4. Project Title: The Effect of Web-Based Streaming Media on Destination Image and
Knowledge Acquisition in a Presentation of Music of the World

5. Funding: _____ Pending funding decision   _____ Funded   _X_ Not externally funded

6. Funding Agency: 7. Grant or Contract No:

8. Name and address of agency official, if any, to be notified of IRB approval:

9. Type of Subject: (Check all appropriate blanks in both A. and B.)

A. _____ Adult, non-student   B. _X_ Normal volunteer   _____ Abnormal mental status
    _X_ UIUC student   _____ In-patient   _____ Individual with limited
    _____ Minor   _____ Out-patient   civil freedom
    _____ Other (explain)   _____ Mentally retarded   _____ Pregnant women/fetuses

10. Number of Subjects in Study: (including controls)   40 _____

Reserved for Board Use Only

Track: _____ Log No: _____ Reviewers: _____

11.		X	Subjects will receive payment or some compensation for participation. *If yes, state amount and form of payment here.*
	yes	no	

12.		X	Access to subjects will be gained through other institutions or agencies. (See May, 1995 Handbook for Investigators, page 24.) *If yes, list specific institutions under #19 below.*
	yes	no	

13.		X	Project involves non Univ. of Illinois investigators. *If yes, list investigators and their affiliation here.*
	yes	no	

14.		X	Project involves medical instrumentation or biological devices that require electrical equipment to be attached to subjects. *Please attach a copy of the completed electrical equipment form which can be requested from the IRB office.*
	yes	no	

15.		X	Project involves use of drugs or medical devices not certified by FDA for clinical use *for this purpose.*
	yes	no	

16.		X	Investigator has, or has applied for, Investigational New Drug certification by the FDA for the use of drugs included in this project. *If yes, provide copy of the FDA form*
	yes	no	

17.		X	Investigator has or has applied for an Investigational Device Exemption (IDE) from FDA for the use of a significant risk medical device in this project.
	yes	no	

18. OBJECTIVES AND SIGNIFICANCE OF THE PROPOSED RESEARCH:

This study is a report on the effects of two distinct sets of WWW (World Wide Web) pages on the knowledge acquisition and destination image formation of the participants. Both sets of pages present identical information, but one set contains information in the form of traditional text and graphics, while the other set contains the information supplemented by dynamic images in the form of streaming media, including music clips. The subject of the WWW pages is a presentation of music from four distinct areas of the world (i.e. China, Africa, Latin America, and Europe). The relationship of image formation and knowledge acquisition , and an explanation the roles of dynamic image can play in music education.

Research Question: Is there a significant difference in the participants' knowledge gain or destination image accross forms of information presentation?

Subquestions:
1. How will the differences in presentation relate to knowledge acquisition of geography and culture?
2. How will the differences in presentation relate to musical understanding and appreciation?

3. How will the differences in presentation relate to participants' attitudes toward possible future vacations to each of the areas represented?

4. How will the differences in presentation relate to participants' attitudes toward technology?

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19. VOLUNTARY PARTICIPATION: Describe the method for a) selecting subjects and b) ensuring that their participation is voluntary. **A copy of the consent form to be signed by the subject and/or any explanation to be given to the subject should be attached to this form.** If no consent form will be used, explain the procedures to be used to ensure that participation is voluntary. If any information is withheld from subjects, identify what will be withheld, justify the withholding, and describe the debriefing plan, if any. Special requirements for consent need to be met for certain subject populations including children. Consult the May, 1995 Handbook.

Subjects will be taken from existing music classes.
All subjects will be given the following information prior to the study via a WWW page:

1) This study involves research.
2) No participant should be expected to spend more than 60 minutes in this research.
3) Participation is voluntary, and refusal to participate will involve no penalty. The subject has the freedom to withdraw at any time. Participation, or lack thereof, will not affect class grade in any way.
4) All records will remain confidential.
5) Contact Richard Repp <rrepp@uiuc.edu> for more information on the study.

20. PROCEDURES: Describe how subjects will be involved. (Attach additional page only if
more space is needed)

The participants are first divided into two groups using a computerized random number generator. After being made aware of their legal rights as mandated by the IRB, the participants are given a pretest to determine levels of knowledge acquisition. The treatment phase of the experiment consists of two sets of WWW pages. Both pages contain similar information, but in two different formats. The first set of pages contains information in the form of text and graphics with interactive links to encourage user participation.
The second set of WWW pages also contains some traditional web design, but highlights the use of streaming media to present information. These pages have music clips as well as moving images to support the textual and graphic information. Many of the static graphics incorporated into the first set of pages have been translated into a slide show within the streaming media. The subjects wil view the pages and then be tested on their knowledge acquisition.

21. CONFIDENTIALITY OF DATA: If data are collected that could be associated with
individual subjects, describe the methods to be used to ensure the confidentiality of data
obtained (See May, 1995 Handbook, page 25). Confidentiality of data is required unless subjects
give express permission that their data may be identified.

All records will remain confidential. Data will be taken via on on-line survey mechanism.
Data will be transferred to a tab-delimeted ASCII file which will not contain information
which could identify a participant. Analysis of data will take place only after this removal of
identifying elements.

22. RISKS ASSOCIATED WITH PROPOSED RESEARCH: X   Minimal risk _____ More than minimal risk
Describe the risks to the subject (whether or not you consider them to be risks of ordinary life)
and precautions that will be taken to minimize them. The concept of risk goes beyond physical
risk and includes risks to the subject's dignity and self-respect, as well as psychological and
emotional.

None

23. BENEFITS: Despite the growth of the Internet, few studies exist concerning its impact on
the user. From the viewpoint of a music educator, the Internet provides a new avenue for the
dissemination of information on the music of the world. The Music Educators National
Conference National Standard Number Nine (Consortium, 1994) states that music should
promote "understanding music in relation to history and culture" (p. 45). The present
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images of potential travelers are matched. What portraits will appear in individuals' minds
when they hear African rhythms or Chinese melodies? It is difficult for individuals to
visualize the reality of places based only on the limited information provided by tourism
operators.

CERTIFICATIONS:
1. I am familiar with the HANDBOOK FOR INVESTIGATORS (May, 1995). I will adhere to
the policies and procedures explained therein.

2. Should I wish to make changes in the approved human subjects protocol for this project, I
will submit them for review **prior to** initiating the changes.

3. If any problems involving human subjects occur, I will immediately notify my Departmental
Executive Officer and the Executive Secretary of the Institutional Review Board.

Signatures: _____

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_____
Responsible Project Investigator   Investigator (if different)   Date

FOR OPTIONAL DEPARTMENTAL USE:
      The activity described herein is in conformity with IRB-approved departmental
guidelines.

_____
                    Departmental Executive Officer   Date
                            (or designee)

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Yu-Lan Yuan

7 May 1998

Overview

- Comparison of two sets of WWW pages
  - "Control group" - no video
  - "Experiment group" includes demonstrative video clips

Status of Experiment

- In progress
- Schedule demands
- Completed over Summer

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Need

- Technical
- Interdisciplinary
  - MENC National Standards
    - understanding music in relation to history and culture
    - understanding relationships between music, the other arts, and disciplines outside of the arts

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Definition of Terms

- Destination Image
- World Music
  - Celtic regions
  - Latin America
  - Africa
  - China

Topics addressed

- How will the differences in presentation relate to musical understanding and appreciation?
- How will the differences in presentation relate to knowledge acquisition of geography and culture?
- How will the differences in presentation relate to participants' attitudes toward possible future vacations to each of the areas represented?
- How will the differences in presentation relate to participants' attitudes toward technology?

Research methodology

- quantitative and qualitative techniques
- pre- and posttest

The subject group

- undergraduate leisure studies majors

The presurvey gathered demographic information

- experience with technology
- knowledge of world cultures
- attitudes toward educational technology

Name:
Email address:
○ a member of Mr. Norris' 264 class
○ an interested observer
Sex: ○ Male ○ Female
Age (optional):

Streaming Media

- RealMedia format
- Media created in Premier
- SCALE dedicated server

http://www.real.com/

The postsurvey

- reaction to the pages,
- questions on world cultures
- repeated questions from the first survey

What is your reaction towards the presentation of these pages (Including the layout and the use of the technology)?

I was very impressed	Has a great potential	I liked them	I could take them or leave them	Has a slight negative effect	Ineffective	Very confusing and ineffective
○ 1	○ 2	○ 3	○ 4	○ 5	○ 6	○ 7

Comments about the presentation.

http://alliance.ed.uiuc.edu/rrepp/WorldMusic/

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