Determining Changes in Students’ Perceptions towards Participating in International Activities after Watching On-line Videos

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Abstract
The use of technology and gadgets in today’s society is modifying the way we communicate and gather information. Recently, on-line videos have become very popular among college students. A tremendous effort is being made by colleges of agriculture sciences to internationalize the curricula and educators and administrators struggle to promote study abroad programs among agricultural science students. This study aimed to investigate the effectiveness of on-line videos in modifying students’ perceptions towards participating in international activities after watching on-line videos. Three on-line videos were developed in 2006 and these videos were posted online for student viewing. A quasi-experimental research design was used in this study. A total one hundred and fifty-six students from nine sections of the first year seminar course participated in the study. Results concluded that students possess an inaccurate perception regarding participating in study abroad program and international activities. The use of on-line videos in order to change students’ perceptions was not effective in this study. Professors and college administrators should use the results from this study to better understand the depth of the problem regarding gaining interest in international agricultural among this population of students. In the future, other technologies, such as wikis, instant messaging, and cell phones, could be explored as other ways to transfer information regarding international programs and modify student perceptions.

Key words: Promoting international programs, on-line, videos, internationalizing the curricula
Introduction

As American companies become more involved in various businesses and agreements with other countries in the world, college graduates need to be prepared to join and succeed in this global work environment (Navarro, 2006). Throughout the years, the importance of internationalizing the curricula in higher education has been well documented by various researchers (Acker, 1999; Acker & Scanes, 1998; Bor, Bryden & Fuller, 1995; Navarro, 2006). Studies have shown that study abroad activities are extremely important in preparing students to enter the workforce (Younes & Asay, 2003). Some of the benefits from studying abroad range from increasing students ability to become more flexible citizens, increasing students’ problems solving skills, increasing students’ awareness of other cultures, and increasing students’ appreciation for their home country (Brooks, Frick & Bruening, 2006; Wolfskill & Wingenbach, 2007).

However, only a small percentage of students in colleges of agricultural sciences are likely to take advantages of study abroad programs. Less than two percent of all students in colleges of agricultural sciences in the United States have studied abroad (Open Doors, 2007). Since international experiences are essential for developing a global workforce the American congress is trying to ease some of the financial barriers for students and faculty. In June 2007, the U.S. House of Representatives approved a bill that aimed to boost the number of students who study abroad from 200,000 to one million dollars annually within the next ten years (American Council of Education, 2007).

Scholarships and grants will ease some of the financial burdens of participating in international activities. However other classic barriers to participation such as the inability to speak another language, need to graduate on time, and lack of knowledge regarding study abroad opportunities need to be taken into account when promoting international programs. Recent efforts to increase participation among colleges of agricultural sciences students include developing shorter programs, creating scholarships, increasing the number of international activities, and aggressive promotion of these programs among students (Brooks, Frick & Bruening, 2006). Traditionally, international programs have been promoted through seminars, guess speakers, brochures, workshops, and college websites. Still today, little is known regarding the impact of specific online strategies to recruit and motive students to participate.

Strategies used to motivate students to participate in international programs need to be tailored in order to meet the needs of this generation of technology savvy students. Websites such as the YouTube, Facebook, My Space, and Wikis are integral part of the college experience. In particular, on-line videos have become very popular since students can share information through cell phones, PDAs, and the Internet. Last fall, one of the presidential debates displayed on-line videos containing questions for the candidates (CNN, 2008). As Internet bandwidth becomes less of a problem and production costs decrease, on-line videos could be used to motivate students to participate in international activities (Genovese, 2000; Shephard, 2003).

In the past, the impact of on-line videos on students’ learning outcomes has been documented by researchers (Boster, Meyer, Roberto, Inge & Strom, 2006; Cofield, 2002; Fletcher, 1990; Kappes & Schmidt, 2002; King, Harnar & Mayall, 1999; Kris, 2005; Lai, 2000; Shephard, 2003; Wakshlag, Reitz, & Zillmann, 1982; Wetzel, Radtke & Stern, 1994). However little is known regarding the impact of on-line videos in changing student perceptions regarding interest in study abroad programs. There is a need to comprehend the impact of on-line videos in changing students’ perceptions towards participating in study abroad programs.
Theoretical Framework

In order to understand how online videos could potentially contribute to modifying students’ perceptions, Paivio’s dual coding theory of verbal information and visual image was incorporated into the study. Although verbal and visual channels function independently, most mental processing involves connections and reinforcement between the two systems (Paivio, 1991; Paivio & Csapo, 1973). Educational videos produced to disseminate knowledge should take into account how memory and cognition take place by reinforcing verbal messages with supporting images. In addition, professional video production techniques should be used to potentially boost learning in educational videos. Some studies indicated that bad production techniques might distract learners from internalizing the content displayed on videos (Wakshlag, Reitz, & Zillmann, 1982). Studies suggested that background music may increase students’ learning by engaging them in the content of presentations (Harder & Bruening, 2007; Wakshlag, Reitz, & Zillmann, 1982).

Regarding visuals, videos produced for 15 to 25 year-olds that take into consideration the “MTV syndrome” might be more effective. MTV tends to be part narrative, part atmosphere, sound intensive, and image-rich, these videos have a remarkable appeal to younger generations (Dancyger, 2002). Another characteristic that might influence the effectiveness of educational videos is the play length. The play length of the videos can impact the type and how much of the information is internalized by students. Fielder (2003) noted that students’ attention spans last for a few minutes and college bound students tended to dismiss much of the information retained after the first three to four minutes. Videos should be produced in a way to disseminate information while boosting students’ attention (Dancyger, 2002).

Purpose and Objectives

The purpose of this study was to determine changes in students’ perceptions regarding participating in international activities after watching three on-line videos. The objectives of the study were: 1. Describe the demographic characteristics of the students, 2. Describe students’ perceptions, interest and awareness of international agriculture before and after watching on-line videos.

Methods

In order to access students’ perceptions after watching on-line videos, three on-line videos were developed between May 2006 and August 2006. The content of the three videos were based on existing study abroad programs offered by the College of Agricultural Sciences (CAS) at Penn State University. Videos were based on a semester-long study abroad program in Russia and two short term study tours programs in Puerto Rico and Brazil. In all, three videos messages were conveyed from a student perspective. Students from previous programs helped to identify video content that was relevant for a college-age audience. Videos were edited in a way to promote action, most scenes were less than eight seconds in play length, and a number of students testimonials were incorporated into the videos. In addition, background music was incorporated to boost students’ interest and attention. After being compressed for the Internet, videos were posted on Angel (Penn State online course management system) so that students could have access during the study.

The first section of the instrument contained questions regarding students’ perceptions, these were developed based on the instrument developed by Mamontova (2005) and Place, Irani, Friedel, and Lundy (2004). The second section of the instrument contained demographics. To
verify the reliability of the instrument and the process used in the study, a pilot study was conducted. Fourteen students participated in the pilot study. The Spearmen-Brown reliability coefficient was calculated for both the pre- and posttest and the coefficients were .72 and .79, respectively. A quasi-experimental research design was used in this study (Campbell & Stanley, 1963; Grimshaw, Campbell, Eccles & Steen, 2000). Five class sections were exposed to the online videos and these sections composed the treatment group. A total one hundred and fifty six students from nine sections of the first year seminar course participated in the study. One hundred and forty-five questionnaires were retained as usable data and no incomplete surveys were removed.

In order to ensure internal validity of the experiment, student sections were randomly selected. Data procedures were identical for both treatment and control groups. History and maturation were not a concern in the experiment since respondents were 18-years of age or older and pre-and posttests occurred with roughly sixty days apart. Students were not aware that two different groups existed. Regarding external validity, in-class presentations on international activities did not take place during the experiment. This was a census study, which eliminates the threat of having a sample that does not represent the population. Multiple treatment interaction was not a concern since completing the three activities was considered one treatment.

Results

Demographic Characteristics of the Students

The majority of the respondents were female (58%) while the male respondents were 42% of the population. Thirty percent of the respondents intended to enroll at the Animal Sciences major, followed by undecided students (11%), Environmental Resource Management (8%), and Wildlife & Fisheries Sciences major students (8%). Roughly 94% of the respondents were freshmen students, four percent were juniors, and one percent were seniors and graduate students. Ninety percent of the student reported coming from a European/Caucasian family ancestry. Twenty-eight percent of the students speak a foreign language other than English and three percent of the students speak two foreign languages other than English. Seventy-nine percent of the students came from an urban background and twenty one percent came from a rural background.

Students’ Perceptions, Interest, and Awareness of International Agriculture before and after Watching On-Line Videos

Perceptions on the importance of international issues. The examination of the perceptions regarding how important students perceive international issues and their perceptions to what extent they feel they possess these attributes included seven items. The means values for perceptions regarding how important students consider international issues ranged from 2.98 to 3.64. Data showed that for both treatment and control, respondents tended to agree with all the seven items (Table 1). The item “Ability to function as a citizen in a global society” had the highest mean value (M=3.43) and (M=3.64) for both treatment and control respectively, followed by “Ability to interact with people from other parts of the world” with mean values (M=3.49) and (M=3.57) for treatment and control groups, respectively. Four items mean values fell between 3.07 and 3.39. The item “Knowledge of production systems in other countries means were (M=3.05) and (M=2.98) for treatment and control groups, respectively.
Table 1

Students’ Perceptions Toward the Importance of International Issues – Posttest, 2006

<table>
<thead>
<tr>
<th>Importance of International Issues</th>
<th>Control</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to interact with international people</td>
<td>3.57 .59 44</td>
<td>3.49 .56 96</td>
</tr>
<tr>
<td>Ability to function as a global citizen</td>
<td>3.64 .53 44</td>
<td>3.43 .65 96</td>
</tr>
<tr>
<td>Awareness of cultures of other countries</td>
<td>3.39 .69 44</td>
<td>3.35 .54 99</td>
</tr>
<tr>
<td>Understanding the differences between developed and developing nations</td>
<td>3.16 .53 44</td>
<td>3.19 .53 96</td>
</tr>
<tr>
<td>Knowledge of global agricultural export markets and marketing systems</td>
<td>3.07 .74 43</td>
<td>3.16 .58 92</td>
</tr>
<tr>
<td>Knowledge on what other countries’ culture has added to U.S. society</td>
<td>3.36 .61 44</td>
<td>3.14 .68 97</td>
</tr>
<tr>
<td>Knowledge of production systems in other countries</td>
<td>2.98 .84 42</td>
<td>3.05 .58 92</td>
</tr>
</tbody>
</table>

Note. Scale: 1 = Strongly disagree (S.D.), 2 = Disagree (D), 3 = Agree (A), 4 = Strongly agree (SA).

Perceptions on possession of knowledge on international issues. The means values for the extent students perceived they possess these attributes ranged from 2.11 to 2.98. Data showed that for both treatment and control, respondents tended to agree with four of the items. Treatment and control group tended to disagree with two items (Table 2). The item “Ability to function as a citizen in a global society” and “Ability to interact with people from other parts of the world” were the highest means values ($M=2.86$) and ($M=2.98$) for treatment and control groups, respectively. Three items mean values fell between 2.73 and 2.89. Both treatment and control groups tended to disagree with the item “Knowledge of production systems in other countries” with mean values of ($M=2.20$) and ($M=2.18$), respectively. Both treatment and control groups tended to disagree with the item “Knowledge of export markets and marketing systems” with mean values ($M=2.11$) and ($M=2.16$), respectively.

Table 2

Students’ Perceptions toward Possession of Knowledge of International Issues – Posttest, 2006

<table>
<thead>
<tr>
<th>Possession of Knowledge</th>
<th>Control</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Awareness of cultures of other countries</td>
<td>2.88 .66 43</td>
<td>2.89 .60 96</td>
</tr>
<tr>
<td>Understanding differences between developed and developing nations</td>
<td>2.83 .54 42</td>
<td>2.87 .61 93</td>
</tr>
<tr>
<td>Ability to interact with international people</td>
<td>2.98 .92 42</td>
<td>2.86 .64 91</td>
</tr>
<tr>
<td>Ability to function as a global citizen</td>
<td>2.98 .83 42</td>
<td>2.86 .63 91</td>
</tr>
<tr>
<td>Knowledge on what other countries’ culture has added to U.S. society</td>
<td>2.78 .83 40</td>
<td>2.73 .56 92</td>
</tr>
<tr>
<td>Knowledge of production systems in other countries</td>
<td>2.18 .69 38</td>
<td>2.20 .70 87</td>
</tr>
<tr>
<td>Knowledge of global agricultural export markets and marketing systems</td>
<td>2.16 .75 38</td>
<td>2.11 .65 89</td>
</tr>
</tbody>
</table>

Note. Scale: 1 = Strongly disagree (S.D.), 2 = Disagree (D), 3 = Agree (A), 4 = Strongly agree (SA).
**Students’ prior international experiences.** Regarding respondents’ international involvement prior to coming to Penn State University, Table 3 presents the percentages of “affirmative” responses for all ten items collected during the pretest for the treatment and control groups. For the treatment group, three items had positive responses lower than 10%. Four items received positive responses between 13% and 46%, and three items received positive responses between 78% and 86%. The item “Going to an international restaurant” received the highest percentage of “affirmative” responses (86%), followed by “Interaction with international students” (85%) and “International guest speaker in a class” (78%). The item “Church mission in another country” received the lowest percentage of positive responses (3%), followed by “Participating in a study abroad program (7%)”, and “International study tour (8%)”. For the item “Other (if “Yes”, indicate please), for both control and treatment groups students indicated that traveling with family or school was the main international activity performed.

Table 3

<table>
<thead>
<tr>
<th>International involvement</th>
<th>Control</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Going to an international restaurant</td>
<td>84</td>
<td>86</td>
</tr>
<tr>
<td>Interaction with international students</td>
<td>86</td>
<td>85</td>
</tr>
<tr>
<td>International guest speaker in a class</td>
<td>70</td>
<td>78</td>
</tr>
<tr>
<td>Attending an international festival</td>
<td>70</td>
<td>46</td>
</tr>
<tr>
<td>Taking a class focused on int’l issues</td>
<td>52</td>
<td>38</td>
</tr>
<tr>
<td>Other (if “Yes”, please indicate)</td>
<td>43</td>
<td>13</td>
</tr>
<tr>
<td>Hosting an international visitor</td>
<td>23</td>
<td>13</td>
</tr>
<tr>
<td>International study tour</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>Participating in a study abroad programs</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Church mission in another country</td>
<td>7</td>
<td>3</td>
</tr>
</tbody>
</table>

**Students’ level of interest in engaging in international activities.** Regarding respondents’ level of interest in engaging in international activities, Table 4 presents means and standard deviations for all eight items collected during the posttest for treatment and control groups. During the posttest for the control group, the means values for students’ level of interest in engaging in international activities ranged from 2.12 to 3.28. Data showed that respondents tended to be interested in six items and slightly interested in two items.

The item “Going to an international restaurant” received the highest mean value ($M=3.28$), followed by “International study tour (10 to 15 days long)” with the mean value of ($M=3.12$), and “Attending an international festival” ($M=3.09$). The item “How interested would you be to take a job doing international work in another country?” and “Hosting an international visitor” received the lowest mean values of ($M=2.37$) and ($M=2.12$), respectively.

During the posttest for the treatment group, the means values for students’ level of interest in engaging in international activities ranged from 1.91 to 3.17. Data showed that respondents tended to be interested in five items and slightly interested in three items.

The item “Going to an international restaurant” received the highest mean value ($M=3.17$), followed by “Attending an international festival” with the mean ($M=2.99$),
“Interaction with international exchange students” with the mean value of ($M=2.89$), “International study tour (10 to 15 days long)” ($M=2.85$). The item “Hosting an international visitor” and “How interested would you be to take a job doing international work in another country?” received the lowest mean values ($M=1.91$) and ($M=2.21$), respectively (see Table 4).

Table 4

Students’ Level of Interest in Engaging in International Activities at Penn State University – Posttest, 2006

<table>
<thead>
<tr>
<th>Variables</th>
<th>Control</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
</tr>
<tr>
<td>Going to an international restaurant</td>
<td>3.28</td>
<td>.73</td>
</tr>
<tr>
<td>Attending an international festival</td>
<td>3.09</td>
<td>.88</td>
</tr>
<tr>
<td>Interaction with int’l students</td>
<td>2.95</td>
<td>.83</td>
</tr>
<tr>
<td>International study tour (10 to 15 days long)</td>
<td>3.12</td>
<td>.88</td>
</tr>
<tr>
<td>Participating in a semester long study abroad</td>
<td>2.73</td>
<td>1.13</td>
</tr>
<tr>
<td>Taking a class focused on international issues</td>
<td>2.69</td>
<td>.90</td>
</tr>
<tr>
<td>How interested would you be to take a job doing international work in another country?</td>
<td>2.37</td>
<td>1.11</td>
</tr>
<tr>
<td>Hosting an international visitor</td>
<td>2.12</td>
<td>1.01</td>
</tr>
</tbody>
</table>

Note. Scale: 1 = Not interested (NI), 2 = Slightly interested (SI), 3 = Interested (I), 4 = Very interested (VI).

Conclusions

The majority of the students that participated in the study were freshmen. Students formed a very uniform group because the majority came from European/Caucasian family ancestry and about one third of the students intended to enroll as the Animal Science major. Control and treatment groups have similar perceptions regarding the importance of international issues. CAS at Penn State University students agreed or strongly agreed with all seven statements on the importance of international issues. Students in the control group strongly agreed that the ability to interact with international people and the ability to function as a global citizen are important skills whereas students in the treatment group agreed with these statements.

Regarding students’ perceptions on possession of knowledge regarding international issues, both groups presented similar perceptions. Students in both treatment and control groups agreed that they possessed knowledge on international issues on five out of seven statements. The ability to function as global citizens and the ability to interact with international people received the highest means. Students perceived that they lacked knowledge regarding production systems in other countries and knowledge of global agricultural markets.

Regarding students’ prior international experiences, the majority of the students reported having interactions with international students, going to an international restaurant, and having an international guess speaker in class. Students in the control group appeared to be more engaged in international activities prior to coming to Penn State University. Students in the control group were more likely to host an international visitor, attend an international festival,
participate in other international activities such as international vacation trips with family members, take classes with international focus, and participate in church missions in another country.

Control and treatment groups had similar perceptions regarding students’ interests in engaging in international activities. Students were interested and slightly interested in engaging in all eight international activities. The statement “Going to an international restaurant” received the highest mean.

Students believed that they possessed knowledge regarding international issues. However, students possessed an inaccurate perception regarding participating in study abroad programs and international activities. Some students considered going to an international restaurant an international activity and they were interested in engaging in this activity as a way to become more international. Students were more interested in participating in short term study abroad programs than in programs that lasted an entire semester.

Finally, on-line videos did not modify students’ perceptions regarding participating in study abroad programs. After watching the videos, students in the treatment group had similar perceptions to students in the control group.

**Educational Importance and Recommendations**

Boosting the participation of students in the colleges of agricultural sciences in study abroad programs is ongoing concern for professionals interested in developing study abroad programs. In order for colleges to promote and create international programs there is a need to comprehend students’ perceptions and to develop effective ways to promote these programs among students.

Despite the tremendous interest in on-line videos among this age group, it appears that the use of this technology to promote study abroad programs is not particularly valuable with this group of students. This finding should be a real concern for those that would like to market international programs through the Internet. It appears that the challenge of encouraging large number of undergraduates to participate in international agricultural programs is profound. The analysis indicates that on-line videos were not effective in modifying students’ perceptions towards participating in international activities.

Students’ perceptions regarding the importance of international issues, possession of knowledge on international issues, and interest in engaging on international issues are higher compared with the results obtained by Mamontova (2005) using a similar cohort of students.

Results of the study could be used by college administrators when selecting content to promote international activities. Students have an inaccurate perception on what it means to participate in international activities. These inaccurate perceptions might undermine participation in study abroad activities since students perceive going to an international restaurant and attending an international seminar as a ways to participate in international activities. Given that students believe that international issues are important and that they tend to lack content knowledge of these issues, presents many opportunities for educators to teach and make an impact with these students.

The use of on-line videos in order to change students’ perceptions was not effective in this study. This study should be replicated with students from across the university to determine whether there are differences among students from other colleges. In addition, future research could examine the effectiveness of on-line videos in transferring knowledge regarding international activities.
Professors and college administrators should use the results from this study to understand better the depth of the problem regarding gaining interest in international agriculture among this population of students. In the future, other technologies, such as wikis, instant messaging, and cell phones, could be explored as other ways to transfer information on international programs and modify student perceptions.

References


