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# Examining the General Global Competence of Students Enrolled in an International Dimension Course: An Attempt to Internationalize Undergraduate Education in a College of Agriculture

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*Many U.S. colleges and universities are concerned with how best to prepare students to become globally competent citizens. Therefore, the need existed to examine the general global competence of students enrolling in international dimension (ID) courses at Oklahoma State University. This investigation was a census study; the target population included all undergraduate students (N = 147) enrolled in three ID courses offered in the College of Agricultural Sciences and Natural Resources (CASNR) during the fall semester of the 2010–2011 academic year. General knowledge instruments were used to gather pretest and posttest data to measure differences. Although students' post-course scores were higher than pre-course scores, their overall performance was below 60%. This difference in knowledge gain connoting general global competence was statistically significant ( $p < .05$ ), but the corresponding effect size was small, which signaled little practical significance. Whether ID courses are an efficacious way of achieving substantial change in students' general global competence remains an open question. A more appropriate method to assess change in general global competence may be writing assignments. Faculty are encouraged to improve their ID courses by infusing learning experiences that stand to enhance students' general global competence while complementing content-specific objectives.*

**Keywords:** global competence, globalization, infusion approach, internationalizing undergraduate curriculum

## Introduction

An urgency exists to adequately prepare university students for the emerging global challenges they are likely to face (Bok, 2006). This phenomenon, frequently framed as *globalization*, has inspired higher education institutions to transform themselves in an effort to prepare graduates capable of competing globally (Friedman, 2005). To this end, van der Wende (2007) described a

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world becoming increasingly more interconnected; because of this “growing interdependence and convergence, globalization affects higher education in various dynamic ways” (p. 274), including the methods by which it educates undergraduate students.

Many U.S. colleges and universities have used a variety of methods to prepare their students and help them develop the ability to understand emerging global challenges and opportunities (McGowan, 2007; Moriba, 2011). The College of Agricultural Sciences and Natural Resources (CASNR) at Oklahoma State University has taken actions to achieve this goal by offering three international dimension (ID) undergraduate courses. The Department of Animal Science offers students the course Agricultural Animals of the World (ANSI 3903), which focuses on “[t]he production and utilization of agricultural animals by human societies” (Oklahoma State University Catalog, 2010–2011, p. 214). The Department of Agricultural Economics provides the course International Agricultural Markets, Trade, and Development (AGEC 4343). The course description is this:

Contemporary international agricultural trade theory and applications. Tools to identify, evaluate critically, and seek solutions to complex international trade and development problems, such as gains from trade, impacts of trade barriers on social welfare, export promotion effectiveness, trade impacts on environment and land degradation, social benefits and costs of free trade areas, and impacts of genetically modified crops on trade. (Oklahoma State University Catalog, 2010–2011, p. 210)

Students also have the opportunity to take a course in the Department of Agricultural Education, Communications, and Leadership titled International Programs in Agricultural Education and Extension (AGED 4713). The course description at the time of the study was this:

World hunger and its root causes. The function of international agencies, organizations, foundations, and churches in improving the quality of life for people of the developing nations. Roles of agricultural education and Extension at all levels for enhancing the effectiveness of indigenous programs of rural development and adult education. (Oklahoma State University Catalog, 2010–2011, p. 211)

University students need to gain knowledge that will improve their ability to relate effectively with people of diverse cultural and geographical backgrounds who may hold worldviews different from their own. Individuals who acquire global competence know their own culture and seek to understand those of others, recognize cultural and geographical differences, and strive to function effectively in diverse professional, political, and social settings while pursuing additional competence (Grudzinski-Hall, 2007; Hunter, 2004). ID courses are intended to assist students in acquiring general global competence. However, because little or no data existed,

CASNR faculty and administrators could not be certain if students taking their ID courses were undergoing learning experiences that enhanced their general global competence.

To address this uncertainty, it was important to examine the general global competence of students who participated in the three ID courses offered in CASNR at Oklahoma State University. The results of this study may help faculty and administrators of CASNR, and of similar academic units at other institutions of higher education, determine whether students are being prepared to function as globally competent citizens and employees.

### **Conceptual Framework**

Global competence is critical for meaningful and mature engagement of individuals worldwide. Being globally competent is defined as “having an open mind while actively seeking to understand cultural norms and expectations of others, [as well as] leveraging this gained knowledge to interact, communicate, and work effectively outside one’s [usual] environment” (Hunter, 2004, p. 101). Globally competent individuals are knowledgeable about current events and world history; they maintain a positive attitude with others who are different from themselves; they are linguistically competent in at least one language other than their own; and they appreciate the value of other cultures (Lambert, 1996). In as much as they are influenced by the world, globally competent individuals impact the world and recognize their responsibility to make decisions that will positively affect the future, including choices and efforts made in their professional lives (Shams & George, 2006).

Schunk (1989) stated that “[s]ocial, instructional, and other contextual variables associated with the learning context affect students while they are cognitively engaged with academic material” (p. 182). The undergraduate students who participated in this study were enrolled in one of three ID courses intended to assist them in acquiring knowledge on global and cross-cultural issues. The students learned by (a) reading prescribed academic materials on international issues; (b) observing and interacting with guest presenters in their courses, including foreign nationals; and (c) receiving feedback from their instructors through class discussions and assignments. Wingenbach et al. (2003) asserted, “an implication exists that formal education can be used in limited ways to increase students’ international knowledge by making stronger connections in ‘real world’ events and classroom discussions of international agricultural issues” (p. 33). This study tested Wingenbach and colleagues’ (2003) assertion by examining the change in undergraduate students’ knowledge supporting their general global competence as the result of completing an ID course taught in an agricultural context.

### **Purpose of the Study**

The purpose of this study was to examine the general global competence of students enrolled in the ID undergraduate courses offered in CASNR at Oklahoma State University during the fall

semester of the 2010–2011 academic year. The study examined students' knowledge regarding their general global competence, including aspects of world agriculture. It also compared students' knowledge, pre-course and post-course. Further, the study described selected personal characteristics of the students and examined relationships between those attributes and their knowledge regarding objects of general global competence.

### Research Questions and Research Hypothesis

1. What were the selected personal characteristics of students enrolled in the undergraduate courses offered for ID credit during the fall semester of the 2010–2011 academic year?
2. What were students' levels of pre-course and post-course knowledge regarding objects of general global competence?
3. What relationships existed between selected personal characteristics of students enrolled in the ID courses and their general global competence? (*Note:* The purpose of this analysis was to address whether certain independent variables confounded the results associated with research question 2 and the potential for Type 1 error.)

H<sub>0</sub>: No statistically significant difference ( $p < .05$ ) existed between students' pre-course and post-course knowledge connoting general global competence after completing an ID course (H<sub>0</sub>:  $\mu_{1\text{pre-course knowledge}} = \mu_{2\text{post-course knowledge}}$ ).

### Methods and Procedures

The design of this study was nonexperimental, pretest–posttest descriptive and comparative, and it involved the use of knowledge instruments to gather data for the purpose of measuring differences resulting from an intervention effect (Creswell, 2008). This investigation was a census study (Patton, 2002), and its target population consisted of all undergraduate students ( $N = 147$ ) enrolled in the three ID undergraduate courses. The ID courses were worth 3 credit hours each. The measurement of knowledge gain from pre-course to post-course provided data for analyzing the levels of general global competence of students who participated in the three ID courses. Data were collected on or around the first and last weeks of the semester. The study was designed to explore the assumption that students who completed an ID course would experience a positive change in knowledge informing their general global competence.

The research instrument assessed students' knowledge before and after they had completed one of the ID courses. The pre-course instrument also included questions intended to describe selected personal characteristics of the students. Twenty-one items constituted the knowledge portion of the research instruments, which were adapted from two previous studies and content-

relevant websites (i.e., Global Awareness Quiz, 2007, 2008, 2009; Radhakrishna & Dominguez, 1999; Wingenbach et al., 2003). The survey instrument was designed to test the knowledge of students on objects of world geography, international events, and international relations (Global Awareness Quiz, 2007, 2008, 2009), as well as world agriculture (Radhakrishna & Dominguez, 1999; Wingenbach et al., 2003).

The multiple-choice form of assessment was used, in which participants were asked to select the correct answer from four possible choices. Some minor rewording was done to update a few of the test items. For example, one of the items asked students about the projection of world population. That item from a previous study asked students to identify the continent projected to have the largest population by the year 2000. The item in this study asked students to identify the continent projected to have the largest population by the year 2010.

As part of a larger survey instrument, students completed the knowledge test at the beginning of the semester. The students were administered an *alternate* or *parallel form* (Johnson & Weiss, 1979) of the instrument at the end of the semester to measure their learning gain. For example, one of the items examined students' knowledge about the seven continents. The pre-course item asked students to identify the *smallest* of the seven continents, and the post-course item asked students to identify the *largest* of the seven continents.

Rudner and Schafer (2001) wrote that "alternate forms [of a test] are typically matched in terms of content and difficulty" (para. 15). Creswell (2008) stated that an alternate form approach consists of "two instruments, both measuring the same variables and relating (or correlating) the scores for the same group of individuals to the two instruments" (p. 170). An alternate form of a knowledge examination assists in overcoming the problem of *practice effect* [i.e., to reduce "the possibility that a participant's performance in a task may be influenced (positively or negatively) if they repeat the task because of familiarity with the experimental situation and/or the measures being used"] (Field, 2005, p. 742).

Of note, the selected knowledge items were not derived necessarily or intentionally from the content of the three courses under study. Rather the items were *knowledge objects* that other researchers (Radhakrishna & Dominguez, 1999; Wingenbach et al., 2003) and the study's panel of experts (Creswell, 2008) considered appropriate for ascertaining undergraduate students' *general global competence*, including test items with relevance to the agriculture sector. The panel included faculty of the Department of Agricultural Education, Communications, and Leadership and the Department of Agricultural Economics at Oklahoma State University. One of the panelists was also the associate vice-president of the Division of International Studies and Outreach. His extensive teaching and administrative experience involving issues related to internationalizing undergraduate education, including the development of curricula and ID

course delivery in a college of agriculture, increased the likelihood of the study's instruments having sufficient content validity.

Suggestions made by Wiersma and Jurs (1990) were followed to ensure reliability of the study's knowledge instruments. Eight factors that may be used to enhance the reliability of criterion-referenced tests include "homogeneous items, discriminating items, enough items, high-quality copying and format, clear directions to the students, a controlled setting, a motivating introduction, and clear directions to the scorer" (as cited in Pense & Leising, 2004, pp. 89–90). These guidelines were followed to increase the likelihood of the knowledge instrument being sufficiently reliable. In addition, Popham (1993) stated "the Kuder-Richardson (K-R) method focuses on the degree to which the items in the test are functioning in a homogenous (i.e., coherent) fashion" (p. 122). The K-R21 reliability coefficient—as a measure of the internal consistency of this study's pre-test—was .94 or the upper end of its 0 to 1 range.

Descriptive statistics were computed to obtain measures of central tendency, variability, and effect size (*eta squared*). The researchers used inferential statistics, i.e., a paired-samples *t*-test, to determine change in knowledge because the participants were considered representative of students who had taken the ID courses in the past or would take said courses in the future (Oliver & Hinkle, 1982). Bivariate correlation analyses were performed to test relationships between selected personal characteristics of the students and their knowledge of objects connoting general global competence to address the possibility of Type I error.

## Results

More male students (45.7%) than female students (37.2%) participated in the study, and the students were mostly seniors (42.6%) and juniors (31.9%) by classification who majored mainly in agricultural education (26.2%), animal science (18.1%), agribusiness (12.8%), or agricultural leadership (12.8%). The students' overall mean grade point average (GPA) was 3.17 with a standard deviation of .437, as self-reported. Most of the students were White (69.1%), non-Hispanic or non-Latino (77.7%), and spoke only English (64.9%). Moreover, nearly three-fourths of the students (74.5%) had *not* participated in a study abroad learning experience before taking an ID course.

### Measures of Knowledge Objects Connoting Students' General Global Competence

The students were asked to select the correct answer from four choices for each of the 21 multiple-choice items that constituted the pre-course knowledge test of their global competence. Regarding their overall performance, only 18 students (19.1%) answered 13 (60%) or more of the items correctly (see Table 1). Overall, the students' pre-course knowledge score was slightly below 50% ( $M = 10.43$ ;  $SD = 2.316$ ) (see Table 2).

**Table 1. Descriptive Statistics for Pre-Course Knowledge Scores of Students Connoting Their General Global Competence During the Fall Semester of the 2010–2011 Academic Year (n = 94)**

Items	Correct Answers	
	f	%
A country with a high standard of living, a strong economy, and an array of wealth and skills is:	77	81.9
What are the four main oceans?	76	80.9
The _____ desert is the world's largest hot desert.	76	80.9
Which country is the largest producer of rice in the world?	71	75.5
Which country is the leading exporter of wheat?	69	73.4
What does NAFTA stand for?	69	73.4
What is the world's approximate population?	68	72.3
Two examples of import control include:	60	63.8
What is the primary household fuel in Africa and Asia?	51	54.3
_____ is the smallest of the seven continents:	44	46.8
Which country produces the largest number of swine in the world?	42	44.7
Considering developing and developed countries, the projection of world population for the year 2010 shows the largest segment will be in:	38	40.4
Generally, who carries out most of the fieldwork on an African farm?	37	39.4
The percentage of usable land in the world for food production is:	34	36.2
Which means of communication currently reaches the largest number of people throughout the world?	31	33.0
Although large areas of land are brought into cultivation throughout the world each year, large amounts are also rendered useless or are reduced in productive capacity for each of the reasons below, EXCEPT:	29	30.9
Which term means independence and self-government?	25	26.6
In East Africa, it is expected that everyone will _____ upon greeting one another at meetings, and upon departure from meetings.	23	24.5
Who is the Prime Minister of the United Kingdom of Great Britain and Northern Ireland?	23	24.5
Which country is the United States' largest trading partner?	20	21.3
What is the name of the treaty in which individual countries agreed to reduce greenhouse gas emissions?	17	18.1
<i>Students who answered 13 or more test items correctly</i>	<i>18</i>	<i>19.1</i>

Three-fourths or more students chose the correct answers for these items: “A country with a high standard of living, a strong economy, and an array of wealth and skills is:” (81.9%); “What are the four main oceans?” and “The \_\_\_\_\_ desert is the world's largest hot desert” (80.9%); and “Which country is the largest producer of rice in the world?” (75.5%) (see Table 1). On the other hand, only 18.1% of students chose the correct answer to the item, “What is the name of the treaty in which individual countries agreed to reduce greenhouse gas emissions?”

**Table 2. Descriptive Statistics for Students' Pre-Course and Post-Course Knowledge Scores Connoting Their General Global Competence During the Fall Semester of the 2010–2011 Academic Year**

	<b>Knowledge</b>	<b>n</b>	<b>M</b>	<b>SD</b>
Pair 1	Pre-course	94	10.43	2.316
	Post-course	94	11.15	2.767

The students' post-course knowledge connoting their general global competence was assessed by asking them to select the correct answer from four choices for 21 multiple-choice items, as presented by an alternate form test. Overall, 29 students (29.6%) answered 13 or more items correctly (see Table 3).

**Table 3. Descriptive Statistics for Post-Course Knowledge Scores of Students' Connoting Their General Global Competence During the Fall Semester of the 2010–2011 Academic Year (n = 98)**

<b>Items</b>	<b>Correct Answers</b>	
	<b>f</b>	<b>%</b>
Which country is the largest consumer of rice in the world?	86	87.8
Which of the following statements best describes a "third world" country?	82	83.7
The North American Free Trade Agreement (NAFTA) is an agreement signed by the governments of the following countries, creating a trilateral trade bloc in North America.	70	71.4
The continent with the fastest growing population is _____.	68	69.4
Which country is the largest beef producer in the world?	66	67.3
Which of the following is not an ocean?	63	64.3
_____ is the largest of the seven continents.	63	64.3
Which of the following is not an example of import control?	63	64.3
Which country is the leading producer of corn/maize in the world?	61	62.2
Generally, _____ do most of the fieldwork on African farms.	59	60.2
Wood is the primary household fuel in _____.	55	56.1
More people in the world are reached by _____ than any other form of communication.	55	56.1
Which of the following is not part of Islamic practices in Muslim countries?	46	46.9
Which countries are the United States' four largest trading partners?	45	45.9
The _____ desert is the world's largest cold desert.	41	41.8
Which of the following is not responsible for rendering large amounts of land useless in productive capacity?	41	41.8
Sovereignty is a term that means _____.	32	32.7
Who is the prime minister of Canada?	28	28.6
According to the United Nations, the world's approximate population in 2025 will be _____.	28	28.6
What percentage of land in the world is not used for food production?	21	21.4
What is the name of the treaty in which individual countries agreed to reduce greenhouse gas emissions?	17	17.3
<i>Students who answered 13 or more test items correctly</i>	29	29.6

The students' post-course knowledge scores ( $M = 11.15$ ;  $SD = 2.767$ ) (see Table 2) were higher than their pre-course scores, but still below 60% correct overall (53.4%). The item, "Which country is the largest consumer of rice in the world?" was answered correctly by 87.8% of the students (see Table 3). More than two-thirds of the students chose the correct answers for four other items: "Which of the following statements best describes a 'third world' country?" (83.7%); "The North American Free Trade Agreement (NAFTA) is an agreement signed by the governments of the following countries, creating a trilateral trade bloc in North America" (71.4%); "The continent with the fastest growing population is \_\_\_\_\_" (69.4%); and "Which country is the largest beef producer in the world?" (67.3%). However, few students (17.3%) chose the correct answer to the item, "What is the name of the treaty in which individual countries agreed to reduce greenhouse gas emissions?" (see Table 3).

### Research Hypothesis

$H_0$ : No statistically significant difference ( $p < .05$ ) existed between students' pre-course and post-course knowledge connoting general global competence after completing an ID course ( $H_0: \mu_{1\text{pre-course knowledge}} = \mu_{2\text{post course-knowledge}}$ ).

A paired-samples  $t$ -test was conducted to determine if a statistically significant ( $p < .05$ ) difference existed between students' pre-course and post-course knowledge regarding general global competence after they completed one of the ID courses. Overall,  $t$ -test results revealed a statistically significant difference in students' knowledge gain from pre-course ( $M = 10.43$ ;  $SD = 2.316$ ) to post-course ( $M = 11.15$ ;  $SD = 2.767$ ) (see Table 2),  $t(93) = 2.256$ ,  $p = .026$  (two-tailed) (see Table 4). The *mean difference* in knowledge scores was .72 with a 95% confidence interval ranging from .087 to 1.360 (see Table 4). The *eta squared* statistic (.052) indicated a small effect size (Cohen, 1988) (see Table 4). Based on this result, the null hypothesis was rejected.

**Table 4. Paired Samples  $t$ -Test of Students' Pre-Course and Post-Course Knowledge Scores Connoting Their General Global Competence During the Fall Semester of the 2010–2011 Academic Year ( $n = 94$ )**

	Knowledge	MD	SD	95% CI		$t$	df	Sig.*	$\eta^2$
				Lower	Upper				
Pair 1	Pre–post course	.72	3.109	.087	1.360	2.256	93	.026	.052

Note: CI = Confidence Interval

\* $p < .05$

### Relationships Between Selected Personal Characteristics of the Students and Their General Global Competence

Selected relationships were tested to examine the role of potentially confounding variables (Campbell & Stanley, 1963). The Pearson product-moment correlation coefficient indicated the

relationship between students' knowledge regarding general global competence and their GPA was negligible, positive, and not statistically significant ( $r = .051$ ;  $p = .657$ ). The point-biserial correlation coefficient revealed a low and negative relationship ( $r_{pb} = -.108$ ) between students' knowledge regarding general global competence and their participation (*yes* or *no*) in a study-abroad learning experience; the relationship was not statistically significant ( $p = .174$ ). Additional point-biserial correlation analysis revealed a negligible and positive relationship ( $r_{pb} = .015$ ) between students' knowledge regarding general global competence and their involvement (*yes* or *no*) in an international experience during the fall semester of 2010; the relationship was not statistically significant ( $p = .442$ ). Because the tests of association between the three independent variables and the dependent variable, general global competence, yielded either low or negligible magnitudes, it was concluded the former did not confound the study's results. The tests of association reduced the likelihood of reporting spurious results due to Type I error.

### Conclusions

Less than one-fifth of the students achieved a "passing score" (i.e., 60% or more correct answers) on the pre-course knowledge test of their general global competence. Regarding the post-course knowledge test, less than one-third of the students scored 60% or higher. Although the students' post-course knowledge scores were higher than the pre-course scores, their overall performance was still below 60%. This was a statistically significant difference ( $p < .05$ ) regarding change in students' general global competence from pre-course to post-course, but it held little practical significance. To that end, Wingenbach et al. (2003) asserted formal education can increase the international knowledge of students by helping them understand the relevance of *real world* occurrences and of their classroom learning on issues involving international agriculture. The findings of this study supported Wingenbach and colleagues' (2003) assertion, albeit in a rather limited way. Much room for improvement existed in the students' performance on the test used to measure their general global competence. Whether the ID courses studied were an efficacious way of achieving substantial change in students' general global competence remains an open question. More appropriate methods for measuring such change warrant consideration.

### Recommendations

Findings of this study showed that students' performance on the pre-course and post-course knowledge tests of their general global competence was rather poor. To address this shortcoming, instructors who teach ID courses should consider restructuring their courses to include topics that would facilitate improving students' global competence in general, while still stressing course-specific content – i.e., follow a variation of an *infusion approach*, as described by Whalley, Langley, and Villarreal (1997). The infusion approach emphasizes interdisciplinary learning through the internationalization of curricula; this method exposes students to various

fields of study and makes them aware of the important connections existing among topics and subjects with international perspectives (Whalley et al., 1997).

Faculty, departments, and colleges across Oklahoma State University should create a collaborative and interdisciplinary approach to internationalizing the curricula by sharing their skills, knowledge, resources, and ideas (Navarro & Edwards, 2008; Whalley et al., 1997). Faculty and administrators, especially those individuals with international experience, should help promote institution-wide undergraduate curricular reform to meet the needs of students regarding their global competence. Navarro and Edwards (2008) asserted that a multifaceted effort is required for institutions of higher education to successfully internationalize their students' learning experiences, including *but not limited to* the courses in which they enroll.

Faculty who teach ID courses should be motivated by the findings of this study to improve their curricula by creating learning experiences calibrated to prepare students to succeed in an increasingly globalized world in which the demand for general global competence continues to increase. Related literature (Guo & Jamal, 2007; Peelo & Luxon, 2007; Schuerholz-Lehr & van Gyn, 2006) suggests (a) students' learning experiences should be diverse, (b) learning approaches should be more student-centric, (c) faculty should provide a framework for the expectations and requirements of students, (d) sources of information should include national and international viewpoints, and (e) course assessments should be comprehensive and reflect the learning needs of the students.

Other inquiries should be conducted using different ways to measure and operationalize students' knowledge regarding their general global competence, especially regarding facts and understanding that resonate in the 21st century. Finally, similar studies should be conducted that include students who attend other universities.

### **Implications and Discussion**

As students acquire more knowledge of international issues, they become citizens who are more globally competent. Further, they accept the viewpoint that to be knowledgeable of the world is an enduring need for all persons aspiring to become globally and culturally competent professionals (Egan & Bendick, 2008). Shams and George (2006) asserted that

[a] globally competent person is someone who is *aware of the world* around him and who *knows how to interact with people* from other cultures. A globally competent person *understands the interconnectedness of today's world* and the importance of responsible decision making. (para. 28)

Students who complete ID courses that improve their general global competence increase the likelihood of achieving this aim.

Therefore, the poor performance of undergraduate students on a test connoting their general global competence is a cause for concern. Hunter (2004) also concluded U.S. undergraduate students' knowledge supporting their global competence was unacceptable. However, were the measures of general global competence used in this study appropriate? Could measurement error have been a factor? Or was the students' knowledge of objects reflecting their general global competence simply that poor? Should institutions of higher education be providing learning experiences other than ID courses, including nonformal opportunities for learning, structured and facilitated to assist students in developing a deeper knowledge base to support their general global competence? The experiences may include international library sections, seminars, debates, films, dramas, music, pot-luck dinners, brown-bag lunches, coffee hours, food contests, dances, sports, and camp weekends (Navarro, 2004). These activities would support what Navarro (2004) called "a positive institution-wide attitude toward internationalization" (p. 74).

Moreover, according to Oklahoma State University's catalog (2013–2014),

[g]oals of "I" [formerly known as "ID"] courses are to prepare students to critically analyze one or more contemporary cultures external to the United States; understand how contemporary international cultures relate to complex, modern world systems; and demonstrate their understanding through written work that provides them the opportunity to enhance their writing skills. (p. 10)

Mindful of the institution's emphasis on students' critically analyzing aspects of their international understanding and doing that by writing, a more appropriate way to assess changes in general global competence attributed to an ID course may be writing assignments rather than multiple-choice tests.

Finally, this paper's findings were derived from a larger study (Moriba, 2011) that included assessments of students' attitudes on the importance of acquiring international awareness regarding issues of significance to the agriculture sector (Moriba, Edwards, Robinson, Cartmell, & Henneberry, 2012). Significant differences with more robust practical significance were found for that part of the investigation (Moriba et al., 2012). Therefore, the salient value of undergraduate students' completing ID courses may lie more with the potential for these learning experiences impacting their attitudes around global topics and issues than improving their general knowledge on the same. This aspect of the global competence phenomenon and educating undergraduate students deserves additional study by scholars and more discussion in academia.

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