Readiness for Self-Directed Learning and the Cultural Values of Individualism/Collectivism among American and South Korean College Students Seeking Teacher Certification in Agriculture

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Abstract

The purpose of this study is to examine the relationship between self-directed learning readiness and the cultural values of individualism/collectivism in two sample groups drawn from different cultures. The target population for this study consisted of two sample groups: Korean and American students who seek teacher certification in the field of agriculture. Data were collected using a web-formatted questionnaire. Findings indicated that in a hierarchical multiple regression analysis, scores for the Self-Directed Learning Readiness Scale (SDLRS) ($R^2 = .03$, adjusted $R^2 = .01$, $p = .30$) in Step 1 was not statistically significantly related by gender, student classification, and GPA. However, scores for SDLRS ($R^2 = .34$, adjusted $R^2 = .30$, $R^2 = .31$, $p = .00$) in Step 2 was statistically significantly related by gender, student classification, GPA, nationality, vertical individualism (VI), horizontal individualism (HI), vertical collectivism (VC), and horizontal collectivism (HC). This model accounted for 34% of the variance in the SDLRS ($R^2$ change = .31). More specifically, differences in the students’ SDLRS can be best explained through HI, VC, and HC among the cultural values of individualism/collectivism.
Introduction

As a society changes rapidly, the ability of self-direction in learning will become one of the most imperative factors that learners must have to survive, succeed, and improve on their own. (Cross, 1981; Guglielmino and Roberts, 1992). More and more learning, in the future, will be based on self-directed learning skills and activities in formal and informal settings to satisfy this necessity (Tuttle, Lee, Kohls, Hynes, and Lindner, 2004). Further, a need exists to examine self-directed learning from a larger cultural perspective (Redding, 1991). Schooler’s theory on self-directedness suggests that it is an adaptive behavior (Schooler, 1990). Educators who want to practice self-directed learning strategies with adult learners need to be concerned about cultural differences among learners; however, little is known about the relationship between self-directed learning readiness and cultural dimension constructs (Braman, 1998). It is imperative for researchers to see imperceptible things beyond our own experience and knowledge in relation to cultural perspective. By examining the relationship between readiness for self-directed learning and individualism and collectivism, the results of this study will be imperative in understanding how the role of cultural orientation affects self-directed learning readiness and in enabling educators in both institutions to consider students’ SDLRS and I/C to improve teacher preparation curriculum.

Theoretical Framework

Self-directed learning is the basis from which most adults seek learning throughout their life (Candy, 1991). Self-directed learning has been defined in a variety of ways by numerous researchers (Hiemstra, 1991). Self-direction in learning was defined as a concept that recognizes the learner taking responsibility internally for the learning process (Brockett and Hiemstra, 1991; Tough, 1979). Cross (1981) noted that self-directed learning was a concept of deliberate learning where the individual’s main goal is to obtain certain definite knowledge or skills. Self-directed learning requires investigation of learning needs, developing learning goals, identifying resources, selecting appropriate learning strategies, and evaluation of learning outcomes (Brockett and Hiemstra, 1991).

Triandis (1995) defined culture as a memory of the past that influences others and societies generally from period to period. The memory was considered as a component of the culture, called subjective culture, such as attitudes, beliefs, roles, norms, and values that exist in societies. That is, it is the shared awareness of the social environment (Triandis, 1972). In terms that adult educators should consider culture for developing programs effectively for adult learners, Boone, Safrit, and Jones (2002) stated that culture refers to a body of knowledge, concepts, values, and skills that is produced by a social grouping over a long span of time and has been passed on from one generation to the next. Culture is an all-inclusive phenomenon, consisting of all aspects of the social grouping’s environment. It includes language, beliefs, attitudes, modern or primitive methods of production, the educational system, and all belongings. Culture not only consists of artifacts and material types of possessions, it also includes sets of patterns of behaviors and attitudes that are
taught by one generation and are modified by life experiences of each succeeding
generation (p. 120).

Hofstede (2001) provided five different cultural dimensions, grounded on a large
body of empirical research that compared many different samples over more than 50
nations’ cultures. Individualism and collectivism (I/C) is one of the five dimensions of
culture. Every society has a characteristic of I/C that differentiates culture within a
society from another (Hofstede, 2001; Triandis, 1995). Individualism is the extent that
individuals in loosely affiliated societies are anticipated to care primarily for themselves
and their immediate families only. Collectivism is the extent that people in tightly
affiliated societies are accepted into those societies from and/or beyond when they are
born strong, and are expected to take care of their societies in interchange for owing
giving absolute loyalty to it.

In terms of self, the main elements of individualism are personal uniqueness and
independence and the core constituents of collectivism are duty to the in-group and living
in harmony (Triandis, 1995; Oyserman, Coon, and Kemmelmeier, 2002). Regarding the
vertical and horizontal dimension, the vertical dimension acknowledges the difference in
social status, wealth, or opportunity between people or groups while the horizontal
dimension represents that people should be similar on most attributes, especially status
(Triandis, 1995). In individualistic cultures such as America, most individuals are seen as
separate and autonomous, and they live their lives in accordance with personal goals
whereas in collectivistic cultures such as Korea, individuals subordinate their personal
goals to collective ones and see themselves as fundamentally connected with others

Calhoun, Teng, and Cheon (2002) provided the comparison of cultural variables between
Korea and the United State and concluded that differences between Korea and the United States’
cultures exist. Korea tends to show collectivistic aspects and the United States tends to show
high individualistic aspects (Calhoun, Teng, and Cheon, 2002; Hofstede, 2001). Traditional
Korean culture was likely to present high rates of collectivism regarding Hofstede’s dimensions;
in addition, older Koreans tend to represent more collectivistic aspects than younger Koreans
(Cha, 1994). Cha further proposed the following trend: traditional collectivism would become
less strong in Korea; instead, individualism would be increased with the vertical dimension
decreasing and the horizontal dimension increasing.

However, it is clear that all Koreans and Americans will not represent their predominated
cultural values, beliefs, and behaviors (Calhoun, Teng, and Cheon, 2002). Coon and
Kemmelmeier’s (2001) work has also supported this assertion. By using meta-analysis to exhine
differences in terms of I/C between the African-American, Asian-American, Latino-American,
and European-American ethnic groups in the United States, Coon and Kemmelmeier (2001)
found that European Americans scored lower in collectivism than African Americans and Asian
Americans, with Latino Americans and African Americans scoring the highest in individualism.
This is inconsistent with the belief that the European-American majority represents
individualism in the United States.
Based on the Hofstede’s (2001) work, it can be hypothesized that the level of readiness for self-directed learning of individualistic people was higher than that of collectivistic people (Guglielmino, Klatt, and Guglielmino, 1994; Guglielmino and Roberts, 1992; Guglielmino and Vichas, 1991). Nah (1999), however, briefly described Korean society and culture to help understand another perspective on self-directed learning. Her interview with 5 Korean women leaders showed that their self-directed learning process was not for themselves but for others, and interdependence might be one of the characteristics of a self-directed learner. According to Nah (1999), even though independence and autonomy seem to be necessary conditions for the highly self-directed learner in American culture, the fact cannot be applied to every culture.

Purpose

The purpose of this study is to examine the relationship between self-directed learning readiness and the cultural values of individualism/collectivism in two sample groups of students seeking teacher certification drawn from different cultures in Korea and the United States. A secondary purpose is to explore the implication of the findings for developing agricultural teacher education programs in both institutions. The objectives of the study were to:

- Describe population by Self-Directed Learning Readiness Scale (SDLRS);
- Describe population by Individualism/Collectivism (I/C) within and between cultures;
- Describe SDLRS by nationality;
- Describe I/C by nationality; and
- Describe the relationships self-directed learning readiness and I/C.

Methods and Data Sources

The target population for this study consisted of two sample groups: Korean (N=145) and American (N=185) college and graduate students who sought teacher certification in the field of agriculture at Sunchon National University (SNU) in Sunchon, South Korea and Texas A&M University (TAMU) in College Station, USA. The Office of University Affairs and Department of Agricultural Education at Sunchon National University and Department of Agricultural Education at TAMU were contacted for contact information for the target population. Data were collected using a web-formatted questionnaire. Web surveys are growing rapidly into survey methodology and afford survey researchers many opportunities not only for maximizing response rate and measurement quality but also for advancing research methodology and for comprehending the role of any other type of self-administered instrument (Couper, 2000; Couper, Traugott, and Lamias, 2001). In addition, the equal reliability and validation of the use of web and paper survey methodologies exist. (Ladner, Wingenbach, and Raven, 2002).

The researcher sent an invitation e-mail given the link for the questionnaire to each individual prospective participant. Invitation emails of 30 (20.7%) Korean and 15 (8.1%) American were undeliverable. The total accessible population therefore was 285. A total of 137 (48.1%) students responded during March 22, 2004 – April 23, 2004. Of these responses all, 137 were usable. Among the 137 students, 84 (61.3%) were Korean students at SNU and 53 (38.7%) were American students at TAMU. Early versus late respondents’ comparison was conducted to evaluate whether nonresponse was a threat to external validity of the study by using the second
method recommended by Lindner, Murphy, and Briers (2001). No statistically significant
difference was found between early and late respondents.

The researchers used two research instruments. The first was Guglielminos’s (1989) 34-
item Self-Directed Learning Readiness Scale (SDLRS) to describe participants’ level of self-
directedness. The coefficient alpha of the SDLRS in this study was .91. The second instrument
was adopted from the work of Singelis et. al. (1995) and was designed to measure
individualism/collectivism (I/C) at the individual level through 32 statements of attitude items in
four dimensions: vertical individualism (VI), horizontal individualism (HI), vertical collectivism
(VC), and horizontal collectivism (HC). In this study, the reliability coefficients for the scores on
the two dimensions of the Individualism and Collectivism instrument in attitude section were
moderate ($\alpha_{VI} = .77$; $\alpha_{HC} = .77$). The horizontal individualism (HI) scale generated a reliability
coefficient of .82 while the vertical collectivism (VC) yielded scores with lower reliability ($\alpha_{VC} =
.63$). An alpha level of .05 was used for all statistical tests and was set *a priori*.

**Results**

**Objective One**

The first objective of this study described population (n=137) by their SDLRS. The mean
score on the SDLRS was 123.69 with a standard deviation of 16.59. The range was 106, with a
minimum of 61 and a maximum of 167.

**Objective Two**

The second objective described by Individualism/Collectivism (I/C) within and between
cultures. The mean score on the VI was 35.40 with a standard deviation of 7.15. The range was
37, with a minimum of 19 and a maximum of 56. The mean score on the HI was 41.59 with a
standard deviation of 7.26. The range was 35, with a minimum of 21 and a maximum of 56. The
mean score on the VC was 42.15 with a standard deviation of 5.37. The range was 35, with a
minimum of 20 and a maximum of 55. The mean score on the HC was 42.81 with a standard
deviation of 6.07. The range was 42, with a minimum of 14 and a maximum of 56.

**Objective Three**

The third objective described SDLRS by nationality. Table 1 shows the Nationality of the
participants. As illustrated, The mean score for Korean was 122.5 ($SD= 16.6$) and for American
it was slightly higher at 125.6 ($SD=16.6$). There was no statistically significant difference
between the mean SDLRS score for Korean and the mean SDLRS score for American by
nationality, $t(135)=-1.06$, $p>0.05$. A negligible effect size ($d=-.18$) was found.

Table 1: Distribution of Participating Korean and American Students’ SDLRS Score by
Nationality ($N=137$)
Objective Four

The fourth objective described the I/C by nationality. The mean vertical individualism (VI) score for Korean students by nationality was statistically significantly greater than the mean score for American students, \( t(135)=2.56, p>0.05 \). A small effect size \((d=.44)\) was found. The mean horizontal individualism (HI) score for American student was statistically significantly greater than the mean score for Korean students, \( t(135)=-6.52, p>0.05 \). A large effect size \((d=-1.12)\) was found. There was no statistically significant difference between the mean vertical collectivism (VC) score for Korean students and the mean score for American students, \( t(135)=-1.74, p>0.05 \). small effect size \((d=-.30)\) was found. The mean horizontal collectivism (HC) score for American student was statistically significantly greater than the mean score for Korean students, \( t(135)=-3.65, p>0.05 \). A medium effect size \((d=-.63)\) was found.

Table 2

<table>
<thead>
<tr>
<th>Nationality</th>
<th>( n )</th>
<th>( M )</th>
<th>( SD )</th>
<th>( t )</th>
<th>( p )</th>
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<td></td>
</tr>
<tr>
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<td>84</td>
<td>36.62</td>
<td>6.68</td>
<td>2.56</td>
<td>0.01</td>
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<tr>
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<td>53</td>
<td>33.47</td>
<td>7.50</td>
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<tr>
<td>Horizontal Individualism</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korean</td>
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<td>38.90</td>
<td>7.02</td>
<td>-6.52</td>
<td>0.00</td>
</tr>
<tr>
<td>American</td>
<td>53</td>
<td>45.85</td>
<td>5.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vertical Collectivism</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>5.17</td>
<td>-1.74</td>
<td>0.08</td>
</tr>
<tr>
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<td>43.15</td>
<td>5.57</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horizontal Collectivism</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Korean</td>
<td>84</td>
<td>41.37</td>
<td>5.51</td>
<td>-3.65</td>
<td>0.00</td>
</tr>
<tr>
<td>American</td>
<td>53</td>
<td>45.09</td>
<td>6.28</td>
<td></td>
<td></td>
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</table>

Note: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree.

Objective Five

The fifth objective described the relationships self-directed learning readiness and I/C. In a hierarchical multiple regression analysis, scores for the SDLRS \( R^2 = .03, \) adjusted \( R^2 = .01, p = \)
.30) in Step 1 were not statistically significantly related by gender, student classification, and GPA. Gender, student classification, and GPA accounted for 3% of the variance when entered into the equation. None of the three beta weights for the gender, student classification, and GPA variables were statistically significantly related to the SDLRS. However, scores for SDLRS (R² = .34, adjusted R² = .30, ΔR² = .31, p = .00) in Step 2 were statistically significantly related by gender, student classification, GPA, nationality, VI, HI, VC, and HC. When nationality, VI, HI, VC, and HC were entered as the second step, this model accounted for 34% of the variance in the SDLRS (R² change = .31). It appears that nationality, VI, HI, VC, and HC accounted for a further 31% of the variance. However, as in Step 1, the gender, student classification, and GPA variables did not account for a significant amount of variance in Step 2. The beta weight for nationality and VI variables were not statistically significantly related to the SDLRS (β = -0.15, t = -1.67, p = .10; β = 0.01, t = 0.10, p = .92, respectively). However, the beta for HI variable was statistically significant and positive (β = 0.40, t = 4.31, p = .00). The beta for VC variable also was statistically significant and positive (β = 0.20, t = 2.12, p = .04). The beta for HC variable also was statistically significant and positive (β = 0.21, t = 2.19, p = .03).

Table 3
Hierarchical Multiple Regression for Study Variables on the SDLRS (N=137)

<table>
<thead>
<tr>
<th>Variables</th>
<th>B</th>
<th>SEB</th>
<th>β</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>119.22</td>
<td>11.51</td>
<td>10.36**</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
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<td>3.00</td>
<td>0.03</td>
<td>0.34</td>
<td>.74</td>
</tr>
<tr>
<td>Student classification</td>
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<td>1.18</td>
<td>0.16</td>
<td>1.80</td>
<td>.07</td>
</tr>
<tr>
<td>GPA</td>
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<td>-0.02</td>
<td>-0.24</td>
<td>.81</td>
</tr>
<tr>
<td>Step 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>21.62</td>
<td>16.89</td>
<td>1.28</td>
<td>.20</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>4.63</td>
<td>2.59</td>
<td>0.14</td>
<td>1.79</td>
<td>.08</td>
</tr>
<tr>
<td>Student classification</td>
<td>0.25</td>
<td>1.06</td>
<td>0.02</td>
<td>0.24</td>
<td>.81</td>
</tr>
<tr>
<td>GPA</td>
<td>3.64</td>
<td>3.18</td>
<td>0.09</td>
<td>1.15</td>
<td>.25</td>
</tr>
<tr>
<td>Nationality</td>
<td>-5.08</td>
<td>3.04</td>
<td>-0.15</td>
<td>-1.67</td>
<td>.10</td>
</tr>
<tr>
<td>VI</td>
<td>0.02</td>
<td>0.18</td>
<td>0.01</td>
<td>0.10</td>
<td>.92</td>
</tr>
<tr>
<td>HI</td>
<td>0.92</td>
<td>0.21</td>
<td>0.40</td>
<td>4.31**</td>
<td>.00</td>
</tr>
<tr>
<td>VC</td>
<td>0.63</td>
<td>0.30</td>
<td>0.20</td>
<td>2.12**</td>
<td>.04</td>
</tr>
<tr>
<td>HC</td>
<td>0.57</td>
<td>0.26</td>
<td>0.21</td>
<td>2.19**</td>
<td>.03</td>
</tr>
</tbody>
</table>

Note: R² = .03 for Step 1: ΔR² = .31 for Step 2 **p < .01, * p <.05.

Conclusions and Discussion

Although 137 participants in the study had similar levels of SDLRS, as did the worldwide adult mean 129.0, the participants’ SDLRS scores tended to be skewed to below average and above average. The data showed that the average SDLRS for study participants was 123.69. Sixty-five (47.4%) participants had a below average SDLRS; seventy-two participants (52.6%) had an above average SDLRS; and fifty participants (36.5%) had an above the worldwide adult mean. The students who exhibited a lower SDLRS score may reflect low, moderate, or
intermediate self-directed learners, and those who exhibited the above average SDLRS score may reflect intermediated or high self-directed learners, described by Grow (1991). Teacher educators should apply a variety of approaches to teaching for different stages of learners by considering each stage of the learners (Grow, 1991). For example, for students with lower SDLRS scores, teacher educators can use a variety of strategies such as facilitated discussion, active involvement in creative thinking and problem solving, and team projects to accomplish the stated objective of the learning experience and to increase the learners’ level of self-directedness. A recommendation for future study includes reviewing teacher education programs for their efficacy in terms their adaptability to educate and train a variety of learners. It is responsibility upon teacher educators that an allowance for different learning methods be incorporated in teacher education program.

There were no statistically significance differences in SDLRS by nationality. Korean and American had tended to have similar SDLRS. Guglielmino, Klatt, Guglielmino (1995) found that there are statistically significant differences between SDLRS score and nationality. However, this study does not support their findings. In this study, self-directedness was not shown to be a function of the increase in the participant’s nationality. Further research is recommended to investigate where the differences of SDLRS exist among other nationality.

There were statistically significance differences in VI, HI, and HC by nationality, while, there was no statistically significance difference in VC by nationality. Coexistence and incorporation of both individualism and collectivism within societies and cultures is present in this study. This result supports that a relationship between nationality and cultural value exists (Hofstede, 2001). There are some horizontal and vertical and collectivistic individualists, and some horizontal and vertical collectivists in every culture (Sinha and Tripathi, 1994; Triandis, 1995). More specifically, vertical dimension is more predominated than horizontal dimension in Korean culture, whereas horizontal dimension is more predominated than vertical dimension in the United States culture. However, the finding that American students had tended to have higher horizontal collectivistic characteristic than Korean students does not support previous literature (Hofstede, 2001). It might be explained by Cha’s (1994) supposition that Korean culture will be changed from collectivism to individualism, and from vertical aspects to horizontal aspects. The findings indicated that because students are more complex than unidimensional cultural beings, teacher educators need to develop the culturally relevant tools (writing, photography, dialogue, etc) to teach effectively and better understand them (Allen and Hermann-Wilmarth, 2004).

There were statistically positive relationship between SDLRS and HI, VC, and HC. These findings indicated that if HI, VC, and HC attitudes are high, the SDLRS scores tend to be high. That is, differences in the students’ SDLRS can be best explained through HI, VC, and HC among the cultural values of individualism/collectivism. This finding implicates that the cultural values of individualism and collectivism need to be woven into the theory of self-directed learning.
Educational Importance and Implications

The findings revealed a beneficial implication for teacher educators who teach students seeking teacher certification in Agriculture. Cultural values of individualism and collectivism may be an important component of training and educating students seeking to teacher certification. The findings support Braman’s research (1998) that self-directed learning readiness has a relationship with individualism. The findings of this current study further revealed that self-directed learning readiness can be best explained through vertical and horizontal dimensions of culture related to independence and interdependence. These current findings support Nah’s suggestion that interdependence, independence, and autonomy are not mutually exclusive (Nah, 1999). Unlike Braman’s (1998) suggestion, collectivism should be considered in a construction of self-directed learning theory. Effective educators take into account the learner’s stage of self-direction while matching their teaching strategies with the learners’ learning style to facilitate them to become more and more self-directed in learning. The findings in this study support Grow’s assumption and can be applied in different educational settings.

Teaching is “intellectual, cultural, and contextual activity that requires skillful decisions about how to convey subject matter knowledge, apply pedagogical skills, develop human relationship, and both generate and utilize local knowledge” (Cochran-Smith, p. 298, 2004). Teacher education should not be focused on developing simply effective teaching skills and on culturally neutral. Patton and Day-Vines stated that:

...no resources, attention, time, or teaching are devoted to understanding cultural differences. Often educators and institutions functioning in the color-blind stage construct their understanding of students from culturally different backgrounds using a race or cultural neutral lens (2001).

The results of this study will help teacher educators in higher education to better understand indigenous students’ ability to use self-directed approaches to learning and their cultural values of individualism and collectivism. When teacher educators are playing a role as change agents in culturally different settings, they will consult, implement, or evaluate more effectively teacher education program by considering students’ self-directedness in learning and culture.

References


