READINESS FOR SELF-DIRECTED LEARNING AND THE CULTURAL VALUES OF INDIVIDUALISM/COLLECTIVISM AMONG AMERICAN AND SOUTH KOREAN COLLEGE STUDENTS SEEKING TEACHER CERTIFICATION IN AGRICULTURE

A Thesis

by

IN HEOK LEE

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

December 2004

Major Subject: Agricultural Education

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Approved as to style and content by:

James R. Lindner (Chair of Committee)	Tim H. Murphy (Member)
Toby M. Egan (Member)	Glen C. Shinn (Head of Department)

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ABSTRACT

Readiness for Self-Directed Learning and the Cultural Values of Individualism/Collectivism among American and South Korean College Students Seeking Teacher Certification in Agriculture. (December 2004)

In Heok Lee, B.S., Sunchon National University

Chair of Advisory Committee: Dr. James R. Lindner

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 research design used for this study was descriptive and correlational in nature. The target population for this study consisted of two sample groups: Korean and American college students who seek teacher certification in the field of agriculture. Data were collected using a web-formatted questionnaire. Results were computed statistically, including the means, standard deviations, effect size, independent sample *t*-test, one-way ANOVA, bivariate correlations, and multiple regression.

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. Gender, student classification, and GPA accounted for only 3% of the variance and the three beta weights for the gender, student classification, and GPA variables were not statistically significantly related to the SDLRS. However, scores for SDLRS ($R^2 = .34$, adjusted $R^2 = .30$, $\Delta R^2 = .31$, $p = .00$) 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). It appears that nationality, VI, HI, VC, and HC accounted for a further 31% of the variance. However, 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 the HI variable was statistically significant and positive (β = 0.40, t = 4.31, p = .00). The beta for the VC variable also was statistically significant and positive (β = 0.20, t = 2.12, p = .04). The beta for the HC variable also was statistically significant and positive (β = 0.21, t = 2.19, p = .03). 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.

DEDICATION

This thesis is dedicated to my loving wife, mother, brother,

and to the lovely memory of my father.

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The completion of this work would have been impossible without the encouragement and assistance of many individuals. Of utmost importance, I would like to thank the almighty God, without Whom none of this would have been possible.

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CHAPTER I

INTRODUCTION

There is growing trend of social and technological change and innovation. Knowledge and information are regarded as global public resources, valuable assets, and power that provide the means to enhance the learning environment and support experience on which we can build a better world (*World Science Forum,* 2003). Toffler (1989) asserted that persons who have information have power in the world. Giddens (2000, p.61) stated that "rising standards of education, plus the easy availability of information, may make people more critical and skeptical than they once were."

Agricultural teachers rely on a variety of teaching methods to educate students (Tuttle, Lee, Kohls, Hynes, and Lindner, 2004). Worldwide, the implementation of distance education, through various methods, is changing education (Tuttle, Lee, Kohls, Hynes, and Lindner, 2004). Learning continues throughout life and people become more capable of directing their own learning, as they got older (Cross, 1981). Learning takes place constantly in a knowledge and information-based context. More learning in the future will be based on self-directed learning skills and activities in formal and informal settings (Tuttle, Lee, Kohls, Hynes, and Lindner, 2004). Alexander and Murphy (1998) identified one of the five learner-centered principles in learning as follows: people equally learn through a social process and individual constructed process. Long (2000) also noted that persons who are ready to be educationally self-directed should be those who can try themselves to understand and control the important parts of a social process.

This thesis follows the style and format of the *Journal of Agricultural Education.*

Self-directed approaches to teaching and learning are consistent with the goals andragogy and result in deeper and more meaningful learning (Knowles, Holten, and Swanson, 1998). This approach also promotes the lofty premise of individuals controlling their own learning in a meaningful context (the learners). As agricultural and extension professionals, we aspire to help learners take responsibility for their own learning (Lindner, Dooley and Williams, 2003). Effective educators should attempt to design and deliver individualized instructional sequences to provide the greatest opportunity for a learner's growth. Professional educators need to tailor their teaching based on learners' self-directedness or degree of dependency…situational teaching. Self-directed learning should be a primary goal of teacher education. The goal of teacher education should be a lifelong process. Agricultural teachers also should teach and guide students how to become self-directed learners to face successfully growing trend of social and technological change and innovation not only because of their development and but because of better society.

Statement of the Problem

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. 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 (Cross, 1981). Additional research on student self-direction in learning is needed as new models of teaching and learning emerge. A need exists, further 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 and the value and culture places or this trait affects individual's levels of self directedness (Schooler, 1990). Educators who want to practice self-directed learning strategies with adult learners need to be concerned about cultural differences among learners, while 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. For instance, Rains (1998) indicated the consequence of racism that failed to analyze imperceptible things in his article, *Is the Benign Really Harmless?,* as follows:

> The failure to analyze the invisibility of white privilege as a corollary to racism has prevented us from dealing effectively with racism. While there are overt acts of racism that cry out for attention, racism does not function in isolation. Rather, it is the subtler, "benign" acts of white privilege and the hidden benefits that accrue from unearned racial advantages that sustain the status quo and, in turn, sustain racial inequality. It is this status quo maintenance, in conjunction with white privilege, which makes racism more difficult to eradicate" (p. 82).

Following above statement, he suggested to researchers:

> "When there is an understanding that goes beyond the history of a single group, there are new possibilities of discovery. Shared oppressions, similar resistive acts, different ways of approaching problem solving might be discerned. Such learning has the potential to expand understanding of different worldviews, of the conflicts that have divided us, and of how we might begin to bridge understanding… The location of white privilege as an invisible corollary to racism must move beyond acknowledgement" (p. 97).

In a dissertation study, *The Cultural Dimension of Individualism and Collectivism as a Factor in Adult Self-Directed Learning Readiness*, Braman (1998) also mentioned that this study would support researchers and practitioners to clarify particular differences

among learners when designing, planning, and implementing adult education programs and to understand evaluative data. Finally, Braman pointed out that " by understanding the role of cultural orientation, adult educators would be able to more accurately interpret program results and explain various levels of program effectiveness" (p. 6). That is, cross-cultural research would be helpful to better understand cultural differences and provide much more important insights and implications in the field of education.

Purpose of the Study

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. A secondary purpose is to explore the implication of the findings for developing agricultural teacher education programs in both institutions.

Objectives of the Study

The following research objectives are proposed to accomplish the purpose of the study:

1. Describe population by selected personal characteristics such as gender, age, ethnicity, grade point average (GPA), student classification, and nationality.
2. Describe population by Self-Directed Learning Readiness Scale (SDLRS).
3. Describe population by Individualism/Collectivism (I/C) within and between cultures.
4. Describe differences by the personal characteristics of the population and their scores regarding Self-Directed Learning Readiness Scale and I/C.

5. Describe the relationships self-directed learning readiness and I/C.

Significance of the Study

Braman (1998) suggested cross-cultural studies using the SDLRS "may lead adult educators to realize that the development of an adult does not necessarily ultimately lead to independence or dependence, but can lead to interdependence, the ultimate goal of a significant number of adults with whom the field needs to become better acquainted" (p. 93). Guy (1999) also emphasized the importance of knowing learners' cultural background as follows: "Adult educators should find ways to learn about the cultural backgrounds of their learners and to discover learners' webs of significance. Cultural self-awareness, cultural knowledge about learners, and instructional skills that are inclusive and empowering constitute the kind of knowledge and skills required for service for service to marginalized learners" (p.16). By examining the relationship between readiness for self-directed learning and individualism and collectivism, the results of this study would be imperative to understand how the role of the cultural orientation affect self-directed learning readiness and to lend educators in both institutions consider students' SDLRS and I/C to improve teacher preparation curriculum.

Definition of the Terms

Andragogy: A concept as the art and science of adult teaching and learning, to describe the education of adults in contrast to the term pedagogy, the art and science of childhood teaching and learning (Knowles, 1990).

Collectivism: A social pattern consisting of closely linked individuals who see themselves as parts of one or more collectives (family, co-workers, tribe, nation); are primarily motivated by the norms of, and duties imposed by, those collectives; are willing to give priority to the goals of these collectives over their own personal goals; and emphasize their connectedness to members of these collectives (Triandis, 1995, p. 2).

Culture: A memory of the past that influences others and societies generally from period to period (Triandis, 1995).

Individualism: A social pattern that consists of loosely linked individuals who view themselves as independent of collectives; are primarily motivated by their own preferences, needs, rights, and the contracts they have established with others; give priority to their personal goals over the goals of others; and emphasize rational analyses of the advantages and disadvantages to associating with others (Triandis, 1995, p. 2).

Self-Directed Learner: A individual to be independent in their learning, intellectually curious, unintimidated by the subject, and possessing high levels of closure (Guglielmino, 1978).

Self-Directed Learning: A concept of deliberate learning where the individual's main goal is to obtain certain definite knowledge or skills (Cross, 1981).

Self-Directed Learning Readiness Scale (SDLRS): An instrument for measuring the degree to which people perceive themselves as possessing the skills and attitudes usually/frequently associated with the self-directed learning (Guglielmino, 1978).

Staged Self-Directed Learning (SSDL) Model: A model that describes learners level of self-directedness and educators teaching style (Grow, 1991).

Delimitations of the Study

This study will be delimited to approximately 330 students who seek teacher certification in the field of agriculture. Current students at Sunchon National University and TAMU during the 2003-2004 school years approximately 145 Korean students and approximately 185 American students who have access to Internet during the period March, 2004 through April, 2004.

Limitations of the Study

It is recognized that the following limitations exist in the proposed study:

1. As the subjects under this study is limited to two institution of Texas A&M University in College Station in the United States and Sunchon National University in Sunchon in South Korea, findings and conclusion should not be generalized to other sectors of higher education.
2. Both instruments and the questionnaire used in this study are self-reported instrument.

Assumptions of the Study

The following assumptions will be made in order to complete the study:

1. Students who seek teacher certification in the field of agriculture in the United States and South Korea will response honestly to self-reporting questionnaire and instruments.
2. The questionnaire and instruments will obtain accurately participants' perceptions on the issues questioned.
3. The SDLRS and Individual and Collectivism survey instrument have substantial support for the validity and reliability.
4. The online survey style will encourage a comfort level for respondents to complete the survey anonymously and in a timely manner.

CHAPTER II

REVIEW OF LITERATURE

This chapter presents a review of the literature related to the self-directed learning, Staged Self-Directed Learning model, three conceptual levels on self-directed learning, the Self-Directed Learning Readiness Scale, research on self-directed learning related to [Korean] culture, definitions of culture, dimensions of culture, the concepts of individualism and collectivism, cultural differences between Korean and American societies, and individualism/collectivism and self-directed learning.

Self-Directed Learning

In the field of adult learning, the concept of self-directed learning has attracted considerable attention (Caffarella, 1993; Merriam and Caffarella, 1999). Self-directed learning has been the basis from which most adults seek learning throughout their life (Candy, 1991). Self-directed learning has been defined in a variety of manners by numerous researchers (Hiemstra, 1991). Tough (1979) defined self-planned learning as the learner taking responsibility for deciding and arranging their own learning. Brockett and Hiemstra (1991) defined self-direction in learning as concept that recognizes the learner taking responsibility internally for the learning process. Self- directed learning requires investigation of learning needs, developing learning goals, identifying resources, selecting appropriate learning strategies, and evaluation of learning outcomes. 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. Brookfield (1986), however, noted that most commonly used definition of self-directedness, such as

Knowles' (1975) and Tough's (1967) concentrates on "externally observable learning activities or behaviors rather than in terms of internal, mental dispositions" (p. 40).

Knowles (1975) purported adults experience natural psychological development through self-directed learning and indicated the three reasons for self-directed learning as follows:

1. The first persons to act in learning learn more things, and learn better, than do individuals who have a sedentary style in learning are waiting to be taught.
2. Self-directed learning is more in agreement with a series of our inborn action of psychological development.
3. The learners get a heavy responsibility to take a great deal of initiative in learning by many of the new developments in education.
4. In viewing self-directed learning, Knowles stated that learning could be accomplished on one's own or with the support of other learners and teachers.

Knowles (1975, 1990) theory of self-directed learning, when melded with andragogy, produces a readily identifiable and workable philosophy of learning and teaching. The concept of andragogy is assisting both adults and children and youth learn (Knowles, 1970). Knowles (1984) theory of andragogy is based on six assumptions about the learner:

1. *The need to know*. It is necessary for adults to know why they need to learn something before starting learning and accepting responsibility for it.
2. *The learners' self-concept*. Adults conceptualize themselves of being responsible for their own lives and decisions.

3. *The role of the learners' experiences.* Adults have a role in activities related to education with both a greater amount and a different quality of experience from childhood and youths.
4. *Readiness to learn*. Adults become ready to learn something they need to know in order to deal effectively with their real-life situations.
5. *Orientation to learning*. Adults have a life-centered (or task-centered or problem-centered) orientation to learning.
6. *Motivation.* Adults are motivated to learn by some external motivators (better jobs, promotions, higher salaries, etc.) and internal pressures (the desire for increased job satisfaction, self-esteem, quality of life, etc.).

The Staged Self-Directed Learning (SSDL) Model

Guglielmino (1978) indicated self-directed learners are independent in their learning, intellectually curious, unintimidated by the subject, and possessing high levels of closure. However, there is no magic age when students stop being dependent and interested learners, and begin being involved and self-directed learners (Lindner, Dooley, and Williams, 2003). There is no magic grade level when a teacher's role should move from being an authority/coach to a motivator/guide to a facilitator to a consultant/delegator…it depends on the student.

In Malcolm Knowles' (1990) seminal book, "The Adult Learner: A Neglected Species," he noted that the appropriateness of teaching methods were contingent on students' maturity and degree of dependency. Pedagogical approaches (teaching children) are appropriate for students with high degrees of dependency. Knowles noted that

> The pedagogical model assigns to the teacher full responsibility for making all decisions about what will be learned, how it will be learned, when it will be learned, and if it has been learned. It is teacher-directed education, leaving to the learner only the submissive role of following a teacher's instructions (Knowles, Holton, and Swanson, 1998, p. 62).

As a student gets older, the degree of dependence tends to lower and andragogical approaches (teaching adults) become more appropriate.

> But is seems that the process of gaining a self-concept, of self-directedness, starts early in life and grows cumulatively as we biologically mature, start performing adult-like roles, and take increasing responsibility for making our own decisions. So we become adult by degree as we move through childhood and adolescence, and the rate of increase by degree is probably accelerated if we live in homes, study in schools, and participate in youth organizations that foster our taking increasing responsibilities" (Knowles et al., 1998, p. 64)

Grow (1991) supported Knowles' belief by suggesting the Staged Self-Directed Learning (SSDL) model, grounded on the situational Leadership Model of Hersey and Blanchard (1988) and some assumptions he proposed, has a form educators can use to help learners be developed into self-directed learners within the formal learning process. In order to develop the model, he proposed certain assumptions from the first as follows:

1. Creating self-directed learners is the goal of the educational process, but many present educational processes in educational settings sustain dependency rather than self-direction.
2. May ways to teach well are exist. Good teaching depends on situation with some exceptions.
3. The ability to be self-directed is situational but is not entirely, and is transferable to different situations.
4. Self-direction is based on a strong belief in its value and beneficial in many situations.

5. Self-direction can be learned and taught as dependency can be learned and taught.
6. A theory does not have to be right to be useful because of the practical process by which it stop being different and become more similar.

Grow emphasized that effective teachers consider the learner's stage of self-direction while matching their teaching strategies with the learners learning styles and facilitate them to become more and more self-directed in learning. He delineated the following four distinguished stages of learners:

1. Low self-direction stage of learners: learners need an authority-figure to make known what to do, how to do it, and when.
2. Moderate self-direction stage of learners: learners are interested, interestable, or confident but largely ignorant of the subject of instruction.
3. Intermediate self-direction stage of learners: learners have skill and knowledge and consider themselves as being ready to explore a subject with a good guide but need to develop more responsibility, confidence, collaboration.
4. High self-direction stage of learners: learners set their own goals with or without the assist of experts and both able and willing to learning.

Considering each stages of learners, he also proposed a variety of approaches to teaching for distinct stages of learners as follows:

Stage 1: Coaching and insight with the necessity of involving students in the learning situations.

Stage 2: Motivating and encouraging with the satisfied explanation of learning and instruction, along with preparing students to become more self-directing.

Stage 3: Facilitating, communicating, and supporting students in using their skills and knowledge toward greater self-directed learning

Stage 4: Delegating, consulting, cultivating the students' ability to learn and, mentoring, challenging, evaluating the learners

Infants, adolescents, and adults, may under a variety of circumstances, exhibit either low or high levels of dependence. It is the teacher's responsibility to adjust their role based on a student's level of self-directedness. Failure to do so results in what Grow (1991) refers to as mismatches. He indicated that some problems may take place while mismatching teaching strategies with the learners learning styles. For example, if a student is a dependent learner and the teacher is acting in the role of a facilitator a mismatch will occur and even students will hate the teacher (Grow, 1991). If a teacher is acting in the role of an authority/expert and the student is an involved learner, reversing the previous example, a mismatch will occur also. Grow (1991) also pointed out with some uncertainties that teaching style should be controlled by the balance and discussion between student control and teacher directivenss, as well as learners should have skills and knowledge to react to teaching style focused on encouraging learners self-direction in learning.

Three Conceptual Levels of Self-Directed Learning

Brookfield (1986) noted that self-directed learning has been defined ambiguously in the literature. Kerka (1999) argued, "the biggest misconception may be in trying to capture the essence of self-directed learning in a single definition. It is clearly a multifaceted concept that should not be approached through one perspective" (p. 1). Long

(1989b) pointed out that most concepts on self-directed learning have not been clearly clarified and major authorities on self-directed learning such as Knowles (1975) and Tough (1971) have hardly noticed psychological level on self-directed learning. In order to emphasize that psychological self-directedness is necessary and sufficient reason for causing self-directed learning, Long (1989b) proposed three different conceptual levels of self-directed learning as follows:

1. A sociological level that related to the social isolation of the learners and stressed the importance of the pedagogical model;
2. A pedagogical level where the learners should recognize their learning needs, establish their learning objectives, notice resources, and assess learning and stressed the importance of the pedagogical process; and
3. A psychological level that related to the mental activities of the learners and stressed the amount of freedom and control the learners should affect the pedagogical process.

Long (1989b) suggested that the relationship between pedagogical and psychological control in self-directed learning for group activities could be categorized into one of four quadrates:

Quadrate I: The learner has high psychological control and the educator use low pedagogical control teaching methods where highest self-direction in learning will appear and high possibility of learner satisfaction will exist.

Quadrate II: The learner has high psychological control and the educator use high pedagogical control teaching methods where more self-direction in

learning will appear but the highest possibility of both a learner leaving and learner dissatisfaction in learning activity will exist.

Quadrate III: The learner has low psychological control and the educator use high pedagogical control teaching methods where lowest self-direction in learning will appear but high possibility of learner satisfaction will exist.

Quadrate IV: The learner has low psychological control and the educator use low pedagogical control teaching methods where less self-direction in learning will appear but high possibility of learner dissatisfaction in learning activity will exist.

Tremblay (1992) emphasized the implication of Long's model by recommending educator to consider it when initiating, planning, implementing, conducting, and evaluating learning activities, and the model of the relationship between pedagogical and psychological control in self-directed learning would be considerable factor in designing learning activities.

The Self-Directed Learning Readiness Scale

One of the most broadly used instruments in the field of adult education is the Self-Directed Learning Readiness Scale (SDLRS) (Caffarella and Caffarella, 1986; Long and Agyekum, 1984; McCune, 1988; McCune and Guglielmino, 1991). The SDLRS was developed by Guglielmino (1978) as a self-report questionnaire, consisting of 58 Likert-type items, using a 5-point response scale. The development of SDLRS was in order to gain experts' agreement on the most important personality characteristics of highly self-

directed learners, and to develop an instrument for measuring a learner's self-directed learning readiness.

The SDLRS is an instrument for measuring the degree to which people perceive themselves as possessing the skills and attitudes usually/frequently associated with the self-directed learning (Candy, 1991) and not an instrument for measuring actual behavior (Brockett and Hiemstra, 1991). It was developed by a three round modified Delphi survey with the participation of fourteen experts in the field of adult learning. Initially, Guglielmino administered the scale to 307 participants and through a principal component factor analysis with varimax rotation, Guglielmino (1978) identified following eight characteristics of self-directed learners:

1. Openness to learning opportunities;
2. Self-concept as an effective learner;
3. Initiative and independence in learning;
4. Informed acceptance of responsibility for one's own learning;
5. Love of learning;
6. Creativity;
7. Positive orientation to the future; and
8. Ability to use basic study skills and problem-solving skills.

The SDLRS is an instrument that can be administered individually or in groups. The administration of the instrument is on an untimed basis. The respondents are allowed as much time as they need to complete the instrument. This instrument has been used by hundreds of organizations and researchers and has been translated into several languages such as Chinese, Finnish, French, German, Japanese, Lithuanian, Korean, and Spanish.

Notable ways to utilize the SDLRS are to investigate relationships between readiness for self-directedness and other personal characteristics through experimental, quasi-experimental, and correlational research designs, and to use for discovering the individual's levels of self-directed learning readiness (Brockett and Hiemstra, 1991).

The instrument has been shown through numerous studies to be a valid and reliable predictor of adult readiness for self-direction in learning (Guglielmino, 1997; Delahaye and Smith, 1995). In the initial study, Guglielmino (1978) reported the reliability of the SDLRS as .87. Since her study, most research using SDLRS has shown high reliability estimates of .72-.92 for the SDLRS (Guglielmino, 1997, Guglielmino and Knudson, 2000).

Since the original development of the SDLRS, A large body of validation studies have been carried out by many researchers such as Brockett (1985a), Crook (1985), Guglielmino (1997), Finestone (1984), Jones (1992), Long and Agyekum (1983, 1984), McCune (1988), McCune and Guglielmino (1991), Mourad and Torrance (1979), and Torrance and Mourad (1978a). Torrance and Mourad (1978a) carried out an exploratory study of construct validity of the SDLRS, which was supported by significant relationships with three measures of originality; development of analogies; creative personality and achievement; and right brained thinking among 41 graduated students in education as participants. Even though this study demonstrated some content and construct validity of the SDLRS, Mourad and Torrance (1979) noted that additional validation study was necessary. They conducted construct validity research of the SDLRS using 584 gifted students randomly selected from 1500 students. Results offered some support of the validation of the SDLRS.

Long and Agyekum (1983) investigated the validity of the SDLRS by using a modified multitrait-multimethod based on correlations between scores and SDLRS and other measures. The result of the study provided some support for the validity of the Self-Directed Learning Readiness Scale. Concerned about inconsistency between instructor ratings and SDLRS score, Long and Agyekum replicated their study for supporting additional validation of the SDLRS. The follow-up study of the SDLRS was conducted by using the same validation procedure used in first study (Long and Agyekum, 1984). The findings concerning convergent validity of this second study are also supportive of the validity of the SDLRS.

Predictive validity study of the SDLRS was established by comparing students' SDLRS score and alternate measures of self-directedness, including nominations as self-directed learners from faculty and peers, admission grades from high school, and grades on 5 subjects at first year end (Crook, 1985). Results supported statistically significant correlations between the SDLRS score and the first year-end grades score, as well as the SDLRS score and overall peer nomination score. However, because the SDLRS score only accounted for 7% and 8% of the variance, Crook concluded the instrument was not educationally significant. Even though the result was not successful in supporting the predictive validity of the SDLRS, Crook concluded that because the SDLRS scale is easy to use and has face validity, it seems as a good benchmark for measuring self-directedness.

McCune's (1988) study contributed to the validation of the Guglielmino's (1978) SDLRS by conducting meta-analytic procedures and descriptive statistics of 67 studies in

order to generalize the instrument. Guglielmino (1997) also supported the validity of the SDLRS by examining many literature on SDLRS and came to the following conclusion:

> [Here is] a large number of findings that provide evidence that the SDLRS is measuring what is purports to measure. Overall, the validity studies have how a definite positive relationship between SDLRS scores and observable indicators of self-directed learning (p. 218).

Delahaye and Smith (1995) further supported the construct validity of the Learning Preference Assessment (LPA), called the SDLRS by using a correlation analysis between SDLRS and the Student's Orientation Questionnaire (SOQ). They questioned whether the SDLRS should be used cautiously with individuals younger than 20 years old until further studies are investigated due to someone regarding whether there were the lack of the validity into the LPA or the SOQ. They concluded, even so, that the LPA can contribute to precise measurement of self-directed learning readiness and suggested the instrument should be recognized because it helps researchers explore further the complexities of self-directed learning. However, reviewing selected articles on self-directed learning that were collected by using a quantitative content analysis method, Brockett et al. (2000) still indicated further need of validation research within published journal articles on SDL.

Since its development, the Self-Directed Learning Readiness Scale has expanded and contributed to the research field on self-direction in learning (Brockett and Hiemstra, 1991; Candy, 1991). Even though many research studies have used the SDLRS, supported its reliability and validity, and explored some relationships between different variables and the SDLRS, the scale has failed to avoid some criticism (Candy, 1991). Brookfield (1984) criticized empirical studies on self-directed learning and samples of self-directed learners as follows:

> One consequence of the adoption of such instruments is the emphasis placed upon the quantity of self-directed learning, largely to the exclusion of any assessment of its quality or effectiveness … it is apparent that researchers adopting formalized measures of self-directed learning (such as the SDLRS), … or presenting a self-completion questionnaire to subjects, are likely to be regarded with suspicion by working class adults with poor educational attainments and distressing memories of their own school experience (p. 63~64).

Brockett (1985b) supported one of Brookfield's (1984) criticisms, the sociopolitical aspects of self-direction, by mentioning that the SDLRS may not be appropriate for adults with only a few years experience in formal educational settings because the instrument identifies self-directedness from a highly school-and-book oriented perspective. Not only did Brockett support the Brookfield's criticism, but also he argued:

> The SDLRS is not a measure of the quantity of self-directedness … Rather, the SDLRS is an attempt to measure the extent to which individuals perceive themselves to possess skills and attitudes often associated with the readiness to engage in self-directed learning. In this way, the SDLRS has helped to move self-directed learning research beyond description toward a greater understanding of the relationship between self-directedness and certain personological variables (Brockett, 1985b, p. 56).

Bonham (1989) issued further criticism about the SDLRS by noting that Guglielmino's definition of the opposite learner as being other directed learner, and the SDLRS seems to assess a natural tendency for learning in general and not for self-directed learning specifically. In addition, she proposed that additional validity studies were needed and these studies should be conducted to determine if the SDLRS might more accurately be called a Learning Readiness Scale (Bonham, 1991).

Field (1989) examined the structure, reliability, and validity of the SDLRS. Field came to the following conclusions about the SDLRS: (a) it is not reasonable for measuring individual's self-directed learning readiness, (b) most research studies was affected by the original study of SDLRS with the serious weakness for method and

concept, (c) its construct is related to love of and enthusiasm for learning rather than self-directed readiness, (d) the instrument is not likely to be supported, and (e) the instrument should not be used due to significant problems with the scale.

Field's strong criticism of the SDLRS triggered a series of lively controversies (Candy, 1991). Guglielmino (1989b) countered Field's (1989) criticism by defending the four issues Field indicated. She asserted the Delphi technique was not used for selecting items but for getting a general agreement on characteristics of the self-directed learner. Also, she reported that the self-directed learner was defined by the Delphi panel, and the term readiness is a capacity and something existing along a continuum. In addition, she explained that the reason the reverse items were used was as a means of avoiding participant answers similarly and easily response set, and pointed out additional items were included in the scale after the initial analysis, not after validation of the scale as stated by Field. Finally, Guglielmino accepted that the development of any scale cannot avoid some problems, but at the same time she criticized Field's criticism for identifying errors that had not been included. She pointed that there was no reason to seriously consider the study.

Long (1989a) provided some additional criticisms of Field's study. He supported the validity of the SDLRS by providing examples such as the studies of Torrance and Mourad (1978a, 1978b), and countered Field's study contributed little to understanding SDLRS validity and reliability. McCune (1989) agreed with Long 's (1989a) criticism by noting Field's study did not warrant abandoning the use of the SDLRS in the field of adult education.

After the critical reactions by Guglielmino (1989b), Long (1989a), and McCune (1989), Field (1990) reaffirmed his determination by reviewing his earlier criticism of the SDLRS. Acknowledging the two errors in the analysis of the data, Field continued to insist that the SDLRS is less effective, and that the instrument should not be used due to significant problems with the scale. Candy (1991) also criticized the SDLRS as follows: "it seems that while argument has been raging over the methodological superstructure, the conceptual hull of the good ship SDLRS may prove to be dangerously leaky" (p. 153). Candy further critiqued the absence of a clear definition of major terms as likely to cause some confusion as to what the SDLRS actually measures. Candy noted that participation in self-directed learning is shaped by the specific situation and circumstances rather than a generic quality transferable to all situations.

Literature on Self-Directed Learning Related to Korean Culture

Guglielmino and Vichas (1991) examined the level of self-directed learning readiness on two sample groups in Honduras and compared with American sample. They found out that no significant difference between two Honduran samples but a significant difference between Honduran samples and the American sample. The level of readiness for self-directed learning of the American sample was higher than the Honduran samples. Explaining the result, they concluded, "Honduran managers have not developed the same degree of readiness for unstructured learning environments as U.S. managers, and prefer structured learning environments to unstructured ones" (p. 83).

In 1992, Guglielmino and Roberts compared two samples people from the U. S. and Hong Kong were measured on self-directed learning readiness in order to investigate

whether there were similarities or differences between learning style and job performance. Relationship between learning styles and job performance were examined with implications for companies for survival in global competitive contexts. They then suggested that because we are living in a world where information and knowledge are powerful resources, “the ability to learn on one’s own, in a self-directed way, becomes more valuable in the workplace” (p.261). The authors established null hypotheses to compare the SDLRS scores of the U.S. to those of the Hong Kong sample in six areas: level of management, sex, age, race, educational level, and job performance. Five null hypotheses related to the level of management, age, race, educational level, and job performance were tested by a one-way analysis of variance and the last null hypothesis, related to gender, was tested by a *t*-test.

The authors concluded that individuals who have developed high readiness for self-directed learning of self-directed learning readiness carry out their task better than those who have not developed it and a high positive relationship between SDLRS scores and job performance rating existed in the two samples. They further pointed out, “ The experience of different cultures may affect the development of self-directed learning readiness and that, over time, individuals who develop that skill tend to progress in corporations to higher levels of management. One explanation of this result may be the residual influence of the highly structured formal educational process in some cultures” (p.270). Guglielmino and Roberts recommended that additional research using other samples from Pacific Rim cultures be conducted. They further recommended that cultural differences should be conducted as a mitigating factor when using the SDLRS. They reported implications of such research could be important for business sectors and for the

selection process in this historical period that requires a high degree of problem-solving ability and creativity.

Cheong and Long (1995) stressed that most teaching and learning in Korean higher education settings depends on traditional methods of teaching and learning and only a few institutions try to change these ways. Before conducting the research, they applied new teaching method, called small-group-centered teaching, to one course in a Korean higher education setting. They then administrated the Self-Directed Learning Readiness Scale (Korean version) to 20 Korean college students who were registered in the course. They compared scores from the first and last sessions of the course in order to discover the effect of the new teaching method on students' readiness for self-directed learning. Cheong and Long (1995) defined the small-group-centered teaching method as a "teaching and learning process in which students enrolled in the course are divided, by mutual agreement, into groups of about five students, to work together on the assigned unit in advance, to briefly present their results, to ask and answer the questions raised and to evaluate the small group activities" (p. 258). This case study demonstrated that new teaching method affected the Korean learners' readiness for self-directed learning. The authors noted, "no effective teaching/learning model is fixed, but is situational" (p. 265), and emphasized the importance of learner's participation.

Cheong, Lee, and Long (1995) explored the comparison of two Korean samples of both Self-Educated Bachelor's Degree (SEBD) holders and Challengers for Bachelor. . In the study, self-educated Bachelor's degree holders was individuals who get Bachelor's degree by passing official examinations without formal learning in higher educational institutions. Challengers for Bachelor, on the other hand, were individuals who try to get

college degree by the same way as SEBD. The purpose of their study was to determine students' readiness for self-directed learning in relation to socio-cultural background and to compare their SDLRS. Cheong, Lee, and Long (1995) found that the SEBD holders had significantly higher SDLRS scores than Challengers for Bachelor and the SEBE tend to have more characteristics of highly self-directed learner than Challengers for Bachelor do. The authors further indicated that there were no significant differences between two samples' SDLRS scores and their socio-demographic background. They further noted that female had higher SDLRS scores that male participants had, even though there were no statistically significant differences between male and female participants, it is evident.

Guglielmino, Guglielmino, and Zhao (1996) explored the relationship between culture and self-directed learning readiness in two samples of both China and the United States managers and nonmanagers and whether there exists the same in China samples as the relationship between readiness for self-directed learning and job performance uncovered in U. S. samples. The study showed similar results as previous studies (Guglielmino, Klatt, and Guglielmino, 1994; Guglielmino and Roberts, 1992). That is, the mean SDLRS score of the Chinese sample was lower than the mean score of the U. S. sample.

Dissimilar to previous research that just compared different cultural origins by using SDLRS scores with or without another measurement such as job performance ratings, Braman (1998) used the instrument to explore cultural dimension of individualism/collectivism in order to investigate the relationship between individualism/collectivism and adult self-directed learning readiness. Braman found that a strong significant relationship between the SDLRS readiness and individualism existed,

but no significant relationship between the SDLRS and other variables (i.e., collectivism, age, ethnicity, gender, and occupation). These findings suggested that adult educators should consider the individualistic cultural emphasis of the self-directed learning construct and begin to address the various learning preferences that may exist among multicultural adult populations. Braman (1998) noted that more cross-cultural studies using the SDLRS should be conducted.

Nah (1999) briefly described about 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 interdependent might be one of their characteristics about self-directed learner. According to Nah (1999), interdependence, independence, and autonomy are "not mutually exclusive within a self-directed learner" (p. 19) and even though independence and autonomy seem to be necessary conditions for highly self-directed learner in North American culture, the fact cannot be applied to every culture.

Definition of Culture

Many social scientists in various disciplines such as anthropology, sociology, management, and psychology have tried to understand culture by providing various definitions of the term for many years. Geertz (1973), defined culture as :

> the fabrics of meaning with which human beings interpret their experience and guide their actions (p. 42) and an historically transmitted pattern of meanings embodied in symbols, a system of inherited conceptions expressed in symbolic forms by means of which men communicate, perpetuate, and develop their knowledge about and attitudes toward life (p. 89).

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).

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, and those components. That is, it is the shared awareness of the social environment (Triandis, 1972).

In the book, *Culture's Consequences* that investigated the differences or similarities of cultures among more than 50 contemporary countries, Hofstede (2001) defined culture as "usually reserved for societies (operationalized as nations or as ethnic or regional groups within or across nations)", however it "can be applied to any human collectivity or category: an organization, a profession, an age group, an entire gender, or a family" (p. 10). Trice and Beyer (1993) pointed out, "cultures are collective phenomena that embody people's responses to the uncertainties and chaos that are inevitable in human experience" (p. 2). In summary, culture could be defined as "the collective programming of the mind that distinguishes the members of one group or category of people from another" (Hofstede, 2001, p. 9)

Dimensions of Culture

Anthropologist Hall (1976) classified two categories of culture into high and low context in communications. High context culture is indicated by the degree to which people have close connections with each other over a long time. In a high context culture most of the information is not expressed clearly and openly and words have not precise meanings. Low context culture, on the other hand, is indicated by the degree to which people have relationships with each other but tend to divide their relationships into their own lives. In a low context culture most of the information is expressed clearly and openly and words have precise meanings. In Figure 1, Copeland and Griggs (1985, p. 107) shows nations classified by their level of context. Hofstede (2001) furthermore stated that in both high context and low context culture, some of the differences between traditional and modern aspects and some of the differences between collectivism and individualism exist.

Figure 1. Nations' Classification by High/Low Context Culture (Source: Adapted from Copeland and Griggs, 1985)

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. The five dimensions of culture are power distance, uncertainty avoidance, individualism versus collectivism, masculinity versus femininity, and long-term versus short-term orientation. Power distance is the extent to which societies anticipate and admit that institutional and organizational power are distributed equally or unequally. Uncertainty avoidance is the extent to which societies notice any threats by unpredictable or dubious situations and tend to avert those situations by planning negotiated situations. Individualism is the extent to the loosely affiliated societies in which individuals are anticipated to care primarily for themselves and their immediate families only. Collectivism is the extent to tightly affiliated societies in which people are accepted into those societies from or/and beyond when they are born strong, and expected to take care of their societies in interchange for that they owe absolute loyalty to it. Masculinity is the extent to clearly distinct societies in social gender roles, in which main values are assertiveness, achievement, material success, and heroism. Femininity is the extent to equal societies in social gender roles, in which main values are modesty, tenderness, caring, relationship, and the quality of life. Long-term orientation is the extent to which individuals in societies focus on promoting virtues concerned with future benefits such as persistence and thrift. Short-term orientation is the extent to which individuals in societies focus on promoting virtues concerned with the past and present such as fulfillment of social obligations and preservation of face.

The Concepts of Individualism and Collectivism

Every society has a characteristic of individualism and collectivism, which is a principal dimension that differentiates culture within a society from another (Hofstede, 2001; Triandis, 1995). The concept of individualism and collectivism has attracted cross-cultural psychologists as well as other discipline researchers (Hofstede, 2001; Kim, 1994), so that these constructs contributed to the amalgamation of various disciplines such as psychology, anthropology, sociology, and management, and to become more similar in using different methodologies such as ethnographies, experiments, and surveys (Kim, 1995). Triandis (1995) defined individualism and collectivism as follows:

> A preliminary definition of individualism is a social pattern that consists of loosely linked individuals who view themselves as independent of collectives; are primarily motivated by their own preferences, needs, rights, and the contracts they have established with others; give priority to their personal goals over the goals of others; and emphasize rational analyses of the advantages and disadvantages to associating with others" (p. 2). Collectivism may be initially defined as a social pattern consisting of closely linked individuals who see themselves as parts of one or more collectives (family, co-workers, tribe, nation); are primarily motivated by the norms of, and duties imposed by, those collectives; are willing to give priority to the goals of these collectives over their own personal goals; and emphasize their connectedness to members of these collectives (p. 2).

In terms the two moral-political foundations, liberalism and Confucianism, Kim (1995) noted, "Liberalism extols the virtues of individualism and Confucianism glorifies collectivism" (p. 38). Liberalism blossomed in Western culture as the primary philosophy that represents the concept of self and society, whereas Confucianism was blossomed in East Asian culture that encourages the primary goal of the collective well-being and harmony. Kim (1995) defined liberalism and Confucianism as the:

> a moral and political philosophy that evolved in Western Europe and North America. It represents a sharp break from the ascribed, communal, and medieval social order (p. 32) and Confucianism, [evolved in East

> Asia], represents an idealization of traditional social order. Confucius (551-479 B.C.), saw the universe and all living things in it as a manifestation of a unifying force called the Tao (translated as the Truth, Unity, or the Way). It constitutes the very essence, basis, and unit of life that perpetuates order, goodness, and righteousness (Lew, 1977). Confucius, born in an agrarian society, expounded his moral and political philosophy to maintain, propagate, and reify this natural order (p. 34).

From this perspective, Kim (1994, 1995) tried to distinguish the differences between individualism and collectivism and provided a summary table that describes the differences between liberalism and Confucianism (see Table 1). Kim (1995) also proposed that three restrictions exist in the comparison. First, it is evident that both liberalism and Confucianism stand for both individualism and collectivism, but those should not be the only version representing both individualism and collectivism. Second, the comparative table should not be interpreted horizontally but be interpreted vertically. Third, liberalism and collectivism in every society play a role as ideals for competing with others for achieving good and worth things.

Triandis and associates (1985) indicated that there is a close similarity between the terms idiocentrism and allocentrism at the individual level and individualism and collectivism at the psychological level. Triandis (1994) stated, “this terminology allows quick reference to the idiocentric (who selects mostly individualist solutions) in collectivist cultures and the Allocentric (who selects mostly collectivist solutions) in individualist cultures” (p. 42). He further provided 66 measurable characteristics (hypotheses) of idiocentrics and allocentrics being detected in individualist and collectivist cultures respectively (see Table 2).

Table 1
Liberalism and Confucianism: Comparative Analysis

Level of Analysis	*Liberalism*	*Confucianism*
Individual Level		
Goals:		
Individual	Self-fulfillment	Self-realization
Social	Uphold rights	Substantive goals
Means	Freedom of choice	Self-cultivation
Barriers	External constraints	Internal constraints
Nature of Self:		
Internal	Rational	Lower versus higher self
Boundary	Discrete	Fluid
Entity	Autonomous	Embedded
	Self-sufficient	Interdependent
	Goal-directed	Situated
	Universalistic	Particularistic
Interpersonal Level:		
Individuals	Abstract	Relational
Orientation	Respect	Concern
Basis	Commonality	Common fate
Status and Role	Achieved	Ascribed
	Universalistic	Particularistic
Societal Level:		
Norms and Principles	Equality, equity	Role fulfillment
	Non-interference	Maintenance of “face”
	Detachability	Social obligations
Morality	Right-based	Virtue-based
Conflict resolution	Adversarial	Conciliatory
	Arbitration	Compromise
Justice	Egalitarianism	Role-based
	Procedural	Substantive
Order	Laws and regulations	Roles and duties
Institutions	Protection of individual rights	Familism Legal moralism
State	By people	For people
	Rational principle	Welfaristic
	Democratic representation	Paternalism

Table 2
The Defining Attributes of Allocentrics and Idiocentrics

Idiocentrics	***Allocentrics***
Cut the pie of experience by focusing on:	
Individuals as the basic units of social perception	*Groups* as the basic units of social perception
Attributions:	
Others' behaviors explained by reference to personality traits, attitudes	Others' behaviors explained as reflecting norms
Success attributed to own ability	Success attributed to help from others
Failure attributed to external factors (e.g., task difficulty, bad luck)	Failure attributed to lack of effort
Self-defined as an independent entity	*Self*-defined in terms of in-groups, relationships
Know more about self than about others	Know more about others than about self
Self is less similar to friends than friends to self	Self is more similar to friends than friends to self
Have many self-linked memories	Have few self-linked memories
Achievement for self-glory, competition, exhibition, power	Achievement for the group's sake, cooperation, endurance, order, self-control
Experience much cognitive dissonance	Experience little cognitive dissonance
Goals:	
Personal goals have primacy over in-group goals	In-group goals have primacy or overlap personal goals
Emotion:	
Self-focused (anger), long duration	Other-focused (empathy), short duration
Like those who are self-assured	Like those who are modest
Cognitions:	
What makes me different, distinguished	What makes me the same as my group
My needs, rights, capacity (obligations, contracts)	Needs of in-group
Cognitions are context-independent	Cognitions are context-dependent
Attitudes:	
Favor beliefs that reflect independence, emotional detachment from in-groups	Favor beliefs that reflect interdependence
Norms:	
Favor independence from in-groups	Favor embeddedness in in-groups
Values:	
Pleasure, achievement, competition, freedom, autonomy, fair exchange	Security, obedience, duty, in-group harmony, hierarchy, personalized relationships
Major calamity:	
Dependence on others	Ostracism

Table 2 Continued

Idiocentrics	*Allocentrics*
In-groups:	
Many, relationships are casual, little emotional involvement; less willingness to self-sacrifice for the in-group	Few, but relationship to them is close, with much concern for their integrity
In-group perceived as more heterogeneous than out-groups	In-group perceived as more homogeneous than out-groups
Debate, confrontation are acceptable	Harmony required. In-group influences many behaviors, and influence is deep
Defined by similarity in achieved attributes (e.g., beliefs, occupation)	Defined by similarity in ascribed attributes (e.g., kinship, caste, race, village, tribe)
Accepted structure:	
Egalitarian	Hierarchical
Horizontal relations more important than vertical	Vertical relations more important than horizontal
Social behavior:	
Only somewhat different when the other person is an in-group versus an out-group member	Very different when the other person belongs to an in-group versus an out-group
Easy entry and exit from groups, but relationships are mostly nonintimate	Difficult to get to be friendly, but relationships are intimate after they are established
People appear very sociable but relationships are superficial and depend on social exchanges and contracts	Cooperation with in-group members; communal exchanges
Personal face saving	Mutual face saving
Regulated by attitudes, cost-benefit computations, and generalized public norms	Regulated by in-group norms
Independent (e.g., privacy)	Interdependent (e.g., communal bathing)
Select mates who are physically attractive and have “exciting” personalities	Select mates who will maximize family integrity

Triandis (1995) considered individualism and collectivism as cultural syndromes. He defined a cultural syndrome as “a pattern characterized by shared beliefs, attitudes, norms, roles, and values that are organized around a theme and that can be found in certain geographic regions during a particular historic period” (p. 43). Triandis (1995) stated that the constructs of individualism and collectivism have four aspects: the

definition of self, personal and communal goals, cognitions, and an emphasis on relationships. First, the meaning of the self is distinct from each society grounded on either individualism or collectivism. It tends to mean independent in individualist cultures and interdependent in collectivist cultures, and is showed in individuals' life within society. Second, personal and communal goals affiliate with collectivist cultures, while they do not affiliate well with individualist cultures. Third, individualist cultures tend to more concern with the mental process in understanding attitudes, personal needs, rights, and contracts that help social behavior; instead, collectivist cultures tend to more concern with the mental process in understanding norms, obligations, and duties that help social behavior. Fourth, individualist cultures base on rational relationships that consider whether it is advantage or disadvantage for him/herself. Collectivist cultures, however, more focus on relationships that even make him/herself less useful. Triandis (1995) further categorized that individualism and collectivism can be divided four types of individualism and collectivism: "horizontal individualism, horizontal collectivism, vertical individualism,, and vertical collectivism. Triandis (1995) explained each type of individualism and collectivism as follows:

> In collectivist cultures, horizontal includes a sense of social cohesion and of oneness with members of the ingroup. Vertical includes a sense of serving the ingroup and sacrificing for the benefit of the ingroup and doing one's duty. In both individualist and collectivist cultures, the vertical dimension accepts inequality, and rank has its privileges. This is reflective of the "different self." In contrast, the horizontal dimension emphasizes that people should be similar on most attributes, especially status. This reflects the "same self," which does not want to stand out (p. 44).

Kim (1994, 1995) conceptualized individualism and collectivism as being depended on ecological and cultural adaptation. For example, field-reliant people such as

tribes in hunting and gathering and communities in farming for survival tended to form collectivist societies. Field-free people such as nomadic tribes instead tended to form individualist societies. Triandis (1994) also pointed out that ecology affects the structures and organizations in society. He emphasized the importance of in-groups, which is a group of people sharing similar or common feelings and attributes. Even though some characteristics tended to be shared in both individualistic and collectivistic culture, in-groups in individualistic culture on the whole were developed by similar trusts, opinions, ethics, vocations, etc. In-groups in collectivist culture instead were developed by race, religion, tribe, nation, etc.

In the perspective that individualism and collectivism are affecting by the acculturation of social and cultural change, Kim (1994, 1995) indicated four different patterns of individualism and collectivism. First, regardless of the similarity between individualistic aspects of present societies and collectivistic aspects of traditional nomadic people, economies based on market-driven system gradually developed from not traditional nomadic culture but traditional inactive culture. Therefore, the compatibility between many traditional inactive cultural aspects and the evolution of modern market-driven economy systems can exist in these societies. Second, regardless of giving priority to individualism in both traditional nomadic culture and present Western community such as Canada, the traditional inactive cultural systems are more compatible with cultures with modern economic-driven systems. Third, regardless of still dealing with the deadly situation in impelling to adopt either capitalism or communism, the Pacific Rim that were traditional societies in farming have advanced their own collective approaches that were compatible with the aspects of their traditional culture, and the cultural essential aspects

in stressing-human relatedness deeply exist. Finally, regardless of the situations that tend to move collectivist cultures and individualistic cultures in most Pacific Rim, especially Japan, it can be changed over the time by depending on the societies' contexts.

Triandis (1995) concurred with above cultural patterns by mentioning that no societies exist in terms of pure and simple individualism and collectivism. That is, since culture depends on situation, people can be more individualistic at workplace but be more collectivistic at home (Triandis, 1995). Sinha and Tripathi (1994) also argued that coexistence of both individualism and collectivism within societies and cultures is present, and tried to understand the interaction between individualism and collectivism within cultures rather than classifying cultures into certain types such as individualism and collectivism, especially by investigating Indian culture. From the study, Sinha and Tripathi (1994) found that individualism and collectivism coexist and even incorporate within Indian culture.

Kagitcibasi (1997), on the other hand, concerned with overextension of the conceptualization of individualism and collectivism, and emphasized that the refinement of conceptualization and methodology on individualism and collectivism should be demanded for better awareness of situations under consideration. She further proposed as follows: "researchers should be sensitive to the choices they make with regard to which type of a conceptualization (and operationalization) they undertake, in terms of cultural norms, values, individual attitudes, cognitions, behaviors, and so forth. When these are intermixed, conceptual and methodological confounding may result" (pp. 39-40).

Cultural Differences between Korean and American Societies

Hofstede (2001) found that Korea tends to show collectivistic aspects and the United States tends to show high individualistic aspects. Cha (1994) indicated that traditional Korean culture presented collectivism, and provided some aspects of the traditional Korean culture, which was displayed in attitudes, behaviors, beliefs, and values of Korean in Table 3. He proposed that the traditional Korean culture was likely to present high rates of power distance, uncertainty avoidance, feminine, and collectivism regarding Hofstede's dimensions.

Cha (1994) further investigated collectivism in the modern Korean culture by reviewing his previous work on two Korean generations such as 20s and 50s or above and his Korean value study. He provided the empirical proof that family, clan, and school in the modern Korean society are the imperative in-group. He postulated that older Koreans tend to represent more collectivistic aspects than younger Koreans. From this study, Cha (1994) concluded that collectivism predominated generally in Korean culture. He further proposed the following some definite trends: traditional collectivism would become less strength, instead individualism would be increased, and vertical dimension would become decreased, instead horizontal dimension would be increased.

Table 3
Specific Aspects of the Traditional Korean Culture: Values, Beliefs/Attitudes, and Behaviors

Values	*Beliefs/Attitudes*	*Behaviors*
Dependence	Fear of independent action; lack of the notion of individual rights	Grievances settled through a third party; intrusive and not respecting others' rights
Hierarchy	Obedience to and respect for parents, elders, and the *Yangban* class	Obedient, loyal, and compliant to authorities Suppressing emotions and keeping thoughts to self; not being frank; restrained affective display
Heartfulness/fraternity	Mutual succor norm; friendship more precious than money; one gets paid for helping and not for work	Willing to help even strangers; running mutual-aid organizations; group work; thanklessness; group support for success; confusing what is official with what is personal
Family line	Offspring to inherit ancestor rites	
Many offspring	Women are for bearing children	
Ancestors	Ancestor worship; importance attached to ancestral graves	Ancestor rite; take pains in upkeep of ancestral graves
Filial piety	Filial piety	Deference to parents
Loyalty	Loyalty to the king and things Korean	
Sacrifice of women	Sacrifice required of women	Wives's self-effacing work for husbands

In Table 4 Calhoun, Teng, and Cheon (2002) provided the comparison of cultural variables between Korea and the United State, which is grounded on several studies (Hofstede, 1991; Hofstede and Bond, 1988; Hall, 1976; Trompenaars and Hampden-Turner, 1998). They concluded that the very differences between Korea and the United States' cultures exist, and identified the cultural differences between two countries in the following four variables, closely related to individualism and collectivism: universalism-particularism, specificity-diffuseness, time orientation, and ascription-achievement. Universalism-particularism reflected the extent to whether relationships influence over rules. In general, people who have more universalistic aspects, especially American would act upon the rules for a friend; on the other hand, people who have more particularistic aspects, especially Korean would like to break that rule. In terms of specificity-diffuseness related to individualism and collectivism as well as power distance, private and public spaces were considered. In specific society such as the United States, little private composing of one's own and one's family and a large number of public space are considered while in diffuse society such as Korea in which private space is the large in-group and allegiance to the organization, the reverse is considered. Time orientation reflected the extent to which the short and long-term orientation that considered by Hofstede (2001). Korean considered more about the past and future and less the present than American. Ascription-achievement reflected the extent to which status depends on achievement versus family background. Korean was more oriented on ascription cultures while American was more oriented on achievement cultures.

Table 4
Rankings Regarding Cultural Variables

Culture Variable	Korea rank/N	The United State rank/N
Power distance	27.5/33	38/53
Individualism	43/53	1/53
Masculinity	41/53	15/53
Uncertainty avoidance	16.5/53	43/53
Long term-short term	5/23	17/23
Communications context	High	Low
Time orientation	Polychromic	Monochronic
Universalism-particularism	3/31	27/31
Specific-diffuse	10/45	37/45
Ascription-achievement	14/46	43/46
Time present-past	18/20	3/20

However, it is clear that both all Korean and the American will not represent their predominated cultural values, beliefs, and behaviors (Calhoun, Teng, and Cheon, 2002). Coon and Kemmelmeier's (2001) work supported above assertion. The authors considered the assumptions that minorities in the United States showed higher collectivism scores than European Americans while European Americans showed higher individualism tendency than minorities in the United States. They examined in terms of cultural values of individualism and collectivism, whether differences between the four ethnic groups such as African Americans, Asian Americans, Latino Americans, and European Americans in the United States by using meta-analysis. Coon and Kemmelmeier (2001) found that European Americans scored lower in collectivism than African Americans and Asian Americans, except Latino Americans, and African Americans scored the highest in individualism that are inconsistent with the belief that the European American majority represents individualism in the United States.

Individualism/Collectivism and Self-Directed Learning

Braman (1998) noted that self-directed learning is grounded on individualistic attitudes and values. Braman (1998) pointed out:

> Individualist attitudes and values are listed in positive terms and are deemed preferable to collectivistic attitudes and values, which are listed in negative terms. Every now and then, however, a positive collectivistic term (i.e., cooperation, interdependence, etc.) is listed among contradicting individualistic terms, yet the apparent contradiction goes unreconciled. Collectivism, compared to individualism, has not been given equal attention, consideration, or status as a basis for theory development in adult education (p. 44).

From above perspective, Braman (1998) investigated whether the relationship between self-directed learning and individualism/collectivism as well as several variables such as age, ethnicity, gender, and occupation exists by using two combined instruments such as Self-Directed Learning Readiness Scale and a measure of individualism and collectivism. He found that there is statistically significant relationship between Self-Directed Learning and Individualism, whereas there is no statistically significant relationship between self-directed learning and collectivism as well as other variables. He further concluded that:

> the development of an adult does not necessarily ultimately lead to independence or dependence, but can lead to interdependence, the ultimate goal of a significant number of adults with whom the field needs to become better acquainted (Braman, 1998, p. 93).

CHAPTER III

METHDOLOGY

This chapter describes the methodology used presented here in study. The type of research, population and participate selection, instrumentation, reliability and validity, data collection, and statistical procedures that were used in this research are described in this chapter.

Type of Research

The research design used for this study was descriptive and correlational in nature. The study was designed 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 conceptual schema for this study was grounded on Self-Directed Leaning and cultural values of individualism/collectivism. The review of literature provides the basis for this understanding. This study has one dependent variable and six independent variables. The dependent variable was the Self-Directed Learning Readiness Scale (SDLRS). The independent variables were individualism/collectivism (I/C), age, ethnicity, gender, GPR, student classification, and nation.

Due to the sensitivity of human research, Texas A&M University Institutional Review Board (IRB) approval was needed to start the survey process. IRB approval was requested for the survey instrument (2004-0102) and granted on February 25, 2004 (Appendix A).

Population and Participant Selection

The target population for this study consisted of two sample groups of college and graduate students: Korean and American students who seek teacher certification in the field of agriculture in the following two institutions: Sunchon National University (SNU) in Sunchon, South Korea and Texas A&M University (TAMU) in College Station, USA. The countries and institutions were selected because the researcher has experience in these countries with these institutions and there are the needs for improving their teacher preparation programs to provide better high-quality teacher preparation education with both students who have different cultures.

The Office of University Affairs and Department of Agricultural Education at Sunchon National University and Department of Agricultural Education at Texas A&M University were contacted for contact information for the target population (Gall, Gall, and Borg, 2003). The target population included 145 Korean and 185 American students who were seeking teacher certification in agriculture. Invitation emails of 30 (20.7%) Korean and 15 (8.1%) American were undeliverable. The total accessible population therefore was approximately 285. A total of 137 (48.1%) students: 84 (73%) Korean and 53 (31.2%) American students completed the web-formatted questionnaire.

Instrumentation

The research instrument (Korean and English version, Appendix D) was designed based on the review of literature. The questionnaire was divided into four sections.

The first section was adopted from Self-Directed Learning Readiness Scale- Adult Basic Education (SDLRS-ABE) form developed by Guglielmino (1989a) for specifically

international or less educated persons to measure the degree to which people perceive themselves as having the skills and attitudes usually associated with the self-directed learning. The SDLRS-ABE consists of 34 items and the participant were asked to indicate their agreement with these 34 statements by making their response on a five point Likert-type scale. The points on the scale were: 1 = I never feel like this (N); 2 = I feel like this less than half the time (LH); 3 = I feel like this half the time (H); 4 = I usually feel like this (MH); 5 = I feel like this all the time (A). The level of measurement for this variable was interval. Several items (2, 9, 11, 16, 17, and 27) were reverse-worded to minimize response set influence. However, after data collection the researcher recoded the data for the reverse-worded items, so that higher scores would have a consistent meaning.

The second section with 32 statements, adopted from the work of Singelis et. al. (1995), was designed to measure individualism/collectivism (I/C)at the individual level through attitude items. Eight items among 32 statements correspond to each for the four dimensions: vertical individualism (VI), horizontal individualism (HI), vertical collectivism (VC), and horizontal collectivism (HC). The participants were asked to indicate their agreement by making their response on a seven point Likert-type scale, which was a modified scale of a nine point Likert scale. The points on the scale were: 1 = Strongly Disagree (SD); 2 = Disagree (D); 3 = Somewhat Disagree (SWD); 4 = Neutral (N); 5 = Somewhat Agree (SWA); 6 = Agree (A); 7 = Strongly Agree (SA). The level of measurement for this variable was interval. One item (No. 20) was reverse-worded to minimize response set influence. However, after data collection the researcher recoded

the data for the reverse-worded items, so that higher scores would have a consistent meaning.

The third section with 16 items was adopted from Triandis, Chen, and Chan, (1998) to measure I/C in four dimensions such as vertical individualism (VI), horizontal individualism (HI), vertical collectivism (VC), and horizontal collectivism (HC) at the individual level through scenarios. Triandis, Chen, and Chan (1998) classified the content of these scenarios as follows: the social domain (2 items), the political (2 items), the economic (3 items), the philosophical (4 items), and the aesthetic domain (3 items). The participants were asked to rank four options by selecting from 1 to 4 in terms of participant's preference. The level of measurement for this variable was ordinal.

The fourth section included general demographic information such as age, ethnicity, gender, GPR, nationality, and student classification. Age was measured as the number of years since birth. The level of measurement for this variable is ratio. Ethnicity was measured as White (non-Hispanic), Black/Africa American, Hispanic, Native American, Asian, and other. The level of measurement for this variable is nominal. Gender was measured as either male or female. The level of measurement for this variable is nominal. Grade Point Ratio (GPR) was measured as the average for all courses completed since freshman. The level of measurement for this variable is ratio. Student classification was measured as freshman, sophomore, junior, senior, and graduate/other. The level of measurement for this variable is ordinal.

The instruments adopted in this study are originally in English and were translated into Korean for the Korean sample. According to Behling and Law (2000) who indicated that "poor translations of an instrument could make the data gathered from it valueless;

important as it may be, not enough attention is paid to rules for successful translation", The researcher, a native speaker of Korean, translated the instruments into Korean by himself. The researcher then asked two native Koreans who are both fluent in American English in order to make sure the instruments translated by the researcher. One of them has teaching experience for over 20 years in college in America and the other is studying in graduate school. The two Korean translators rephrased the Korean instrument translated by the researcher more relevantly. After this process, the researcher asked an expert on translation into Korean to make sure the instruments were translated relevantly in the Korean culture.

Reliability and Validity

The first section of the questionnaire, SDLRS-ABE, consisted of a 34-item scale with five point Likert-type responses and was designed to indicate an individual's current level of readiness for self-direction in learning. The instrument has been shown, through numerous studies, to be a valid and reliable predictor of adult readiness for self-direction in learning (Guglielmino, 1997; Delahaye and Smith, 1995). In the initial study, Guglielmino (1977) reported the reliability of the SDLRS as .87. Since her original study, most research of using SDLRS showed high reliability estimates of .72-.92 for the SDLRS (Guglielmino, 1997, Guglielmino and Knudson, 2000). A sample of 3,151 individuals from a wide variety of settings throughout the United States and Canada supported the SDLRS by reporting a highest reliability of .94 (Guglielmino, 1997; Guglielmino, Long and McCune, 1989). Reliability score of the scale, using the Pearson split-half method, was estimated at r=.85 (Tuttle, Lee, Kohls, Hynes, and Lindner 2004).

More than 50,000 adults from around the world have taken the SDLRS. Numerous validation studies support the predictive validity of the SDLRS (Brockett, 1985a, 1985b; Crook, 1985; Guglielmino, 1997; Long and Agyekum, 1983, 1984; McCune, 1988; McCune and Guglielmino, 1991; Mourad and Torrance, 1979; Torrance and Mourad, 1978a; Torrance and Mourad, 1978b).

The second section of the questionnaire consisted of eight items among 32 statements corresponded to each for the four dimensions of individualism/collectivism. A study by Singelis et. al. (1995) estimated reliability for each dimension: vertical individualism (.74), horizontal individualism (.67), vertical collectivism (.68), and horizontal collectivism (.74). A subsequent study by Triandis (1995) estimated the combined individualism scales at .66 and the combined collectivism scales at .78.

Triandis, Chen, and Chan (1998) reported the reliability of the scenario instrument and recommended the 16 scenarios adopted in this study is good instrument to measure horizontal and vertical individualism and collectivism but added, “probably 16 scenarios are an absolute minimum” (p. 285). They also suggested that the use of both attitude and scenario instruments were appropriate to find out individualism and collectivism at the individual level. They indicated the correlation between the attitude and scenario instruments was .41 (horizontal collectivism), .51(vertical individualism), .29(vertical collectivism), and .11(horizontal individualism), and concluded that both the scenario and attitude measurements had substantial convergent validity.

To understand the research topic better in Korea circumstances, Dr. Dae-Gu Kang, a professor from Agricultural Education Department, Sunchon National University, was

invited as Ad Hoc advisor for the study (Appendix B). Dr. Kang reviewed both English and Korean survey instruments and made some corrections for the instrumentation.

Data Collection

Data were collected using a web-formatted questionnaire (see Appendix D). The questionnaire was delivered using the Internet. 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 questions were imputed along with correct table structure. Buttons were then added to making the participant able to select the answer that corresponded with the question and also corresponded to his/her answer. A safeguard was placed on these buttons that made sure that the participant selected an answer before they could finish the survey. Drop-down menus and blank boxes were added for the personal information questions in section four. Due to the identification that the visual elements can affect respondents' answers, aesthetic appeal was considered and the structure and color of the questionnaire was altered.

The researcher sent an invitation e-mail to each individual prospective participant. Participants were assured that their responses would be kept confidential and only group data would be reported. Each participant was given the link for the questionnaire and a

code-number with e-mail. The participants were informed that the surveys had been coded to assist the researcher in following up with non-respondents. Once the student completed the survey and selected the "submit form" button, the questionnaire was instantaneously converted from Front Page onto a secure departmental network.

On March 22, 2004 a first email (Appendix C) was sent to participants. The initial cut-off for respondents was 10 days following receipt of the original email. Forty five (Korean: 22; American: 23) respondents replied during the first round of response. On April 1, 2004, a second email (Appendix C) was sent to nonrespondents. After this second deadline an additional nine participants (Korean: 6; American: 3) responded. On April 12, 2004, a last round of follow-ups was sent to nonrespondents. Data collection ceased on April 20, 2004. Eighty three (Korean: 56; American: 27) respondents replied during the last round of response. A response rate of 41.5% (n = 137) was obtained for the study. Of the instruments returned, all were complete, resulting in a usable response rate of 41.5% (n = 137).

Statistical Procedures

All data was analyzed using the Statistical Package for Social Sciences for Windows (SPSS, 11.0). Descriptive statistics for all of the study variables were performed. Alpha for all statistical procedures was be set a priori at .05. The statistics included the means, standard deviations, effect size, "what if" analyses, independent sample *t*-test, one-way ANOVA, bivariate correlations, and multiple regression. Thompson (2002) recommended authors to "report and interpret effect sizes in the context of effect sizes from prior related studies and not by invoking rigid benchmarks"

(p. 30). However, in this study, effect sizes were calculated, interpreted, and reported according to Cohen's (1988) conversion for *t*-test: negligible size, $d<0.20$; small effect size, $0.50>d \geq 0.20$; medium effect size, $0.80>d \geq 0.50$; and large effect size, $d \geq 0.80$. Interpretations for ANOVA were based on the Cohen Conversion: negligible size, $f <0.10$; small effect size, $0.25> f$; medium effect size, $0.40> f \geq 0.25$; and large effect size, $f \geq 0.40$.

Cohen noted that small effect sizes are not readily observable, medium effect sizes are readily observable, and large effect sizes are evident.

A preliminary analysis was completed to explore Reliability estimates (Cronbach's alpha) for each variable and validity of the two instruments used in the study. In addition, comparisons of Early versus late respondents were conducted to evaluate whether nonresponse would be a threat to external validity of the survey (Lindner, Murphy, and Briers, 2001).

Pearson correlation coefficients were calculated to determine the relationships between self-directed learning readiness and the cultural values of individualism/ collectivism and personal characteristics. A multiple regression analysis utilizing a forced entry method was performed using horizontal individualism (HI) scores, vertical individualism (VI) scores, horizontal collectivism (HC) scores, vertical collectivism (VC) scores, and personal characteristics as independent variables (predictor variables) and self-directed learning readiness scales (SDLRS) as dependent variable (criterion variable). This analysis provided information regarding the contribution of each predictor variable to the criterion variable and accounted for the percentage of variance contributed by the eight scores obtained from the I/C scale to the overall Self-Directed Learning Readiness

Scale score. This procedure allowed the researcher to establish the statistical significance of the unique contribution of each predictor variable toward the variance in self-directed learning readiness.

Objective 1

The first objective was to describe Korean and American students who seek to teacher certification in Agriculture by selected personal characteristics. The variables the students' personal characteristics (age, ethnicity, gender, GPR, student classification, nationality) were analyzed and described by calculating frequencies and percentages by level of response.

Objective 2

The second objective was to describe Korean and American students who seek to teacher certification in Agriculture by Self-Directed Learning Readiness Scale (SDLRS) scores. The variable SDLRS was analyzed and described by calculating a summative cumulative SDLRS mean, and frequencies and percentages by level of response. Interpretation for students' self-directed learning readiness was based on scales: 1~1.5= I never feel like this (Strongly Disagree); 1.51~2.5=Disagree (I feel like this less than half the time); 2.51~3.5=Neutral (I feel like this half the time); 3.51~4.5=Agree (I usually feel like this); and 4.51~5.0=Strongly Agree (I feel like this all the time).

Objective 3

The third objective was to describe Korean and American students who seek to teacher certification in Agriculture by individualism and collectivism (I/C) in four dimensions such as vertical individualism (VI), horizontal individualism (HI), vertical collectivism (VC), and horizontal collectivism (HC) scores. The variables each dimensions for I/C were analyzed and described by calculating a summative cumulative each mean, and frequencies and percentages by level of response. Interpretations for students' cultural values were based on scales: 1~1.5= Strongly Disagree; 1.51~2.5=Disagree; 2.51~3.5=Somewhat Disagree; 3.51~4.5= Neutral; 4.51~5.5=Somewhat Agree; 5.51~6.5=Agree; and 6.51~7.0=Strongly Agree.

Objective 4

The fourth objective was to examine differences by the personal characteristics of the population and their scores regarding SDLRS and I/C.

The variables SDLRS and I/C and age were analyzed and described by calculated mean, standard deviation and analysis of variance by level of response, and computing the degrees of freedom.

The variable SDLRS and I/C and ethnicity were analyzed and described by calculated mean, standard deviation and analysis of variance by level of response, and computing the degrees of freedom.

The variable SDLRS and I/C and gender were analyzed and described by calculated mean, standard deviation and *t*-test by level of response, and computing the degrees of freedom.

The variable SDLRS and I/C and GPR were analyzed and described by calculated mean, standard deviation and analysis of variance by level of response, and computing the degrees of freedom.

The variable SDLRS and I/C and student classification were analyzed and described by calculated mean, standard deviation and analysis of variance by level of response, and computing the degrees of freedom.

The variable SDLRS and I/C and nationality were analyzed and described by calculated mean, standard deviation and *t*-test by level of response, and computing the degrees of freedom.

Objective 5

The fifth objective was to examine the relationships self-directed learning readiness and individualism and collectivism in four dimensions, using both the bivariate correlation and hierarchical multiple regression.

The variables students' SDLRS and I/C scores were measured by correlational analysis and finally indicated by measures of association and statistical significance.

CHAPTER IV

ANALYSIS OF DATA

The findings of the study are presented in three sections. First, reliability analyses for each section of the questionnaire used in the study are reported. Second, population response and the comparison of early versus late respondent are described as regards both Korean and American students who seek to teacher certification in the field of Agriculture. Third, the substantive analyses of the study's objectives are presented.

Preliminary Analyses

For the sample in the present study, the coefficient alpha for the 34-items to assess the internal consistency reliability of the Self-Directed Learning Readiness Scale (SDLRS) was used. The coefficient alpha of the SDLRS was .91. This score suggested that the items comprising the self-directed learning readiness are internally consistent, and were similar with previous reliability estimates of .72-.92 for the SDLRS (Guglielmino, 1997, Guglielmino and Knudson, 2000).

The reliability coefficients for the scores on the two dimensions of the Individualism and Collectivism instrument in attitude section were moderate (α_{VI} = .77; α_{HC} = .77). The horizontal individualism (HI) scale itself generated a reliability coefficient of .82 while the vertical collectivism (VC) yielded scores with lower reliability (α_{VC} = .63). The scores on the full individualism (VI+HI) and collectivism (VC+HC) had reliability coefficient of .77 and .81 respectively, and the scores on the full vertical (VI+VC) and horizontal (HI+HC) characteristics had reliability coefficient of .70 and .82, respectively.

The Spearman correlation coefficient (ρ) for the measurement of individualism and collectivism with 16 scenarios was used to assess the level of consistency between the odd and even attributes. To do this, the researcher calculated the average responses to the eight odd-numbered scenarios and the eight even-numbered scenarios for the four attributes. The Spearman rho correlation coefficient on the VI, HI, VC, and HC were -.08, -.07, .13, and .11, respectively. Due to the very low and negative scores on four attributes, the researcher decided not to use the measurement of individualism and collectivism with 16 scenarios in this study.

Population Response

Korean (*N*=145) and American (*N*=185) college and graduate students seeking 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 were the target population for this study. Thirty (20.7%) Korean and 15 (8.1%) American were undeliverable. The total accessible population, therefore, was 285. Table 5 shows that 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 were Korean students at SNU and 53 were American students at TAMU.

Table 5
Response Population to Web-formatted Questionnaire

Groups	*f*	%
Korean students		
Respondents, complete	84	57.9
Respondents, undeliverable	30	20.7
Nonrespondents	31	21.4
Total	145	100
American students		
Respondents, complete	53	28.7
Respondents, undeliverable	15	8.1
Nonrespondents	117	63.2
Total	185	100

Comparison of Early Versus Late Respondents

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). The first wave of responses of Korean (n=28) and American (n=25) was received between March 22, 2004 and April 11, 2004 and the second wave of responses of Korean (n=56) and American (n=28) was received between April 7, 2004 and April 23, 2004. Table 6 shows no statistically significant differences between early and late Korean respondents related to Self-Directed Learning Readiness Scale (SDLRS) scores, t (82)=1.76, p>0.05.

Table 6
Early versus Late Korean Response to Self-Directed Learning Readiness Scale Score

Returned Status	*n*	*M*	*SD*	*t*	*p*
SDLRS					
Early	28	126.93	16.36	1.76	.08
Late	56	120.29	16.34		

Note: 1=I never feel like this, 2=I feel like this less than half the time, 3=I feel like this half the time, 4=I usually feel like this, 5=I feel like this all the time

Table 7 shows that no significant difference was found between early and late American respondents related to SDLRS scores, t (51)=0.32, p>0.05.

Table 7
Early versus Late American Response to Self-Directed Learning Readiness Scale Score

Returned Status	*n*	*M*	*SD*	*t*	*p*
SDLRS					
Early	25	126.36	12.90	0.32	.75
Late	28	124.89	19.59		

Note: 1=I never feel like this, 2=I feel like this less than half the time, 3=I feel like this half the time, 4=I usually feel like this, 5=I feel like this all the time

Table 8 showed that no statistically significant difference was found between early and late Korean respondents related to Individualism and Collectivism in four dimensions: vertical individualism (VI), t (82)= -0.63, p>0.05; horizontal individualism (HI), t (82)= 0.73, p>0.05; vertical collectivism (VC), t (82)= 1.41, p>0.05; and horizontal collectivism (HC), t (82)= 0.49, p>0.05.

Table 8
Early versus Late Korean Response to Individualism and Collectivism

Returned Status	*n*	*M*	*SD*	*t*	*p*
Vertical Individualism (VI)					
Early	28	35.96	6.57	-.63	.53
Late	56	36.95	6.77		
Horizontal Individualism (HI)					
Early	28	39.61	5.27	0.73	.47
Late	56	38.55	7.77		
Vertical Collectivism (VC)					
Early	28	42.64	4.50	1.41	.16
Late	56	40.96	5.43		
Horizontal Collectivism (HC)					
Early	28	41.79	4.62	0.49	.63
Late	56	41.16	5.93		

Note: 1=Strongly Disagree, 2=Disagree, 3=Somewhat Disagree, 4=Neutral, 5=Somewhat Agree, 6=Agree, 7=Strongly Agree

Table 9 showed that no statistically significant difference was found between early and late American respondents related to Individualism and Collectivism in four dimensions: vertical individualism (VI), t (51)=-0.39, p>0.05; horizontal individualism (HI), t (51)= 0.29, p>0.05; vertical collectivism (VC), t (51)=0.35, p>0.05; and horizontal collectivism (HC), t (51)=1.17, p>0.05.

Table 9
Early versus Late American Response to Individualism and Collectivism

Returned Status	*n*	*M*	*SD*	*t*	*p*
Vertical Individualism (VI)					
Early	25	33.04	7.74	-.39	.70
Late	28	33.86	7.40		
Horizontal Individualism (HI)					
Early	25	46.08	4.93	.29	.77
Late	28	45.64	5.85		
Vertical Collectivism (VC)					
Early	25	43.44	5.30	.35	.73
Late	28	42.89	5.88		
Horizontal Collectivism (HC)					
Early	25	46.16	4.78	1.17	.25
Late	28	44.14	7.32		

Note: 1=Strongly Disagree, 2=Disagree, 3=Somewhat Disagree, 4=Neutral, 5=Somewhat Agree, 6=Agree, 7=Strongly Agree

Findings Related to Objective One

The first objective was to describe Korean and American students seeking teacher certification in Agriculture by selected personal characteristics. The variables included gender, age, ethnicity, grade point average (GPA), student classification, and nationality.

Gender

Table 10 shows the distribution of participating Korean and American Students (*N*=137) by gender. Fifty participants (36.5%) were male and eighty-seven participants (63.5%) were female.

Table 10
Distribution of Participating Korean and American Students by Gender (N=137)

Gender	*f*	*%*
Male	50	36.5
Female	87	63.5
Total	137	100

Age

The age of participants was described in Table 11. Twenty-five participants (18.2%) were in 18-19 years old range; forty-two (30.7%) were in 20-21 years old range; forty-two (30.7%) were in 22-23 years old range; and twenty-eight (20.4%) were more than 24 years old. The youngest participants were 18 years old and the oldest student was 33 years old. The average age of participants was approximately 22 years old.

Table 11
Distribution of Participating Korean and American Students by Age (N=137)

Age Group	*f*	*%*
18-19	25	18.2
20-21	42	30.7
22-23	42	30.7
>24	28	20.4
Total	137	100
Note: *M*=21.97, *SD*=2.83, *Min*=18, *Max*=33		

Ethnicity

Of the 137 students, a majority (62.8%) of them were Asian as shown in Table 12. Another 35% were White. Few participants were Hispanic (1.5%) and Other (0.7%) while no participants were Black/African American and Native American.

Table 12
Distribution of Participating Korean and American Students by Ethnicity (N=137)

Age Group	*f*	*%*
White (non-Hispanic)	48	35
Black /African American	0	0.0
Hispanic	2	1.5
Native American	0	0.0
Asian	86	62.8
Other	1	0.7
Total	137	100

Grade Point Average (GPA)

Table 13 shows the distribution of participating Korean and American Students (*N*=137) by GPA. Because Sunchon National University in Korea uses 4.5 GPA scales (e.g. A+=4.5, A=4.0, B+=3.5, B=3.0, C+=2.5, C=2.0, D+=1.5, D=1.0, and F=0), GPA of Korean students was converted into 4.0 scales. The participants with a GPA ranging from 2.0 to 2.29 comprised 4 (2.9%) of the respondents. Eighteen (13.1%) of the respondents had a GPA that ranged from 2.3 to 2.69; seven (5.1%) had a GPA that ranged from 2.7 to 2.99; fifty-one (37.2%) had a GPA that ranged from 3.0 to 3.29; forty-six (33.6%) had a GPA that ranged from 3.3 to 3.69; and 11 (8.0%) had a GPA that ranged from 3.7 to 4.00.

Table 13
Distribution of Participating Korean and American Students by GPA (N=137)

GPA	*f*	*%*
2.0-2.29	4	2.9
2.3-2.69	18	13.1
2.7-2.99	7	5.1
3.0-3.29	51	37.2
3.3-3.69	46	33.6
3.7-4.00	11	8.0
Total	137	100

Student Classification

The frequency and percentage of each student classification is shown in Table 14. Fifty-four participants (39.4%) were senior; twenty-six participants (19.0%) were sophomore; twenty-five participants (18.2%) were junior; seventeen participants (12.4%) were freshman; and fifteen participants (10.9%) were graduate/other.

Table 14
Distribution of Participating Korean and American Students by Student Classification (N=137)

Student Classification	*f*	*%*
Freshman	17	12.4
Sophomore	26	19.0
Junior	25	18.2
Senior	54	39.4
Graduate/Other	15	10.9
Total	137	100

Nationality

Table 15 shows the distribution of participating Korean and American Students (*N*=137) by nationality. Eight-four participants (61.3%) were Korean and fifty-three participants (38.7%) were American.

Table 15
Distribution of Participating Korean and American Students by Nationality (N=137)

Nationality	*f*	*%*
Korean	84	61.3
American	53	38.7
Total	137	100

Findings Related to Objective Two

The second objective was to describe Korean and American students seeking teacher certification in Agriculture by Self-Directed Learning Readiness Scale (SDLRS) scores.

Self-Directed Learning Readiness

Self-directed learning readiness was measured by participants' responses to thirty-four statements. Calculating the frequencies and percentages of the responses yielded the statements with which the students most strongly agreed.

As Table 16 shows, 70 % of participants agreed or strongly agreed that I know what I want to learn. About 58 % of participants disagreed or strongly disagreed that when I see something that I don't understand, I stay away from it. About 75 % of participants agreed or strongly agreed that if there is something I want to learn, I can find a way to learn it. About 70 of participants agreed or strongly agreed that I love to learn. About 83 % of participants agreed or strongly agreed that I believe that a big part of my education should be thinking about what kind of person I am and what kinds of things I want to do with my life. About 55 % of participants agreed or strongly agreed that I know where to go to get information when I need it.

Table 16
Distribution of Participating Korean and American Students by SDLRS (N=137)

		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
Statement	*N*	*f*	*%*	*f*	*%*	*f*	*%*	*f*	*%*	*f*	*%*
I know what I want to learn.	137	2	1.5	5	3.6	34	24.8	71	51.8	25	18.2
When I see something that I don't understand, I stay away from it.*	137	19	13.9	61	44.5	39	28.5	14	10.2	4	2.9
If there is something I want to learn, I can find a way to learn it.	137	2	1.5	3	2.2	29	21.2	64	46.7	39	28.5
I love to learn.	137	2	1.5	9	6.6	30	21.9	60	43.8	36	26.3
I believe that a big part of my education should be thinking about what kind of person I am and what kinds of things I want to do with my life.	137	1	0.7	7	5.1	16	11.7	42	30.7	71	51.8
I know where to go to get information when I need it.	137	0	0	13	9.5	49	35.8	60	43.8	15	10.9
I can learn things by myself better than most people my age.	137	3	2.2	17	12.4	53	38.7	53	38.7	11	8.0
If there is something I have decided to learn, I can find time for it, no matter how busy I am.	137	2	1.5	26	19.0	35	25.5	56	40.9	18	13.1
Understanding what I read is a problem for me.*	137	29	21.2	52	38.0	32	23.4	18	13.1	6	4.4
I know when I need to learn more about something.	137	1	0.7	18	13.1	47	34.3	54	39.4	17	12.4

Table 16 Continued

		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
Statement	*N*	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
I think books are boring.*	137	33	24.1	45	32.8	34	24.8	16	11.7	9	6.6
I can think of many different ways to learn about something new.	137	3	2.2	22	16.1	59	43.1	42	30.7	11	8.0
I try to think about how the things I am learning will fit in with the plans I have for myself.	137	0	0	10	7.3	25	18.2	58	42.3	44	32.1
I really enjoy looking for the answer to a hard question.	137	11	8.0	23	16.8	52	38.0	38	27.7	13	9.5
I have a lot of questions about things.	137	4	2.9	20	14.6	39	28.5	48	35.0	26	19.0
I'll be glad when I'm finished learning.*	137	55	40.1	32	23.4	29	21.2	17	12.4	4	2.9
I'm not as interested in learning as some other people seem to be.*	137	42	30.7	50	36.5	30	21.9	12	8.8	3	2.2
When I decide to find out something, I do it.	137	1	0.7	9	6.6	47	34.3	59	43.1	21	15.3
I like to try new things, even if I'm not sure how they will turn out.	137	3	2.2	14	10.2	52	38.0	47	34.3	21	15.3
I'm good at thinking of new ways to do things.	137	4	2.9	21	15.3	54	39.4	47	34.3	11	8.0

Table 16 Continued

		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
Statement	*N*	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
I like to think about the future.	137	2	1.5	8	5.8	22	16.1	48	35.0	57	41.6
A hard problem doesn't stop me.	137	4	2.9	16	11.7	47	34.3	53	38.7	17	12.4
I can make myself do what I think I should	137	3	2.2	10	7.3	40	29.2	59	43.1	25	18.2
I am really good at solving problems.	137	3	2.2	13	9.5	56	40.9	53	38.7	12	8.8
I become a leader in learning groups.	137	11	8.0	25	18.2	44	32.1	43	31.4	14	10.2
I like talking about ideas.	137	6	4.4	22	16.1	34	24.8	53	38.7	22	16.1
I don't like learning things that are hard.*	137	14	10.2	54	39.4	43	31.4	20	14.6	6	4.4
I really want to learn new things.	137	1	0.7	9	6.6	31	22.6	65	47.4	31	22.6
When I learn more, the world becomes more exciting.	137	0	0.0	8	5.8	20	14.6	66	48.2	43	31.4
It's really my job to learn-the school and the teachers can't do it for me.	137	4	2.9	14	10.2	34	24.8	40	29.2	45	32.8

Table 16 Continued

		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
Statement	*N*	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
I learn many new things on my own each year.	137	1	0.7	14	10.2	48	35.0	44	32.1	30	21.9
I am a good learner in the classroom and on my own.	137	3	2.2	14	10.2	53	38.7	55	40.1	12	8.8
People who keep learning are leaders, because they know what's happening.	137	2	1.5	14	10.2	30	21.9	51	37.2	40	29.2
I like to see if I can solve hard problems.	137	0	0.0	8	5.8	33	24.1	70	51.1	26	19.0

Note: Overall *M*=3.64; *SD*=0.49; scale: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree. Items having with a "*"were reverse scored.

About 47 % of participants agreed or strongly agreed that I can learn things by myself better than most people my age. About 54 % of participants agreed or strongly agreed that if there is something I have decided to learn, I can find time for it, no matter how busy I am. About 60 % of participants disagreed or strongly disagreed that understanding what I read is a problem for me. About 52 % of participants agreed or strongly agreed that I know when I need to learn more about something. About 57 % of participants disagreed or strongly disagreed that I think books are boring. About 39 % of participants agreed or strongly agreed that I can think of many different ways to learn about something new. About 74 % of participants agreed or strongly agreed that I try to think about how the things I am learning will fit in with the plans I have for myself. About 37 % of participants agreed or strongly agreed that I really enjoy looking for the answer to a hard question. About 54 % of participants agreed or strongly agreed that I have a lot of questions about things. About 64 % of participants disagreed or strongly disagreed that I'll be glad when I'm finished learning. About 67 % of participants disagreed or strongly disagreed that I'm not as interested in learning as some other people seem to be. About 58 % of participants agreed or strongly agreed that when I decide to find out something, I do it. About 50 of participants agreed or strongly agreed that I like to try new things, even if I'm not sure how they will turn out. About 42 % of participants agreed or strongly agreed that I'm good at thinking of new ways to do things. About 77 % of participants agreed or strongly agreed that I like to think about the future. About 51 % of participants agreed or strongly agreed that a hard problem doesn't stop me. About 61 % of participants agreed or strongly agreed that I can make myself do what I think I should. About 48 % of participants agreed or strongly agreed that I am really good at

solving problems. About 42 % of participants agreed or strongly agreed that I become a leader in learning groups. About 55 % of participants agreed or strongly agreed that I like talking about ideas. About 50 % of participants disagreed or strongly disagreed that I don't like learning things that are hard. Seventy percent of participants agreed or strongly agreed that I really want to learn new things. About eighty percent of participants agreed or strongly agreed that when I learn more, the world becomes more exciting. About 62 % of participants agreed or strongly agreed that it's really my job to learn-the school and the teachers can't do it for me. Fifty-four percent of participants agreed or strongly agreed that I learn many new things on my own each year. About 49 % of participants agreed or strongly agreed that I am a good learner in the classroom and on my own. About 66 % of participants agreed or strongly agreed that people who keep learning are leaders, because they know what's happening. About 70 % of participants agreed or strongly agreed that I like to see if I can solve hard problems.

As shown in Table 16, more than 70 % of the participants either agreed or strongly agreed with nine of the statements; more than 50% of the participants either agreed or strongly agreed with thirteen of the statements; more than 50% of the participants either disagreed or strongly disagreed with six of the statements. Less than 50% of the participants either agreed or strongly agreed with six of the statements. The mean score on the Self-Directed Learning Readiness Scale was 123.69 with a standard deviation of 16.59. The range was 106, with a minimum of 61 and a maximum of 167. Korean and American students' mean and standard deviation for SDLRS were M=3.64; SD=0.49. Overall, participants tended to agree with the Self-Directed Learning Readiness Scale statements.

Findings Related to Objective Three

The third objective was to describe Korean and American students seeking teacher certification in Agriculture by Individualism and Collectivism (I/C) in four dimensions such as vertical individualism (VI), horizontal individualism (HI), vertical collectivism (VC), and horizontal collectivism (HC). Individualism and Collectivism (I/C) were measured by participants' responses to thirty-two statements. Eight items among thirty-two statements correspond to each for the four dimensions: VI, HI, VC, and HC.

Vertical Individualism

The vertical individualism (VI) was measured by participants' responses to eight statements. Table 17 contained the statements, frequencies and percentages for the VI. About eighty-one percent of participants somewhat agreed, agreed, or strongly agreed with the statements, "It is important to me that I do my job better than others". About 57% of participants somewhat agreed, agreed, or strongly agreed with the statements, "It annoys me when other people perform better than I do". About 56% of participants somewhat agreed, agreed, or strongly agreed with the statements, "I enjoy working in situation involving competition".

About 58% of participants somewhat agreed, agreed, or strongly agreed with the statements, “Competition is the law of nature”. About 56% of participants somewhat agreed, agreed, or strongly agreed with the statements, “When another person does better than I do, I get tense and aroused”. About 51% of participants somewhat agreed, agreed, or strongly agreed with the statements, “Without competition it is not possible to have a good society”. About 56% of participants somewhat disagreed, disagreed, or strongly disagreed with the statements, “Some people emphasize winning; I am not one of them”. Forty-two percent somewhat agreed, agreed, or strongly agreed with the statement, “Winning is everything”

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. Korean and American students’ mean and standard deviation for VI were M=4.43; SD=0.89. Overall, participants tended to have neutral vertical individualistic characteristic.

Table 17
Distribution of Participating Korean and American Students by VI (N=137)

		Strongly Disagree		Disagree		Somewhat Disagree		Neutral		Somewhat Agree		Agree		Strongly Agree	
Statement	*N*	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
Winning is everything.	137	9	6.6	13	9.5	30	21.9	28	20.4	30	21.9	17	12.4	10	7.3
It annoys me when other people perform better than I do.	137	3	2.2	12	8.8	14	10.2	30	21.9	44	32.1	24	17.5	10	7.3
It is important to me that I do my job better than others.	137	1	0.7	2	1.5	11	8.0	12	8.8	47	34.3	42	30.7	22	16.1
I enjoy working in situation involving competition.	137	7	5.1	12	8.8	14	10.2	28	20.4	39	28.5	27	19.7	10	7.3
Competition is the law of nature.	137	2	1.5	10	7.3	13	9.5	33	24.1	36	26.3	31	22.6	12	8.8
When another person does better than I do, I get tense and aroused.	137	3	2.2	14	10.2	19	13.9	25	18.2	41	29.9	26	19.0	9	6.6
Without competition it is not possible to have a good society.	137	2	1.5	9	6.6	15	10.9	41	29.9	39	28.5	22	16.1	9	6.6
Some people emphasize winning; I am not one of them.*	137	16	11.7	26	19.0	35	25.5	30	21.9	22	16.1	4	2.9	4	2.9

Note: Overall *M*=4.43; *SD*=0.89; scale: 1=Strongly Disagree, 2=Disagree, 3=Somewhat Disagree, 4=Neutral, 5=Somewhat Agree, 6= Agree, 7=Strongly Agree. Items having with a "*"were reverse scored.

Horizontal Individualism

The horizontal individualism (HI) was measured by participants' responses to eight statements. Table 18 contained the statements, frequencies and percentages for the HI. About eighty-eight percent of participants somewhat agreed, agreed, or strongly agreed with the statements, "My personal identity is very important to me". About eighty-one percent of participants somewhat agreed, agreed, or strongly agreed with the statements, "My personal identity independent from others is very important to me". About 60% of participants somewhat agreed, agreed, or strongly agreed with the statements, "I often do 'my own thing'". About 80% of participants somewhat agreed, agreed, or strongly agreed with the statements, "Being a unique individual is important to me". About 69% of participants somewhat agreed, agreed, or strongly agreed with the statements, "I rather depend on myself than on others". About 74% of participants somewhat agreed, agreed, or strongly agreed with the statements, "I am a unique person, separate from others". About 68% of participants somewhat agreed, agreed, or strongly agreed with the statements, "I enjoy being unique and different from others". About fifty-two percent somewhat agreed, agreed, or strongly agreed with the statement, "I rely on myself most of the time; I rarely rely on others".

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. Korean and American students' mean and standard deviation for HI were M=5.19; SD=0.91. Overall, participants tended to somewhat agree with the horizontal individualism statements.

Table 18

Distribution of Participating Korean and American Students by HI (N=137)

		Strongly Disagree		Disagree		Somewhat Disagree		Neutral		Somewhat Agree		Agree		Strongly Agree	
Statement	*N*	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
I often do "my own thing".	137	0	0.0	11	8.0	17	12.4	27	19.7	40	29.2	29	21.2	13	9.5
Being a unique individual is important to me.	137	1	0.7	4	2.9	7	5.1	16	11.7	35	25.5	38	27.7	36	26.3
I rather depend on myself than on others.	137	1	0.7	4	2.9	11	8.0	27	19.7	27	19.7	44	32.1	23	16.8
I rely on myself most of the time; I rarely rely on others.	137	3	2.2	16	11.7	21	15.3	26	19.0	23	16.8	34	24.8	14	10.2
My personal identity independent from others is very important to me.	137	2	1.5	1	0.7	7	5.1	16	11.7	37	27.0	43	31.4	31	22.6
My personal identity is very important to me.	137	1	0.7	2	1.5	0	0.0	13	9.5	26	19.0	52	38.0	43	31.4
I am a unique person, separate from others.	137	1	0.7	3	2.2	13	9.5	18	13.1	35	25.5	38	27.7	29	21.2
I enjoy being unique and different from others.	137	0	0.0	6	4.4	7	5.1	31	22.6	32	23.4	43	31.4	18	13.1

Note: Overall *M*=5.19; *SD*=0.91; scale: 1=Strongly Disagree, 2=Disagree, 3=Somewhat Disagree, 4=Neutral, 5=Somewhat Agree, 6= Agree, 7=Strongly Agree

Vertical Collectivism

The vertical collectivism (VC) was measured by participants' responses to eight statements. Table 19 contained the statements, frequencies, and percentages for the VC. About eighty-five percent of participants somewhat agreed, agreed, or strongly agreed with the statements, "It is my duty to take care of my family, even when I have to sacrifice what I want". Forty-eight percent of participants somewhat agreed, agreed, or strongly agreed with the statement, "Children should be taught to place duty before pleasure". About 61% of participants somewhat agreed, agreed, or strongly agreed with the statements, "I usually sacrifice my self-interest for the benefit of my group". About 79% of participants somewhat agreed, agreed, or strongly agreed with the statements, "It is important to me that I respect decisions made by my groups". About 80% of participants somewhat agreed, agreed, or strongly agreed with the statements, "Family members should stick together, no matter what sacrifices are required". About 80% of participants somewhat agreed, agreed, or strongly agreed with the statements, "Parents and children must stay together, as much as possible". About 84% of participants somewhat agreed, agreed, or strongly agreed with the statements, "I respect the majority's wishes in groups of which I am a member". About 80% of participants somewhat agreed, agreed, or strongly agreed with the statements, "It is important to consult close friends and get their ideas before making a decision".

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. Korean and American students' mean and standard deviation for VC were M=5.27; SD=0.67. Overall, participants tended to somewhat agree with vertical collectivism statements.

Table 19
Distribution of Participating Korean and American Students by VC (N=137)

		Strongly Disagree		Disagree		Somewhat Disagree		Neutral		Somewhat Agree		Agree		Strongly Agree	
Statement	*N*	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
I usually sacrifice my self-interest for the benefit of my group.	137	1	0.7	2	1.5	12	8.8	39	28.5	46	33.6	26	19.0	11	8.0
Children should be taught to place duty before pleasure.	137	15	10.9	9	6.6	21	15.3	26	19.0	29	21.2	27	19.7	10	7.3
It is important to me that I respect decisions made by my groups.	137	2	1.5	0	0.0	6	4.4	21	15.3	41	29.9	45	32.8	22	16.1
Family members should stick together, no matter what sacrifices are required.	137	0	0.0	4	2.9	3	2.2	20	14.6	29	21.2	36	26.3	45	32.8
Parents and children must stay together, as much as possible.	137	0	0.0	2	1.5	7	5.1	18	13.1	30	21.9	40	29.2	40	29.2
It is my duty to take care of my family, even when I have to sacrifice what I want.	137	0	0.0	2	1.5	3	2.2	16	11.7	31	22.6	44	32.1	41	29.9
I respect the majority's wishes in groups of which I am a member.	137	1	0.7	1	0.7	3	2.2	17	12.4	48	35.0	50	36.5	17	12.4
It is important to consult close friends and get their ideas before making a decision.	137	2	1.5	1	0.7	2	1.5	22	16.1	38	27.7	49	35.8	23	16.8

Note: Overall *M*=5.27; *SD*=0.67; scale: 1=Strongly Disagree, 2=Disagree, 3=Somewhat Disagree, 4=Neutral, 5=Somewhat Agree, 6= Agree, 7=Strongly Agree

Horizontal Collectivism

The horizontal collectivism (HC) was measured by participants' responses to eight statements. Table 20 contained the statements, frequencies, and percentages for the HC. About ninety-one percent of participants somewhat agreed, agreed, or strongly agreed with the statements, "It is important for me to maintain harmony within my group". About 74% of participants somewhat agreed, agreed, or strongly agreed with the statements, "My happiness depends very much on the happiness of those around me". About 73% of participants somewhat agreed, agreed, or strongly agreed with the statements, "I like sharing little things with my neighbors". About 74% of participants somewhat agreed, agreed, or strongly agreed with the statements, "The well-being of my co-workers is important to me". About 77% of participants somewhat agreed, agreed, or strongly agreed with the statements, "If a relative were in financial difficulty, I would help within my means". About 74% of participants somewhat agreed, agreed, or strongly agreed with the statements, "If a co-worker gets a prize, I would feel proud". About 79% of participants somewhat agreed, agreed, or strongly agreed with the statements, "To me, pleasure is spending time with others". The lowest percentage (69.3%) was the statement, "I feel good when I cooperate with others".

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. Korean and American students' mean and standard deviation for HC were M=5.35; SD=0.76. Overall, participants tended to somewhat agree with the horizontal collectivism statements.

Table 20
Distribution of Participating Korean and American Students by HC (N=137)

		Strongly Disagree		Disagree		Somewhat Disagree		Neutral		Somewhat Agree		Agree		Strongly Agree	
Statement	*N*	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%	*f*	%
My happiness depends very much on the happiness of those around me.	137	3	2.2	7	5.1	7	5.1	19	13.9	43	31.4	40	29.2	18	13.1
It is important for me to maintain harmony within my group.	137	1	0.7	2	1.5	3	2.2	7	5.1	37	27.0	58	42.3	29	21.2
I like sharing little things with my neighbors.	137	2	1.5	5	3.6	8	5.8	22	16.1	32	23.4	48	35.0	20	14.6
The well-being of my co-workers is important to me.	137	2	1.5	1	0.7	4	2.9	29	21.2	42	30.7	44	32.1	15	10.9
If a relative were in financial difficulty, I would help within my means.	137	2	1.5	0	0.0	4	2.9	25	18.2	25	18.2	51	37.2	30	21.9
If a co-worker gets a prize, I would feel proud.	137	1	0.7	0	0.0	4	2.9	31	22.6	47	34.3	41	29.9	13	9.5
To me, pleasure is spending time with others.	137	1	0.7	3	2.2	6	4.4	19	13.9	36	26.3	38	27.7	34	24.8
I feel good when I cooperate with others.	137	1	.7	2	1.5	4	2.9	11	8.0	41	29.9	54	39.4	0	0.0

Note: Overall *M*=5.35; *SD*=0.76; scale: 1=Strongly Disagree, 2=Disagree, 3=Somewhat Disagree, 4=Neutral, 5=Somewhat Agree, 6= Agree, 7=Strongly Agree

Findings Related to Objective Four

The fourth objective was to examine differences by the personal characteristics of the population and their scores regarding Self-Directed Learning Readiness Scale and Individualism and Collectivism (I/C) in four dimensions such as vertical individualism (VI), horizontal individualism (HI), vertical collectivism (VC), and horizontal collectivism (HC).

Self-Directed Learning Readiness Scale by Gender

As shown in Table 21, the mean Self-Directed Learning Readiness Scale (SDLRS) score was not statistically significantly different by gender, t (135)= -0.64, p>0.05. A negligible effect size (d=-.11) was found.

Table 21
Distribution of Participating Korean and American Students' SDLRS Score by Gender (N=137)

Gender	*n*	*M*	*SD*	*t*	*p*
Male	50	124.9	16.42	-0.64	.52
Female	87	123.0	16.74		
Note: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree.					

Individualism and Collectivism by Gender

Table 22 showed the mean vertical individualism (VI) score was not statistically significantly different by gender, t (135)= 0.03, p>0.05. A negligible size (d=.01) was found. The mean horizontal individualism (HI) score was not statistically significantly different by gender, t (135)= 1.71, p>0.05. A small effect size (d=.29) was found. The table also showed no statistically significance in vertical collectivism (VC) score between

male and female, t (135)= 0.91, p>0.05. A negligible size (d=.15) was found. There was no statistically significant difference in horizontal collectivism (HC), t (135)= 0.48, p>0.05. A negligible size (d=.08) was found.

Table 22
Distribution of Participating Korean and American Students' I/C Score by Gender (N=137)

Gender	*n*	*M*	*SD*	*t*	*p*
Vertical Individualism					
Male	50	35.38	7.50	0.03	0.98
Female	87	35.41	6.99		
Horizontal Individualism					
Male	50	40.20	7.53	1.71	0.09
Female	87	42.39	7.02		
Vertical Collectivism					
Male	50	41.60	5.43	0.91	0.36
Female	87	42.47	5.34		
Horizontal Collectivism					
Male	50	42.48	5.14	0.48	0.63
Female	87	43.00	6.57		

Note: 1=Strongly Disagree, 2=Disagree, 3=Somewhat Disagree, 4=Neutral, 5=Somewhat Agree, 6= Agree, 7=Strongly Agree.

Self-Directed Learning Readiness Scale by Age

As shown in Table 23, there was no statistically significant difference in Self-Directed Learning Readiness Scale score by age, F (3, 133)=0.97, p>0.05, f=.14. A small effect size was found. However, F-test in the given fixed effect would have been statistically significant if sample size had been increased to n=391.

Table 23
Distribution of Participating Korean and American Students' SDLRS Score by Age (N=137)

Age	*n*	*M*	*SD*	*F*	*p*
18-19	25	120.12	17.91	0.97	0.41
20-21	42	123.48	14.06		
22-23	42	126.90	13.35		
>24	28	122.39	22.37		
Note: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree					

Individualism and Collectivism by Age

Table 24 showed that there was no statistically significant difference in vertical individualism (VI) score by age, F (3, 133)= 0.75, p>0.05, f=.14. A small effect size was found. However, this F-test in the given fixed effect would have been statistically significant if sample size had been increased to n=391.

There was a statistically significance difference in horizontal individualism (HI) score by age, F (3, 133)= 6.01, p>0.05, f=.37. A medium effect size was found. In addition, this F-test in the given fixed effect would have still been statistically significant even if sample size had been as small as n=65.

A statistically significant difference was presented in vertical collectivism (VC), F (3, 133)= 3.65, p>0.05, f=.29. A medium effect size was found. In addition, this F-test in the given fixed effect would have still been statistically significant even if sample size had been as small as n=98.

There was a statistically significance difference in horizontal collectivism (HC) score by age, F (3, 133)= 2.94, p>0.05, f=.25. A medium effect size was found. In addition, this F-test in the given fixed effect would have still been statistically significant even if sample size had been as small as n=130.

Table 24
Distribution of Participating Korean and American Students' I/C Score by Age (N=137)

Age	*n*	*M*	*SD*	*F*	*p*
Vertical Individualism					
18-19	25	35.04	8.76	0.75	0.52
20-21	42	36.24	7.08		
22-23	42	34.19	5.63		
>24	28	36.29	7.79		
Horizontal Individualism					
18-19	25	36.80	7.60	6.01	0.00
20-21	42	43.62	6.46		
22-23	42	43.02	6.24		
>24	28	40.68	7.74		
Vertical Collectivism					
18-19	25	42.32	5.70	3.65	0.01
20-21	42	43.74	3.88		
22-23	42	42.21	4.97		
>24	28	39.54	6.70		
Horizontal Collectivism					
18-19	25	42.28	5.74	2.94	0.04
20-21	42	44.48	4.78		
22-23	42	43.17	5.83		
>24	28	40.25	7.66		

Note: 1=Strongly Disagree, 2=Disagree, 3=Somewhat Disagree, 4=Neutral, 5=Somewhat Agree, 6= Agree, 7=Strongly Agree.

Self-Directed Learning Readiness by Grade Point Average

As shown in Table 25, there was no statistically significant difference between mean SDLRS scores and a level of GPA, F (5, 131)= 1.98, p>0.05, f=.27. A medium effect size was found. However, this F-test in the given fixed effect would have been statistically significant if sample size had been increased to n=158.

Table 25
Distribution of Participating Korean and American Students' SDLRS Score by GPA (N=137)

GPA	*n*	*M*	*SD*	*F*	*p*
2.0-2.29	4	114.75	8.80	1.98	0.09
2.3-2.69	18	121.39	16.56		
2.7-2.99	7	137.14	12.48		
3.0-3.29	51	122.88	16.88		
3.3-3.69	46	126.07	13.91		
3.7-4.00	11	116.00	24.56		
Note: 1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree					

Individualism and Collectivism by Grade Point Average

Table 26 showed a statistically significant difference was not found between mean vertical individualism (VI) scores and the level of GPA, F (5, 131)= 1.79, p>0.05, f=.25. A medium effect size was found. In addition, this F-test in the given fixed effect would have been statistically significant if sample size had been increased to n=184.

A statistically significant difference was found between mean horizontal individualism (HI) scores and the level of GPA, F (5, 131)= 2.55, p>0.05, f=.31. A medium effect size was found. However, this F-test in the given fixed effect would have still been statistically significant even if sample size had been as small as n=122.

There was no statistically significant difference between mean vertical collectivism (VC) and the level of GPA, F (5, 131)= 0.95, p>0.05, f=.20. A small effect size was found. However, this F-test in the given fixed effect would have been statistically significant if sample size had been increased to n=276.

There was a statistically significant difference in horizontal collectivism (HC) scores by the level of GPA, F (5, 131)=2.72, p>0.05, f=.31. A medium effect size was

found. In addition, this *F*-test in the given fixed effect would have still been statistically significant even if sample size had been as small as *n*=122.

Table 26
Distribution of Participating Korean and American Students' I/C Score by GPA (N=137)

GPA	*n*	*M*	*SD*	*F*	*p*
Vertical Individualism					
2.0-2.29	4	32.00	8.83	1.79	0.12
2.3-2.69	18	33.78	6.36		
2.7-2.99	7	31.14	5.52		
3.0-3.29	51	36.18	6.32		
3.3-3.69	46	35.13	7.24		
3.7-4.00	11	39.55	10.26		
Horizontal Individualism					
2.0-2.29	4	45.50	6.25	2.55	0.03
2.3-2.69	18	44.61	7.38		
2.7-2.99	7	46.57	5.86		
3.0-3.29	51	39.57	7.40		
3.3-3.69	46	41.22	7.08		
3.7-4.00	11	43.00	5.44		
Vertical Collectivism					
2.0-2.29	4	41.75	3.78	0.95	0.45
2.3-2.69	18	43.56	5.44		
2.7-2.99	7	44.71	5.35		
3.0-3.29	51	42.08	5.22		
3.3-3.69	46	41.85	5.03		
3.7-4.00	11	40.00	7.50		
Horizontal Collectivism					
2.0-2.29	4	43.25	2.99	2.72	0.02
2.3-2.69	18	45.28	4.10		
2.7-2.99	7	49.14	4.99		
3.0-3.29	51	42.18	5.83		
3.3-3.69	46	41.72	5.33		
3.7-4.00	11	42.09	10.52		

Note: 1=Strongly Disagree, 2=Disagree, 3=Somewhat Disagree, 4=Neutral, 5=Somewhat Agree, 6= Agree, 7=Strongly Agree.

Self-Directed Learning Readiness by Student Classification

Table 27 shows a statistically significant difference was not found between mean SDLRS scores and the level of classification, F (4, 132)=1.07, p>0.05, f=.18. A small effect size was found. In addition, this F-test in the given fixed effect would have been statistically significant if sample size had been increased to n=316.

Table 27
Distribution of Participating Korean and American Students' SDLRS Score by Student Classification (N=137)

Student Classification	*n*	*M*	*SD*	*F*	*p*
Freshman	17	119.82	19.42	1.07	0.37
Sophomore	26	121.69	15.91		
Junior	25	122.32	13.84		
Senior	54	124.57	15.40		
Graduate/Other	15	130.67	21.91		

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

Individualism and Collectivism by Student Classification

Table 28 showed no statistically significant difference was found between mean vertical individualism (VI) scores and the level of student classification, F (4, 132)=0.62, p>0.05, f=.14. A small effect size was found. In addition, this F-test in the given fixed effect would have been statistically significant if sample size had been increased to n=474.

The mean horizontal individualism (HI) scores and the level of student classification was a statistically significant different, F (4, 132)=4.12, p>0.05, f=.35. A medium effect size was found. In addition, this F-test in the given fixed effect would have still been statistically significant even if sample size had been as small as n=86.

There was no statistically significant difference in vertical collectivism (VC) scores by student classification, F (4, 132)=0.26, p>0.05, f=.10. A small effect size was found. In addition, this F-test in the given fixed effect would have been statistically significant if sample size had been increased to n=949.

No statistically significant difference was present in horizontal collectivism (HC) scores, F (4, 132)=0.33, p>0.05, f=.10. A small effect size was found. In addition, this F-test in the given fixed effect would have been statistically significant if sample size had been increased to n=949.

Table 28
Distribution of Participating Korean and American Students' I/C Score by Student Classification (N=137)

Student Classification	*n*	*M*	*SD*	*F*	*p*
Vertical Individualism					
Freshman	17	37.71	8.45	0.62	0.65
Sophomore	26	34.73	7.40		
Junior	25	35.64	7.86		
Senior	54	34.76	6.89		
Graduate/Other	15	35.87	4.76		
Horizontal Individualism					
Freshman	17	35.71	7.49	4.12	0.00
Sophomore	26	41.50	7.83		
Junior	25	41.32	5.85		
Senior	54	43.54	7.15		
Graduate/Other	15	41.87	5.45		
Vertical Collectivism					
Freshman	17	42.47	5.79	0.26	0.91
Sophomore	26	42.00	4.59		
Junior	25	42.48	4.99		
Senior	54	41.70	6.12		
Graduate/Other	15	43.13	4.16		
Horizontal Collectivism					
Freshman	17	41.65	5.93	0.33	0.86
Sophomore	26	43.27	5.06		
Junior	25	42.48	6.44		
Senior	54	42.80	7.08		
Graduate/Other	15	43.93	2.87		

Note: 1=Strongly Disagree, 2=Disagree, 3=Somewhat Disagree, 4=Neutral, 5=Somewhat Agree, 6= Agree, 7=Strongly Agree.

Self-Directed Learning Readiness by Nationality

Table 29 showed there was no statistically significant difference between the mean SDLRS score for Korean and the mean SDLRS score for American by nationality. A negligible effect size (d=-.18) was found.

Table 29
Distribution of Participating Korean and American Students' SDLRS Score by Nationality (N=137)

Nationality	*n*	*M*	*SD*	*t*	*p*
Korean	84	122.50	16.55	-1.06	0.29
American	53	125.58	16.63		

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

Individualism and Collectivism by Nationality

As shown in Table 30 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. A 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 30
Distribution of Participating Korean and American Students' I/C Score by Nationality (N=137)

Nationality	*n*	*M*	*SD*	*t*	*p*
Vertical Individualism					
Korean	84	36.62	6.68	2.56	0.01
American	53	33.47	7.50		
Horizontal Individualism					
Korean	84	38.90	7.02	-6.52	0.00
American	53	45.85	5.39		
Vertical Collectivism					
Korean	84	41.52	5.17	-1.74	0.08
American	53	43.15	5.57		
Horizontal Collectivism					
Korean	84	41.37	5.51	-3.65	0.00
American	53	45.09	6.28		

Note: 1=Strongly Disagree, 2=Disagree, 3=Somewhat Disagree, 4=Neutral, 5=Somewhat Agree, 6= Agree, 7=Strongly Agree.

Findings Related to Objective Five

The fifth objective was to examine the relationships self-directed learning readiness and individualism and collectivism in four dimensions, using both the bivariate correlation and hierarchical multiple regression.

Bivariate Correlation among Study Variables

Before a hierarchical multiple regression analysis for the SDLRS was conducted, a bivariate correlation analysis among the selected variables: SDLRS, gender, student classification, age, GPA, nationality, vertical individualism (VI), horizontal individualism (HI), vertical collectivism (VC), horizontal collectivism (HC) was performed in order to investigate the relationship between the SDLRS and the selected variables and determine

whether the possibility of multicollinearity exists. The matrix of the bivariate correlation (α <.05) was presented in Table 31.

None of the relationships were found to be statistically significant by SDLRS except for student classification, HI, VC, and HC. Student classification in the present sample was found to be significantly and positively correlated with the SDLRS at the .05 level (r=. 178, p=.04). HI was found to be significantly and positively correlated with the SDLRS at the .01 level (r=. 440, p<.00). VC was found to be significantly and positively correlated with the SDLRS at the .01 level (r=.427, p<.00). HC was found to be significantly and positively correlated with the SDLRS at the .01 level (r=.377, p<.00).

None of the relationships between independent variables were found to be highly correlated except for the relationship between student classification and age. The correlation between student classification and age was highly significant (r=.81) and the coefficient was not small (r^2=.66). The possibility of multicollinearity tends to exist in the data. Due to the concern about the multicollinearity for both independent variables that might affect a regression model, the researcher further tested the multicollinearity for each of the independent variables using variance inflation factor (VIF) and tolerance statistics.

Table 31
Bivariate Correlations of Study Variables (N=137)

	1	2	3	4	5	6	7	8	9
1. SDLRS									
2. Gender	.06								
3. Student classification	.18*	.16							
4. Age	.10	.30**	.81**						
5. GPA	.02	-.10	.10	.13					
6. Nationality	.09	-.07	.00	-.17*	-.24**				
7. VI	.07	-.00	-.04	-.02	.15	-.22*			
8. HI	.44**	-.15	.24**	.10	-.11	.47**	.08		
9. VC	.43**	-.08	.02	-.14	-.13	.15	.08	.36**	
10. HC	.38**	-.04	.07	-.14	-.15	.30**	-.17	.29**	.60**

Note: ** $p < .01$, * $p < .05$

Multicollinearity

VIF and tolerance statistics were examined to measure whether the possibility of the multicollinearity exists in the data. Allison (1999) suggested that when any VIF is greater than 2.5 and the tolerance is below 0.4 there is a potential problem. The VIF for this study ranged between 1.188 to 3.733 and the tolerance ranged between .27 to .83. All of the VIF values and tolerance statistics with the exception of two variables were within an acceptable range indicating that multicollinearity does not cause serious problem for a regression model. Two independent variables age (VIF, 3.73; tolerance, .27) and student classification (VIF, 3.31; tolerance, .30) did not satisfy the above condition. Thus, the researcher dropped the age variable from the hierarchical multiple regression models and reexamined the VIF and tolerance statistics. After dropping age variable from the models, the VIF ranged between 1.10 to 1.78 and the tolerance ranged between .56 to .91. This concluded that there is no collinearity in the models.

Hierarchical Multiple Regression

A hierarchical multiple regression analysis was conducted to examine the level of the relationship between the SDLRS and nationality and the four cultural values of individualism/ collectivism from the gender, student classification, and GPA. In these analyses gender, student classification, and GPA were entered into a multiple regression blockwise in Step 1. This order of entry was selected because the researcher wished to extract the amount of variance associated with the selected personal characteristic variables first and to control for these variables in the presence of the SDLRS. In Step 2, nationality, VI, HI, VC, and HC were entered over the selected personal characteristic variables to examine the unique contribution of nationality, VI, HI, VC, and HC over the selected personal characteristic variables on the SDLRS. Table 32 showed the results of these analyses.

The findings in Step 1 showed that scores for the SDLRS (R^2 = .03, adjusted R^2 = .01, p = .30) was 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.

The findings for hierarchical multiple regression in Step 2 showed that scores for the SDLRS (R^2 = .34, adjusted R^2 = .30, ΔR^2 = .31, p = .00) was statistically significantly related by study variables. When nationality, VI, HI, VC, HC were entered as the second step, the model accounted for 34 % of the variance in the SDLRS (R^2 change = .31). 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). Table 32 shows 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 32
Hierarchical Multiple Regression for Study Variables on the SDLRS (N=137)

Variables	B	SEB	β	*t*	*p*
Step 1					
Constant	119.22	11.51		10.36**	.00
Gender	1.00	3.00	0.03	0.34	.74
Student classification	2.13	1.18	0.16	1.80	.07
GPA	-0.83	3.48	-0.02	-0.24	.81
Step2					
Constant	21.62	16.89		1.28	.20
Gender	4.63	2.59	0.14	1.79	.08
Student classification	0.25	1.06	0.02	0.24	.81
GPA	3.64	3.18	0.09	1.15	.25
Nationality	-5.08	3.04	-0.15	-1.67	.10
VI	0.02	0.18	0.01	0.10	.92
HI	0.92	0.21	0.40	4.31**	.00
VC	0.63	0.30	0.20	2.12**	.04
HC	0.57	0.26	0.21	2.19**	.03

Note: R^2 = .03 for Step 1: ΔR^2 = .31 for Step 2 **p < .01, * p< .05.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The objectives of the study, summary of methodology, summary of key findings/conclusions for each objectives, additional implications and recommendations, and recommendations for further studies presented in this chapter.

Objectives of the Study

This study was conducted to examine the relationship between self-directed learning readiness and the cultural values of individualism/collectivism in two sample groups drawn from different cultures. Five specific research objectives are proposed to accomplish this purpose:

1. Describe population by selected personal characteristics such as gender, age, ethnicity, grade point average (GPA), student classification, and nationality.
2. Describe population by Self-Directed Learning Readiness Scale (SDLRS).
3. Describe population by Individualism/Collectivism (I/C) within and between cultures.
4. Describe differences by the personal characteristics of the population and their scores regarding Self-Directed Learning Readiness Scale and I/C.
5. Describe the relationships self-directed learning readiness and I/C.

Summary of Methodology

Type of Research

The research design used for this study was descriptive and correlational in nature. The study was designed 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 conceptual schema for this study was grounded on Self-Directed Leaning and cultural values of individualism/collectivism. The review of literature provides the basis for this understanding. This study has one dependent variable and six independent variables. The dependent variable was the Self-Directed Learning Readiness Scale (SDLRS). The independent variables were individualism/collectivism (I/C), age, ethnicity, gender, GPR, student classification, and nation.

Population and Participate Selection

The target population for this study consisted of two sample groups: Korean and American college and graduate students who seek teacher certification in the field of agriculture in the following two institutions: Sunchon National University (SNU) in Sunchon, South Korea and Texas A&M University (TAMU) in College Station, USA. The countries and institutions were selected because the researcher has experience in these countries with these institutions and there are the needs for improving their teacher preparation programs to provide better high-quality teacher preparation education with both students who have different cultures.

The Office of University Affairs and Department of Agricultural Education at Sunchon National University and Department of Agricultural Education at Texas A&M

University were contacted for contact information for the target population (Gall, Gall, and Borg, 2003). The target population included 145 Korean and 185 American students who were seeking teacher certification in agriculture. The total accessible population was approximately 285.

Instrumentation

The research instrument was designed based on the review of literature. The questionnaire was divided into four sections. The first section was adopted from Self-Directed Learning Readiness Scale (SDLRS-ABE) developed by Guglielmino (1989) to measure the degree to which people perceive themselves as having the skills and attitudes usually associated with the self-directed learning. The SDLRS-ABE consists of 34 items and the participant were asked to indicate their agreement with these 34 statements by making their response on a five point Likert-type scale. The points on the scale were: 1 = I never feel like this (N); 2 = I feel like this less than half the time (LH); 3 = I feel like this half the time (H); 4 = I usually feel like this (MH); 5 = I feel like this all the time (A). The level of measurement for this variable was interval. Several items (2, 9, 11, 16, 17, and 27) were reverse-worded to minimize response set influence. However, after data collection the researcher recoded the data for the reverse-worded items, so that higher scores would have a consistent meaning.

The second section with 32 statements, adopted from the work of Singelis et. al. (1995), was designed to measure individualism/collectivism (I/C)at the individual level through attitude items. Eight items among 32 statements correspond to each for the four dimensions: vertical individualism (VI), horizontal individualism (HI), vertical

collectivism (VC), and horizontal collectivism (HC). The participants were asked to indicate their agreement by making their response on a seven point Likert-type scale, which was a modified scale of a nine point Likert scale. The points on the scale were: 1 = Strongly Disagree (SD); 2 = Disagree (D); 3 = Somewhat Disagree (SWD); 4 = Neutral (N); 5 = Somewhat Agree (SWA); 6 = Agree (A); 7 = Strongly Agree (SA). The level of measurement for this variable was interval. One item (No. 20) was reverse-worded to minimize response set influence. However, after data collection the researcher recoded the data for the reverse-worded items, so that higher scores would have a consistent meaning.

The third section with 16 items was adopted from Triandis, Chen, and Chan, (1998) to measure I/C in four dimensions such as vertical individualism (VI), horizontal individualism (HI), vertical collectivism (VC), and horizontal collectivism (HC) at the individual level through scenarios. Triandis, Chen, and Chan (1998) classified the content of these scenarios as follows: the social domain (2 items), the political (2 items), the economic (3 items), the philosophical (4 items), and the aesthetic domain (3 items). The participants were asked to rank four options by selecting from 1 to 4 in terms of participant's preference. The level of measurement for this variable was ordinal.

The fourth section included general demographic information such as age, ethnicity, gender, GPR, nationality, and student classification. Age was measured as the number of years since birth. The level of measurement for this variable is ratio. Ethnicity was measured as White (non-Hispanic), Black/Africa American, Hispanic, Native American, Asian, and other. The level of measurement for this variable is nominal. Gender was measured as either male or female. The level of measurement for this

variable is nominal. Grade Point Ratio (GPR) was measured as the average for all courses completed since freshman. The level of measurement for this variable is ratio. Student classification was measured as freshman, sophomore, junior, senior, and graduate/other. The level of measurement for this variable is ordinal.

Reliability and Validity

The first section of the questionnaire, SDLRS-ABE, consisted of a 34-item scale with five point Likert-type responses. The instrument has been shown, through numerous studies, to be a valid and reliable predictor of adult readiness for self-direction in learning (Guglielmino, 1997; Delahaye and Smith, 1995). In the initial study, Guglielmino (1977) reported the reliability of the SDLRS as .87. Since her original study, most research of using SDLRS showed high reliability estimates of .72-.92 for the SDLRS (Guglielmino, 1997, Guglielmino and Knudson, 2000) and a sample of 3,151 individuals from a wide variety of settings throughout the United States and Canada supported the SDLRS by reporting a highest reliability of .94 (Guglielmino, 1997; Guglielmino, Long and McCune, 1989). In the present study, the coefficient alpha of the SDLRS was .9127.

The second section of the questionnaire consisted of eight items among 32 statements corresponded to each for the four dimensions of individualism/collectivism. A study by Singelis et. al. (1995) estimated reliability for each dimension: vertical individualism (.74), horizontal individualism (.67), vertical collectivism (.68), and horizontal collectivism (.74). A subsequent study by Triandis (1995) estimated the combined individualism scales at .66 and the combined collectivism scales at .78.

The reliability coefficients for the scores on the two dimensions of the Individualism and Collectivism instrument in attitude section were moderate (α_{VI} = .7694 α_{HC} = .7702). The horizontal individualism (HI) scale itself generated a reliability coefficient of .8232 while the vertical collectivism (VC) yielded scores with lower reliability (α_{VC} = .6303). The scores on the full individualism (VI+HI) and collectivism (VC+HC) had reliability coefficient of .7668 and .8125 respectively, and the scores on the full vertical (VI+VC) and horizontal (HI+HC) characteristics had reliability coefficient of .7004 and .8189, respectively.

Data Collection

Data were collected using a web-formatted questionnaire (see Appendix D). The questionnaire was delivered using the Internet. 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 to each individual prospective participant. Participants were assured that their responses would be kept confidential and only group data would be reported. Each participant was given the link for the questionnaire and a code-number with e-mail. The participants were informed that the surveys had been coded to assist the researcher in following up with non-respondents. Once the student

completed the survey and selected the “submit form” button, the questionnaire was instantaneously converted from Front Page onto a secure departmental network.

On March 22, 2004 a first email (Appendix C) was sent to participants. The initial cut-off for respondents was 10 days following receipt of the original email. Forty five (Korean: 22; American: 23) respondents replied during the first round of response. On April 1, 2004, a second email (Appendix C) was sent to nonrespondents. After this second deadline an additional nine participants (Korean: 6; American: 3) responded. On April 12, 2004, a last round of follow-ups was sent to nonrespondents. Data collection ceased on April 20, 2004. Eighty three (Korean: 56; American: 27) respondents replied during the last round of response. A response rate of 41.5% (n = 137) was obtained for the study. Of the instruments returned, all were complete, resulting in a usable response rate of 41.5% (n = 137).

Statistical Procedures

All data was analyzed using the Statistical Package for Social Sciences for Windows (SPSS, 11.0). Descriptive statistics for all of the study variables were performed. Alpha for all statistical procedures was be set a priori at .05. The statistics included the means, standard deviations, effect size, “what if” analyses, independent sample *t*-test, one-way ANOVA, bivariate correlations, and multiple regression. Thompson (2002) recommended authors to “report and interpret effect sizes in the context of effect sizes from prior related studies and not by invoking rigid benchmarks” (p. 30). However, in this study, effect sizes were calculated, interpreted, and reported according to Cohen’s (1988) conversion for *t*-test: negligible size, $d<0.20$; small effect

size, 0.50>d ≥0.20; medium effect size, 0.80>d ≥0.50; and large effect size, d ≥0.80. Interpretations for ANOVA were based on the Cohen Conversion: negligible size, f <0.10; small effect size, 0.25> f; medium effect size, 0.40> f ≥0.25; and large effect size, f ≥0.40.

A preliminary analysis was completed to explore Reliability estimates (Cronbach's alpha) for each variable and validity of the two instruments used in the study. In addition, comparisons of Early versus late respondents were conducted to evaluate whether nonresponse would be a threat to external validity of the survey (Lindner, Murphy, and Briers, 2001).

The first objective was to describe Korean and American students who seek to teacher certification in Agriculture by selected personal characteristics. The variables the students' personal characteristics (age, ethnicity, gender, GPR, student classification, nationality) were analyzed and described by calculating frequencies and percentages by level of response.

The second objective was to describe Korean and American students who seek to teacher certification in Agriculture by Self-Directed Learning Readiness Scale (SDLRS) scores. The variable SDLRS was analyzed and described by calculating a summative cumulative SDLRS mean, and frequencies and percentages by level of response. Interpretation for students' self-directed learning readiness was based on scales: 1~1.5= I never feel like this (Strongly Disagree); 1.51~2.5=Disagree (I feel like this less than half the time); 2.51~3.5=Neutral (I feel like this half the time); 3.51~4.5=Agree (I usually feel like this); and 4.51~5.0=Strongly Agree (I feel like this all the time).

The third objective was to describe Korean and American students who seek to teacher certification in Agriculture by individualism and collectivism (I/C) in four dimensions such as vertical individualism (VI), horizontal individualism (HI), vertical collectivism (VC), and horizontal collectivism (HC) scores. The variables each dimensions for I/C were analyzed and described by calculating a summative cumulative each mean, and frequencies and percentages by level of response. Interpretations for students' cultural values were based on scales: 1~1.5= Strongly Disagree; 1.51~2.5=Disagree; 2.51~3.5=Somewhat Disagree; 3.51~4.5= Neutral; 4.51~5.5=Somewhat Agree; 5.51~6.5=Agree; and 6.51~7.0=Strongly Agree.

The fourth objective was to examine differences by the personal characteristics of the population and their scores regarding SDLRS and I/C. The variables SDLRS and I/C and age were analyzed and described by calculated mean, standard deviation and analysis of variance by level of response, and computing the degrees of freedom. The variable SDLRS and I/C and ethnicity were analyzed and described by calculated mean, standard deviation and analysis of variance by level of response, and computing the degrees of freedom. The variable SDLRS and I/C and gender were analyzed and described by calculated mean, standard deviation and *t*-test by level of response, and computing the degrees of freedom. The variable SDLRS and I/C and GPR were analyzed and described by calculated mean, standard deviation and analysis of variance by level of response, and computing the degrees of freedom. The variable SDLRS and I/C and student classification were analyzed and described by calculated mean, standard deviation and analysis of variance by level of response, and computing the degrees of freedom. The

variable SDLRS and I/C and nationality were analyzed and described by calculated mean, standard deviation and *t*-test by level of response, and computing the degrees of freedom.

The fifth objective was to examine the relationships self-directed learning readiness and individualism and collectivism in four dimensions, using both the bivariate correlation and hierarchical multiple regression. The variables students' SDLRS and I/C scores were measured by correlational analysis and finally indicated by measures of association and statistical significance.

Summary of Key Findings/Conclusions for Each Objective

Objective One

Key Findings

The first objective was to describe Korean and American students seeking teacher certification in Agriculture by selected personal characteristics. The variables included gender, age, ethnicity, grade point average (GPA), student classification, and nationality. Participants (*N*=137) from two universities – Sunchon National University in South Korea and Texas A&M University in the USA – were selected to participate in the study.

Of the 137 participants, fifty participants (36.5%) were male and eighty-seven participants (63.5%) were female. The study population (*N*=137) was not very different in age. Twenty-five participants (18.2%) were in 18-19 years old range; forty-two (30.7%) were in 20-21 years old range; forty-two (30.7%) were in 22-23 years old range; and twenty-eight (20.4%) were more than 24 years old. The youngest participants were 18 years old and the oldest participant was 33 years old. The average age of participants was approximately 22 years old. Of the 137 students, a majority (62.8%) of them were

Asian and another 35% were White. Few participants were Hispanic (1.5%) and Other (0.7%) while no participants were Black/African American and Native American.

Among the 137 participants, 4 (2.9%) of the respondents had a GPA ranging from 2.0 to 2.29. Eighteen (13.1%) of the respondents had a GPA that ranged from 2.3 to 2.69; seven (5.1%) had a GPA that ranged from 2.7 to 2.99; fifty-one (37.2%) had a GPA that ranged from 3.0 to 3.29; forty-six (33.6%) had a GPA that ranged from 3.3 to 3.69; and 11 (8.0%) had a GPA that ranged from 3.7 to 4.00.

As to student classification, fifty-four participants (39.4%) were senior; twenty-six participants (19.0%) were sophomore; twenty-five participants (18.2%) were junior; seventeen participants (12.4%) were freshman; and fifteen participants (10.9%) were graduate/other. As to nationality, eighty-four participants (61.3%) were Korean and fifty-three participants (38.7%) were American.

Conclusions

The target population for this study consisted of two sample groups: Korean and American college and graduate students seeking teacher certification in the field of agriculture in the following two institutions: Sunchon National University (SNU) in Sunchon, South Korea and Texas A&M University (TAMU) in College Station, USA. Of the 137 participants, female participants were more than male participants in this study. The majority of the participants were between 20 and 23 years old and the majority of student classification was senior (39.4%). The majority ethnic group was Asian (62.8%) and the following was White (35%), and eighty-four participants (61.3%) were Korean and fifty-three participants (38.7%) were American. There were few ethnic minority

students seeking teacher certification in Agriculture at Texas A&M University. More than half of participants had a GPA that ranged from 3.0 to 4.0.

Implications

The implications of this research are that even though most participants in this study were female compared to male, the result is not significant. The reason is because female participants are comprised of a much larger potion of the sample than did male participants. Based on the conclusion, it would seem that the majority of students seeking teacher certification in Agriculture were female at Sunchon National University and Texas A&M University. Bell and Fritz (1992) investigated factors preventing female students from enrolling in secondary agricultural education programs and suggested that the establishment of a supportive system will contribute to increase female students' enrollment in agricultural education programs. The findings indicated that their suggestion seems to being attained at least at Texas A&M University.

Recommendations

Additional research is need in these two areas: (1) factors responsible for decreasing male students enrollment in agricultural teacher certification program at Sunchon National University and Texas A&M University; (2) factors preventing ethnic minority students from enrolling in agricultural teacher education program at Texas A&M University.

Objective Two

Key Findings

The second objective was to describe Korean and American students seeking teacher certification in Agriculture by Self-Directed Learning Readiness Scale (SDLRS) scores. Self-directed learning readiness was measured by participants' responses to thirty-four statements.

Among 137 participants, 70 % of participants agreed or strongly agreed that I know what I want to learn. About 58 % of participants disagreed or strongly disagreed that when I see something that I don't understand, I stay away from it. About 75 % of participants agreed or strongly agreed that if there is something I want to learn, I can find a way to learn it. About 70 % of participants agreed or strongly agreed that I love to learn. About 83 % of participants agreed or strongly agreed that I believe that a big part of my education should be thinking about what kind of person I am and what kinds of things I want to do with my life. About 55 % of participants agreed or strongly agreed that I know where to go to get information when I need it. About 47 % of participants agreed or strongly agreed that I can learn things by myself better than most people my age. About 54 % of participants agreed or strongly agreed that if there is something I have decided to learn, I can find time for it, no matter how busy I am. About 60 % of participants disagreed or strongly disagreed that understanding what I read is a problem for me. About 52 % of participants agreed or strongly agreed that I know when I need to learn more about something. About 57 % of participants disagreed or strongly disagreed that I think books are boring. About 39 % of participants agreed or strongly agreed that I can think of many different ways to learn about something new. About 74 % of participants

agreed or strongly agreed that I try to think about how the things I am learning will fit in with the plans I have for myself. About 37 % of participants agreed or strongly agreed that I really enjoy looking for the answer to a hard question. About 54 % of participants agreed or strongly agreed that I have a lot of questions about things. About 64 % of participants disagreed or strongly disagreed that I'll be glad when I'm finished learning. About 67 % of participants disagreed or strongly disagreed that I'm not as interested in learning as some other people seem to be. About 58 % of participants agreed or strongly agreed that when I decide to find out something, I do it. About 50 % of participants agreed or strongly agreed that I like to try new things, even if I'm not sure how they will turn out. About 42 % of participants agreed or strongly agreed that I'm good at thinking of new ways to do things. About 77 % of participants agreed or strongly agreed that I like to think about the future. About 51 % of participants agreed or strongly agreed that a hard problem doesn't stop me. About 61 % of participants agreed or strongly agreed that I can make myself do what I think I should. About 48 % of participants agreed or strongly agreed that I am really good at solving problems. About 42 % of participants agreed or strongly agreed that I become a leader in learning groups. About 55 % of participants agreed or strongly agreed that I like talking about ideas. About 50 % of participants disagreed or strongly disagreed that I don't like learning things that are hard. Seventy percent of participants agreed or strongly agreed that I really want to learn new things. About eighty percent of participants agreed or strongly agreed that when I learn more, the world becomes more exciting. About 62 % of participants agreed or strongly agreed that it's really my job to learn-the school and the teachers can't do it for me. Fifty-four percent of participants agreed or strongly agreed that I learn many new things on my own

each year. About 49 % of participants agreed or strongly agreed that I am a good learner in the classroom and on my own. About 66 % of participants agreed or strongly agreed that people who keep learning are leaders, because they know what's happening. About 70 % of participants agreed or strongly agreed that I like to see if I can solve hard problems.

Of the 137 participants, more than 70 % of the participants either agreed or strongly agreed with nine of the statements; more than 50% of the participants either agreed or strongly agreed with thirteen of the statements; more than 50% of the participants either disagreed or strongly disagreed with six of the statements. Less than 50% of the participants either agreed or strongly agreed with six of the statements. The mean score on the Self-Directed Learning Readiness Scale was 123.69 with a standard deviation of 16.59. The range was 106, with a minimum of 61 and a maximum of 167. Korean and American students' mean and standard deviation for SDLRS were M=3.64; SD=0.49. Overall, participants tended to agree with the Self-Directed Learning Readiness Scale statements.

Conclusions

It can be conclude that although 137 participants in the study had similar levels of SDLRS, as did the world wide adult mean 129.0, the participants' SDLRS scores tended to be slightly positively skewed regarding the adult mean. 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 world wide adult mean.

Implications

Although the mean SDLRS for this particular population was average, the participants' scores tended to be skewed to below average and above average. An implication exists that a variety of teaching methods including both pedagogical methods and andragogical methods are warranted. Andragogical methods can be used for those exhibiting average or above average levels of self-directedness and pedagogical methods, for those exhibiting below average levels of SDLRS. 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 this latter group, 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 second implication of this study is the mean SDLRS scores and the data, using SDLRS-ABE instrument. The data used in the study will help other research studies conduct meta-analysis.

Recommendations

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 incumbent upon teacher educators that an allowance for different learning methods be incorporated in teacher education program.

Objective Three

Key Findings

The third objective was to describe Korean and American students seeking teacher certification in Agriculture by Individualism and Collectivism (I/C) in four dimensions such as vertical individualism (VI), horizontal individualism (HI), vertical collectivism (VC), and horizontal collectivism (HC). Individualism and Collectivism (I/C) were measured by participants' responses to thirty-two statements. Eight items among thirty-two statements correspond to each for the four dimensions: VI, HI, VC, and HC.

The vertical individualism (VI) was measured by participants' responses to eight statements. About eighty-one percent of participants somewhat agreed, agreed, or strongly agreed with the statements, "It is important to me that I do my job better than others". About 57% of participants somewhat agreed, agreed, or strongly agreed with the statements, "It annoys me when other people perform better than I do". About 56% of participants somewhat agreed, agreed, or strongly agreed with the statements, "I enjoy working in situation involving competition". About 58% of participants somewhat agreed, agreed, or strongly agreed with the statements, "Competition is the law of nature". About

56% of participants somewhat agreed, agreed, or strongly agreed with the statements, “When another person does better than I do, I get tense and aroused”. About 51% of participants somewhat agreed, agreed, or strongly agreed with the statements, “Without competition it is not possible to have a good society”. About 56% of participants somewhat disagreed, disagreed, or strongly disagreed with the statements, “Some people emphasize winning; I am not one of them”. Forty-two percent somewhat agreed, agreed, or strongly agreed with the statement, “Winning is everything”. 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. Korean and American students’ mean and standard deviation for VI were M=4.43; SD=0.89. Overall, participants tended to have neutral vertical individualistic characteristic.

The horizontal individualism (HI) was measured by participants’ responses to eight statements. About eighty-eight percent of participants somewhat agreed, agreed, or strongly agreed with the statements, “My personal identity is very important to me”. About eighty-one percent of participants somewhat agreed, agreed, or strongly agreed with the statements, “My personal identity independent from others is very important to me”. About 60% of participants somewhat agreed, agreed, or strongly agreed with the statements, “I often do ‘my own thing’”. About 80% of participants somewhat agreed, agreed, or strongly agreed with the statements, “Being a unique individual is important to me”. About 69% of participants somewhat agreed, agreed, or strongly agreed with the statements, “I rather depend on myself than on others”. About 74% of participants somewhat agreed, agreed, or strongly agreed with the statements, “I am a unique person, separate from others”. About 68% of participants somewhat agreed, agreed, or strongly

agreed with the statements, “I enjoy being unique and different from others”. About fifty-two percent somewhat agreed, agreed, or strongly agreed with the statement, “I rely on myself most of the time; I rarely rely on others”. 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. Korean and American students’ mean and standard deviation for HI were M=5.19; SD=0.91. Overall, participants tended to somewhat agree with the horizontal individualism statements.

The vertical collectivism (VC) was measured by participants’ responses to eight statements. About eighty-five percent of participants somewhat agreed, agreed, or strongly agreed with the statements, “It is my duty to take care of my family, even when I have to sacrifice what I want”. Forty-eight percent of participants somewhat agreed, agreed, or strongly agreed with the statement, “Children should be taught to place duty before pleasure”. About 61% of participants somewhat agreed, agreed, or strongly agreed with the statements, “I usually sacrifice my self-interest for the benefit of my group”. About 79% of participants somewhat agreed, agreed, or strongly agreed with the statements, “It is important to me that I respect decisions made by my groups”. About 80% of participants somewhat agreed, agreed, or strongly agreed with the statements, “Family members should stick together, no matter what sacrifices are required”. About 80% of participants somewhat agreed, agreed, or strongly agreed with the statements, “Parents and children must stay together, as much as possible”. About 84% of participants somewhat agreed, agreed, or strongly agreed with the statements, “I respect the majority’s wishes in groups of which I am a member”. About 80% of participants somewhat agreed, agreed, or strongly agreed with the statements, “It is important to

consult close friends and get their ideas before making a decision". 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. Korean and American students' mean and standard deviation for VC were *M*=5.27; *SD*=0.67. Overall, participants tended to somewhat agree with vertical collectivism statements.

The horizontal collectivism (HC) was measured by participants' responses to eight statements. About ninety-one percent of participants somewhat agreed, agreed, or strongly agreed with the statements, "It is important for me to maintain harmony within my group". About 74% of participants somewhat agreed, agreed, or strongly agreed with the statements, "My happiness depends very much on the happiness of those around me". About 73% of participants somewhat agreed, agreed, or strongly agreed with the statements, "I like sharing little things with my neighbors". About 74% of participants somewhat agreed, agreed, or strongly agreed with the statements, "The well-being of my co-workers is important to me". About 77% of participants somewhat agreed, agreed, or strongly agreed with the statements, "If a relative were in financial difficulty, I would help within my means". About 74% of participants somewhat agreed, agreed, or strongly agreed with the statements, "If a co-worker gets a prize, I would feel proud". About 79% of participants somewhat agreed, agreed, or strongly agreed with the statements, "To me, pleasure is spending time with others". The lowest percentage (69.3%) was the statement, "I feel good when I cooperate with others". 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. Korean and American students' mean and standard deviation for HC were *M*=5.35;

SD=0.76. Overall, participants tended to somewhat agree with the horizontal collectivism statements.

Conclusions

As to vertical individualism (VI), the study found that the majority of the participants in the study tended to have neutral vertical individualistic characteristic. While more than fifty-one percent participants responded that they somewhat agreed, agreed, or strongly agreed with six of the statements and somewhat disagreed, disagreed, or strongly disagreed with one of the statements, about 47% of participants somewhat agreed, agreed, or strongly agreed with the statement, “Winning is everything”.

As to horizontal individualism the study found that the majority of the participants in the study tended to somewhat agree with the horizontal individualism statements. While more than sixty percent participants responded that they somewhat agreed, agreed, or strongly agreed with seven of the statements, about fifty-two percent somewhat agreed, agreed, or strongly agreed with the statement, “I rely on myself most of the time; I rarely rely on others”.

As to vertical collectivism the study found that the majority of the participants tended to somewhat agree with vertical collectivism statements. While more than eighty percent participants responded that they somewhat agreed, agreed, or strongly agreed with five of the statements and about eighty percent participants responded that they somewhat agreed, agreed, or strongly agreed with two of the statements, only forty-eight percent of participants somewhat agreed, agreed, or strongly agreed with the statement, “Children should be taught to place duty before pleasure”.

As to horizontal collectivism, the study found that the majority of the participants tended to somewhat agree with the horizontal collectivism statements. More than seventy percent participants responded that they somewhat agreed, agreed, or strongly agreed with seven of the statements. The lowest percentage (69.3%) was the statement, “I feel good when I cooperate with others”.

Implications

Coexistence and incorporation of both individualism and collectivism within societies and cultures is present. There are some horizontal and vertical and collectivistic individualists, and some horizontal and vertical collectivists in every culture (Sinha and Tripathi, 1994; Triandis, 1995). That is, since culture depends on situation, people can be more individualistic at workplace but be more collectivistic at home (Triandis, 1995). Based on the findings, this study confirms previous theoretical foundation.

Recommendations

Further research is recommended to investigate different conceptualizations of cultural dimensions and values by using other instruments for measurement. A qualitative study would also be beneficial to future research on similar and different groups of students in various settings.

Objective Four

Key Findings

The fourth objective was to examine differences by the personal characteristics of the population and their scores regarding Self-Directed Learning Readiness Scale and Individualism and Collectivism (I/C) in four dimensions such as vertical individualism (VI), horizontal individualism (HI), vertical collectivism (VC), and horizontal collectivism (HC).

The mean Self-Directed Learning Readiness Scale (SDLRS) score of the participants was not statistically significantly different by gender, t (135)= -0.64, p>0.05. The mean vertical individualism (VI) score was not statistically significantly different by gender, t (135)= 0.03, p>0.05. The mean horizontal individualism (HI) score was not statistically significantly different by gender, t (135)= 1.71, p>0.05. There was no statistically significance in vertical collectivism (VC) score between male and female, t (135)= 0.91, p>0.05. There was no statistically significant difference in horizontal collectivism (HC), t (135)= 0.48, p>0.05.

Participants' Self-Directed Learning Readiness Scale score did not statistically significantly differ by age, F (3, 133)=0.97, p>0.05, f=.14. A small effect size was found. Participants' vertical individualism score did not statistically significantly differ by age, F (3, 133)= 0.75, p>0.05, f=.14. A small effect size was found. There was a significant difference in horizontal individualism (HI) score by age, F (3, 133)= 6.01, p>0.05, f=.37. A medium effect size was found. A statistically significant difference was presented in vertical collectivism (VC), F (3, 133)= 3.65, p>0.05, f=.29. A medium effect size was

found. There was a significant difference in horizontal collectivism (HC) score by age, *F* (3, 133)= 2.94, *p*>0.05, *f*=.25. A medium effect size was found.

There was no statistically significant difference between mean SDLRS scores and a level of GPA, *F* (5, 131)= 1.98, *p*>0.05, *f*=.27. A medium effect size was found. A statistically significant difference was not found between mean vertical individualism (VI) scores and the level of GPA, *F* (5, 131)= 1.79, *p*>0.05, *f*=.25. A medium effect size was found. A statistically significant difference was found between mean horizontal individualism (HI) scores and the level of GPA, *F* (5, 131)= 2.55, *p*>0.05, *f*=.31. A medium effect size was found. There was no statistically significant difference between mean vertical collectivism (VC) and the level of GPA, *F* (5, 131)= 0.95, *p*>0.05, *f*=.20. A small effect size was found. There was a statistically significant difference in horizontal collectivism (HC) scores by the level of GPA, *F* (5, 131)=2.72, *p*>0.05, *f*=.31. A medium effect size was found. Students with GPA ranging from 2.0 to2.99 tended to show more horizontal collectivistic characteristics than did students with GPA ranging from 3.0 to 4.0.

A statistically significant difference was not found between mean SDLRS scores and the level of classification, *F* (4, 132)=1.07, *p*>0.05, *f*=.18. A small effect size was found. There was no statistically significant difference between mean vertical individualism (VI) scores and the level of student classification, *F* (4, 132)=0.62, *p*>0.05, *f*=.14. A small effect size was found. The mean horizontal individualism (HI) scores and the level of student classification was a statistically significant different, *F* (4, 132)=4.12, *p*>0.05, *f*=.35. A medium effect size was found. There was no statistically significant difference in vertical collectivism (VC) scores by student classification, *F* (4, 132)=0.26,

$p>0.05$, $f=.10$. A small effect size was found. No statistically significant difference was present in horizontal collectivism (HC) scores, F (4, 132)=0.33, $p>0.05$, $f=.10$. A small effect size was found.

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, $p>0.05$. 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, $p>0.05$. The mean horizontal individualism (HI) score for American student was statistically significantly greater than the mean score for Korean students, t (135)= -6.52, $p>0.05$. 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, $p>0.05$. The mean horizontal collectivism (HC) score for American student was statistically significantly greater than the mean score for Korean students, t (135)= -3.65, $p>0.05$.

Conclusions

There were no statistically significance differences in SDLRS by gender of participants. Women and men had tended to have similar SDLRS. There were no statistically significance differences in vertical individualism (VI), horizontal individualism (HI), vertical collectivism (VC), and horizontal collectivism (HC) by gender. Women and men had tended to have similar VI, HI, VC, and HC.

There were no statistically significance differences in SDLRS by age of participants. Each age group had tended to have similar SDLRS. There were no

statistically significance differences in VI by age of participants. Each age group had tended to have similar VI. There were statistically significance differences in HI, VC, and HC by age of participants. Students ranging from 18 and19 in age had lower HI scores than did other age groups. Students ranging from 20 to21, 22 to 23, and more than 24 in age tended to somewhat agree on items intended to measure their HI while students ranging from 18 to 19 in age tended to be neutral. Age group ranging from more than 24 had lower VC scores than did other age groups. The age groups tended to be neutral or somewhat agree on items intended to measure their VC. Other age groups tended to somewhat agree or agree on items intended to measure their VC. Students in age ranged from more than 24 had lower HC scores than did other age groups. The groups of age range 19-20, 20-21, and 22-23 tended to somewhat agree or agree on items intended to measure their HI while students of age range >24 tended to somewhat agree.

A statistically significant difference in SDLRS by a level of GPA did not exist. Regardless of the level of GPA, students had tended to have similar SDLRS. There were no statistically significance differences in VI and VC by the level of GPA. However, students with GPA ranging from 3.7 to 4.00 tended to have the highest scores on items intended to measure student's VI than did other students. There were statistically significance differences in HI and HC by the level of GPA. Students with GPA ranging from 2.0 to2.99 tended to show more horizontal collectivistic characteristics than did students with GPA ranging from 3.0 to 4.0.

There were no statistically significance differences in SDLRS by the level of classification. However, students in high classification tended to more agree on items intended to measure student's self-directed learning readiness than did other students.

There were no statistically significance differences in VI, VC, and HC by the level of student classification. However, freshmen tended to have more vertical individualistic characteristics than have other classification. There were statistically significance differences in HI by the level of classification. Unlike freshmen had higher VI scores than had other student classification, freshmen's HI scores was lower than students' in other student classification.

There were no statistically significance differences in SDLRS by nationality. Korean and American had tended to have similar SDLRS. There were statistically significance differences in VI by nationality. Korean students had tended to have higher vertical individualistic characteristic than American students. There were statistically significance differences in HI by nationality. American students had tended to have higher horizontal individualistic characteristic than Korean students. There were no statistically significance differences in VC by nationality. Korean and American had tended to have similar VC. There were statistically significance differences in HC by nationality. American students had tended to have higher horizontal collectivistic characteristic than Korean students.

Implications

The findings implicate that gender, age, GPA, student classification, and nationality do not have to be taken into account when considering the levels of individual's self-directed learning readiness. Guglielmino (1996) found that no statistically significant relationship between self-directed learning readiness and age. In addition, gender and age were not statistically significantly related to self-directed

learning readiness as measured by the SDLRS (Adenuga, 1991; Bryan and Schulz, 1995; Cheong, Lee, and Long, 1995). Long (1991) found that the statistically significant relationship between SDLRS score and GPA exist and concluded that SDLRS may play a role to predict students' performance in college. However, this study does not confirm Long (1991)'s findings. 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 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. Instead, the horizontal dimension represents that people should be similar on most attributes, especially status (Triandis, 1995). In individualistic culture 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 (Markus and Kitayama, 1991. Age in this study does not have to be taken into account when considering students' vertical individualism. It needs to be taken into account when considering students' horizontal individualism, vertical collectivism, and horizontal collectivism. The findings implicate that students tend towards similar vertical individualistic attitude, whereas they tend towards significantly different horizontal individualistic, vertical collectivistic, and horizontal collectivistic attitudes in terms of

age. Grade point average (GPA) in this study does not have to be taken into account when considering students' vertical individualism and vertical collectivism. It needs to be taken into account when considering students' horizontal individualism and horizontal collectivism. The findings implicate that students tend towards similar vertical individualistic and collectivistic attitudes without considering GPA, whereas they tend towards significantly different horizontal individualistic and collectivistic attitudes in terms of GPA. Student classification in this study does not have to be taken into account when considering students' vertical individualism and vertical collectivism and horizontal collectivism. It needs to be taken into account when considering students' horizontal individualism. The findings implicate that students tend towards similar vertical individualistic and collectivistic and horizontal collectivistic attitudes without considering student classification, whereas they tend towards significantly different horizontal individualistic attitude in terms of student classification.

Nationality in this study has to be taken into account when considering students' vertical individualism, horizontal individualism, and horizontal collectivism. It is not need to be taken into account when considering students' vertical collectivism in this study. The findings implicate that students tend toward similar vertical collectivistic attitude, whereas they tend towards significantly different students' vertical individualistic, horizontal individualistic, and horizontal collectivistic attitudes in terms of nationality. Korean students had tended to have higher vertical individualistic characteristic than American students. American students had tended to have higher horizontal individualistic characteristic than Korean students. This result supports that a relationship between nationality and cultural value exists (Hofstede, 2001). In addition,

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 (Hofstede, 2001). 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 can be explained by Cha (1994)'s supposition that Korean culture will be changed from collectivism to individualism, and from vertical aspects to horizontal aspects.

Recommendations

It can be recommended to study self-directed learning readiness and cultural dimension of individualism and collectivism by using a larger and varied sample of students. Further study is recommended to reinvestigate the reliability and validity of the 16 scenario instrument measuring individualism and collectivism. Although Triandis, Chen, and Chan (1998) suggested that the use of both attitude and scenario instruments were appropriate to find out individualism and collectivism at the individual level, this study do not confirm their suggestion. The researcher found that the Spearman rho correlation coefficient on the VI, HI, VC, and HC were very low and negative scores, and decided not to use the measurement of individualism and collectivism with 16 scenarios in this study.

Objective Five

Key Findings

The fifth objective was to examine the relationships self-directed learning readiness and individualism and collectivism in four dimensions. A bivariate correlation analysis was performed in order to investigate the relationship between the SDLRS and the selected variables and determine whether the possibility of multicollinearity exists.

None of the relationships by SDLRS were found to be statistically significant by SDLRS except for student classification, horizontal individualism (HI), vertical collectivism (VC), and horizontal collectivism (HC). Student classification in the present sample was found to be significantly and positively correlated with the SDLRS at the .05 level (r=. 18, p=.04). HI was found to be significantly and positively correlated with the SDLRS at the .01 level (r=. 44, p<.00). VC was found to be significantly and positively correlated with the SDLRS at the .01 level (r=.43, p<.00). HC was found to be significantly and positively correlated with the SDLRS at the .01 level (r=.38, p<.00).

None of the relationships between independent variables were found to be highly correlated except for the relationship between student classification and age. The correlation between student classification and age was highly significant (r=.81) and the coefficient was not small (r^2=.66). The possibility of multicollinearity tends to exist in the data. Due to the concern about the multicollinearity for both independent variables that might affect a regression model, the researcher further tested the multicollinearity for each of the independent variables using variance inflation factor (VIF) and tolerance statistics. The VIF for this study ranged between 1.19 to 3.73 and the tolerance ranged between .27 to .83. All of the VIF values and tolerance statistics with the exception of

two variables were within an acceptable range indicating that multicollinearity does not cause serious problem for a regression model. Two independent variables age (VIF, 3.73; tolerance, .27) and student classification (VIF, 3.31; tolerance, .30) did not satisfy the above condition. Thus, the researcher dropped the age variable from the hierarchical multiple regression models and reexamined the VIF and tolerance statistics. After dropping age variable from the models, the VIF ranged between 1.10 to 1.78 and the tolerance ranged between .56 to .91. This concluded that there is no collinearity in the models.

A hierarchical multiple regression analysis was conducted to examine the level of the relationship between the SDLRS and nationality and the four cultural values of individualism/ collectivism from the gender, student classification, and GPA. The findings in Step 1 showed that scores for the SDLRS (R^2 = .03, adjusted R^2 = .01, p = .30) was 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.

The findings for hierarchical multiple regression in Step 2 showed that scores for the SDLRS (R^2 = .34, adjusted R^2 = .30, ΔR^2 = .31, p =.00) was statistically significantly related by study variables. When nationality, VI, HI, VC, and HC were entered as the second step, the model accounted for 34 % of the variance in the SDLRS (R^2 change = .31). 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).

Conclusions

Four of the nine study variables were correlated with Self-Directed Learning Readiness Scale (SDLRS). Student classification, horizontal individualism (HI), vertical collectivism (VC), and horizontal collectivism (HC) have statistically and positively correlated with SDLRS. However, HI (r=.44), VC(r=.43), and HC(r=.38) accounted for 19%, 18%, 14%, respectively, of variance for SDLRS, but student classification (r=.18) only accounted for 3% of variance for SDLRS. Of all of these variables except for student classification tended to best related to the SDLRS.

In a hierarchical multiple regression analysis, scores for the SDLRS (R^2 = .03, adjusted R^2 = .01, p = .30) in Step 1 was not statistically significantly related by gender, student classification, and GPA. Gender, student classification, and GPA accounted for only 3% of the variance and the three beta weights for the gender, student classification, and GPA variables were not statistically significantly related to the SDLRS. However, scores for SDLRS (R^2 = .34, adjusted R^2 = .30, ΔR^2 = .31, p =.00) in Step 2 was statistically significantly related by gender, student classification, GPA, nationality, VI, HI, VC, and HC. This model accounted for 34 % of the variance in the SDLRS (R^2 change = .31). It appears that nationality, VI, HI, VC, and HC accounted for a further 31% of the variance. However, likewise 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), indicating that nationality and VI did not significantly contribute to the final model. However, the beta for HI variable was statistically significant and positive (β = 0.40, *t* = 4.31, *p* = .00), indicating that as HI attitudes are high, the SDLRS scores tend to be high. The beta for VC variable also was statistically significant and positive (β = 0.20, *t* = 2.12, *p* = .04), indicating that as VC attitude are high, the SDLRS scores tend to be high. The beta for HC variable also was statistically significant and positive (β = 0.21, *t* = 2.19, *p* = .03), indicating that as HC attitude are high, the SDLRS scores tend to be high. These findings indicated that as 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.

Implications

The findings provide a beneficial implication for teacher educators who teach students seeking teacher certification in Agriculture. The consideration of the cultural values of individualism and collectivism may be an important component of training and educating students seeking to teacher certification in Agriculture. The findings support Braman's research (1998) that self-directed learning readiness has a relationship with the individualism. The findings of this study further noted that self-directed learning readiness can be best explained through vertical and horizontal dimension of culture. In vertical individualism, individuals are independent and different from others, whereas interdependence and differences from others are in vertical collectivism (Triandis, 1995).

In horizontal individualism, individuals are independent and same as others, whereas interdependence and the same as others are in horizontal individualism (Triandis, 1995). The findings of this study indicated that self-directed learning readiness has a relationship not only horizontal individualism but also vertical collectivism and horizontal collectivism. Nah (1999) noted that interdependence, independence, and autonomy are "not mutually exclusive within a self-directed learner" (p. 19). The findings support Nah's suggestion. Unlike Braman's (1998) suggestion, collectivism should be considered in the theory's construction of self-directed learning.

Recommendations

Grow (1991) emphasized that effective educators take account of the learner's stage of self-direction while matching their teaching strategies with the learners learning style and facilitate them to become more and more self-directed in learning. To facilitate and develop students' self-directed learning readiness, teacher educators at SNU and TAMU should not only take account of evaluating present teacher education program, but also investigate the students' learning style by using qualitative or quantitative method. In addition, students' cultural values should be taken into accounts when considering implementing teacher education program.

Additional Implications and Recommendations

This study implicates that the cultural values of individualism and collectivism need to be woven into the theory of self-directed learning. The following implications and recommendations can be used as a means to better train and educate students seeking

to teacher certification in Agriculture at both institutions: Sunchon National University (SNU) and Texas A&M University (TAMU).

Teacher educators at both institutions need to consider/understand students' self-directed learning readiness and cultural values when considering curriculum development for pre-service and in-service teacher education, and when teaching in class. In this study, students seeking to teacher certification in Agriculture exhibited lower mean SDLRS scores than world wide mean scores. Teacher educators should take account of learners' level of self-directedness, and then decide relevant teaching styles to learners (Grow, 1991). The findings of this study also support the claim that horizontal individualism, vertical collectivism, and horizontal collectivism have relationship with self-directedness in learning. The findings suggest that students are more complex than unidimensional cultural beings (Allen and Hermann-Wilmarth, 2004). 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).

Ultimately, teacher educators should focus on facilitating all students to become a highly self-directed learner. It can be accomplished by providing various self-directed learning activities in class. For example, web-based and technology-based courses using technology can be used as a means to foster students' levels of self-directedness in learning. Especially in Asian culture, it is beneficial to use technology in fostering more self-directed learning (*Education Week*).

Teacher educators need to teach students using culturally relevant and various instructions. Students can learn how to perform teaching that only has technical aspects. However, 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).

By increasing awareness of cultural difference and learner's level of self-directedness and acting properly in relation to that, teacher educators can design more culturally relevant teacher education curriculum and teach effectively each student on different stages of self-directedness in learning.

The results of this study will help teacher educators at higher education 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.

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APPENDIX A

INSTITUTIONAL REVIEW BOARD-HUMAN SUBJECTS IN RESEARCH APPROVAL LETTER

VPR
Office of the Vice President for Research

Date February 25, 2004

MEMORANDUM

TO: Jo Work Lee
Agricultural Education
MS 2116

FROM: Dr. E. Murl Bailey, CIP, Advisor
Institutional Review Board
MS 1112

SUBJECT: IRB Protocol Review

Title: A Comparative Study of the Relationship Between the Readiness for Self-Directed Learning and the Cultural Values of Individualism/Collectivism Among American and South Korean College Students Seeking Teacher Certification in Agriculture
Protocol Number: 2004-0102
Review Category: Exempt from Full Review
Approval Date: February 25, 2004 to February 24, 2005

The approval determination was based on the following Code of Federal Regulations
http://ohrp.osophs.dhhs.gov/humansubjects/guidance/45cfr46.htm

_____ 46.101(b)(1)	_____ 46.101(b)(4)
___✓___ 46.101(b)(2)	_____ 46.101(b)(5)
_____ 46.101(b)(3)	_____ 46.101(b)(6)

Remarks: Request of waived signed consent has been approved.

The Institutional Review Board – Human Subjects in Research, Texas A&M University has reviewed and approved the above referenced protocol. Your study has been approved for one year. As the principal investigator of this study, you assume the following responsibilities:

Renewal: Your protocol must be re-approved each year in order to continue the research. You must also complete the proper renewal forms in order to continue the study after the initial approval period.

Adverse events: Any adverse events or reactions must be reported to the IRB immediately.

Amendments: Any changes to the protocol, such as procedures, consent/assent forms, addition of subjects, or study design must be reported to and approved by the IRB.

Informed Consent/Assent: All subjects should be given a copy of the consent document approved by the IRB for use in your study.

Completion: When the study is complete, you must notify the IRB office and complete the required forms.

Justification for waiver of signed consent
(Required only if requesting waiver of signature on consent document)
*Note: Information sheet must be submitted and written in second person of the subject

I certify that my research study meets all of the following criteria:

___ **45 CFR 46.116**

1. The research involves no more than minimal risk to the subjects;
2. The waiver of alteration will not adversely affect the rights and welfare of the subjects;
3. The research could not practicably be carried out without the waiver or alteration; and
4. Whenever appropriate, the subjects will be provided with additional pertinent information after participation.

or

✓ ___ **45 CFR 46.117**

1. The only record linking the subject and the research would be the consent document and the principal risk would be potential harm resulting from a breach of confidentiality. Each subject will be asked whether the subject wants documentation linking the subject with the research, and the subject's wishes will govern; or
2. That the research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside of the research context. In cases in which the documentation requirement is waived, the IRB may require the investigator to provide subjects with a written statement regarding the research.

A comparative Study of the relationship between Readiness for Self-directed Learning and the Cultural Values of Individualism/Collectivism among American and South Korean College Students seeking Teacher Certificate in Agriculture
Project Title

Lee In Hek
Signature

2/24/2004
Date

IN HEOK LEE
Print Name

Email irb@tamu.edu or call (979) 458-4067 with any questions regarding this form.

APPENDIX B

INVITATION LETTER TO AD HOC ADVISOR

TEXAS A&M UNIVERSITY
College of Agriculture and Life Sciences
Department of Agricultural Education
2116 TAMU
College Station, Texas 77843-2116
(979) 845-2951
FAX (979) 845-6296
http://aged.tamu.edu

April 25, 2004

Kang, Dae-Gu
Department of Agricultural Education
College of Education, Sunchon National University
Maegokdong 315, Sunchon 540-742, South Korea
Tel: 82-61-750-3355
Email: kang@sunchon.ac.kr

Professor Kang Dae-Gu:

Thank you for your interest in In Heok Lee's graduate studies at Texas A&M University. Your communications and suggestions will be extremely helpful in helping Mr. Lee complete his thesis in a timely manner. I know that you are very busy, and I appreciate the time you are taking to help her complete her dissertation at Texas A&M University. We are delighted that Mr. Lee will be conducting his thesis at Sunchon National University with your assistance.

Considering your excellent knowledge base, expertise, and professional experiences in area of extension and innovation management, we would like to invite you with great sincerity to be an Ad Hoc Advisor for his masters studies. As an Ad Hoc Advisor, your advise, suggestions, and guidance will be instrumental in helping Mr. Lee complete his studies, without burdening you with the formality of being involved in examinations and approval of his thesis. Your contributions, however, will be noted and included in his thesis. Time and technology permitting, we would like for you to participate in his final oral presentation and examination. This can be accomplished using interactive video conferencing.

As you know the title of his thesis is "A Comparative Study of the Relationship between the Readiness for Self-Directed Learning and the Cultural Values of Individualism/ Collectivism among the American and South Korean Students Seeking Teacher Certification in Agriculture." The purpose of his study is to examine the relationship between the cultural values of individualism / collectivism and self-directed learning readiness in two sample groups drawn from different cultures. The study also aims to explore the implication of the findings for developing education programs for agricultural teachers in both institutions. In order to gather data on the specific objectives of his study, Mr. Lee has used instruments adopted from Guglielmino (1989) work on Self-Directed Learning Readiness and Triandis (1995) and Triandis, Chen, & Chan, (1998) works on Individualism/Collectivism (I/C).

Effective educators should attempt to design and deliver individualized instructional sequences to provide the greatest opportunity for a learner's growth. Professional educators need to tailor their teaching based on learners' self-directedness or degree of dependency…situational teaching. Self-directed learning should be a primary goal of teacher education. The goal of teacher education should be a lifelong process. Agricultural teachers also should teach and guide students how to become self-directed learners to face successfully growing trend of social and technological change and innovation not only because of their development and but because of better society.

Guy (1999) also emphasized the importance of knowing learners' cultural background as follows: "Adult educators should find ways to learn about the cultural backgrounds of their learners and to discover learners' webs of significance. Cultural self-awareness, cultural knowledge about learners, and instructional skills that are inclusive and empowering constitute the kind of knowledge and skills required for service for service to marginalized learners" (p.16). By examining the relationship between readiness for self-directed learning and Individualism/Collectivism (I/C), the results of this study would be imperative to understand how the role of the cultural orientation affect self-directed learning readiness and to lend educators in both institutions consider students' Self-Directed Learning Readiness and I/C to improve teacher preparation curriculum.

We look forward to your assistance and Mr. Lee's progresses through his graduate studies at Texas A&M University. If you have any question about the research or your role, please contact Mr. Lee or myself. I am pleased and excited that two world renown Universities are able to collaborate on this effort and hope that this partnership can continue in the future.

Sincerely,

James R. Lindner
Associate Professor
Department of Agricultural Education
Texas A&M University
2116 TAMU
College Station, Texas 77843-2116

phone: 979-458-2701
fax: 979-458-2698
email: j-lindner@tamu.edu

In Heok Lee
Masters Student
Department of Agricultural Education
Texas A&M University
2116 TAMU
College Station, Texas 77843-2116

phone: 979-455-2701
fax: 979-458-2698
email: ilee@aged.tamu.edu

cc: Dr. Glen C. Shinn, Professor and Chair, Department of Agricultural Education, TAMU
Dr. Jae Ki Kim, President, Sunchon National University

APPENDIX C

INVITATION LETTER TO PARTICIPANTS

(ENGLISH AND KOREAN VERSION)

SELF-DIRECTED LEARNING AND CULTURAL VALUES OF INDIVIDUALISM/COLLECTIVISM

This purpose of the study is to examine the effect of culture and individualism / collectivism on self-directed learning readiness in two sample groups drawn from different cultures. The study also aims to explore the implication of the findings for developing education programs for agricultural teachers in both institutions.

- I understand that the purpose of this study is to describe my perceptions regarding my self-directedness and cultural values of individualism/collectivism.
- I understand that I will be asked to answer a survey questionnaire via computer and Internet.
- I understand the questionnaire will take no longer than 20 minutes.
- I will not be asked to identify myself by name.
- I understand that there are no benefits for my participation in this study.
- I understand that my decision to participate in this study is given voluntarily and that I may deny consent or withdraw from the study at any time without penalty.
- I am aware that there is a possibility that someone could break into this web-site and access my answers.
- I am aware that in no way will I be punished by the answers I give on the questionnaire nor by the number of questions I choose to answer and that the principle investigator will not associate my name or code with the answers given.
- I know that I may refuse to answer any questions that make me feel uncomfortable.
- I understand that this research study has been reviewed and approved by the Institutional Review Board-Human Subjects in Research, Texas A&M University. For research-related problems or questions regarding subjects' rights, I can contact the Institutional Review Board through Dr. Michael W. Buckley, Director of Support Services, Office of Vice President for Research at (979) 458-4067.
- I have read and understand the explanation provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study.

CONTINUE WITH SURVEY **QUIT SURVEY**

In Heok Lee
Graduate Student
Department of Agricultural Education
Texas A&M University
2116 TAMU
College Station, Texas 77843-2116

phone: 979-845-2594
fax: 979-458-2698
e-mail: ilee@aged.tamu.edu

James R. Lindner
Assistant Professor
Department of Agricultural Education
Texas A&M University
2116 TAMU
College Station, Texas 77843-2116

phone: 979-458-2701
fax: 979-458-2698
e-mail: j-lindner@tamu.edu

자기 주도적 학습 준비성과 개인주의/집단주의

당신은 농업관련 교사 자격증을 취득하는 한국 대학생과 미국 대학생간에 자기 주도적 학습 준비성과 개인주의/집단주의에 관한 문화적 가치와의 관계에 대한 비교연구에 참여하게 됩니다. 첨부된 링크로 들어가셔서 질문에 답해 주십시요. 이 연구의 목적은 문화가 다른 두 집단내에서 자기 주도적 학습 준비도에 관한 문화와 개인주의/집단주의 간의 영향을 그리고 양쪽 교육기관내에 농업관련 교사 교육 프로그램을 개발하기 위하여 연구 결과의 영향을 조사하는데 두고 있습니다. 이 연구는 18 세 이상이며 자발적으로 설문에 응하는 대략 250 명의 인터넷 사용자가 참여할 것입니다. 설문지를 마치는 데는 대략 20 분에서 25 분 정도의 시간이 소요될 것입니다. 이 연구는 참여자들이 자발적으로 참여하며 개개인의 신분은 철저하게 보호될 것입니다. 참여자는 설문에 답을 하지 않을 수 있으며 아무런 불이익 없이 언제든지 중단할 수 있습니다.

이 연구는 Institutional Review Board - Human Subjects in Research, Texas A&M University 에서 검토 되었고 연구에 대해 승인을 받았습니다. 참여자의 권리와 연관이 있는 문제나 질문들은 Institutional Review Board 의 Dr. Michael W. Buckley, Director of Research Compliance, Office of the Vice President for Research 에게 (979) 845-858 으로 연락을 하실 수 있습니다.

이 연구에 응함으로서 당신이 연구에 참여하는게 자발적이며, 언제든지 설문에 답하는 것을 그만 둘 수 있으며, 설문에 응함으로 인해 어떤 이익이나 불이익도 없으며, 이 연구는 학업을 목적으로 한 것이며, 마지막으로 연구자가 이 연구를 통해서 얻게 되는 자료로 출판하는데 동의했음을 인정하게 됩니다.

만약에 더 질문이 있다면 본인 이인혁에게 (979) 845-2594 또는 e-mail: ilee@aged.tamu.edu 로 혹은 Dr. James R. Lindner 에게 (979) 458-2701 혹은 e-mail: j-lindner@tamu.edu 로 연락을 하실 수 있습니다.

만약에 위의 사항에 동의하신다면 링크로 가셔서 설문에 응해주시면 고맙겠습니다.

당신의 시간과 노력에 대해서 진심으로 감사드립니다.

설문에 참여하기

In Heok Lee
Graduate Student
Department of Agricultural Education
Texas A&M University
2116 TAMU
College Station, Texas 77843-2116

phone: 979-845-2594
fax: 979-458-2698
e-mail: ilee@aged.tamu.edu

설문을 그만두기

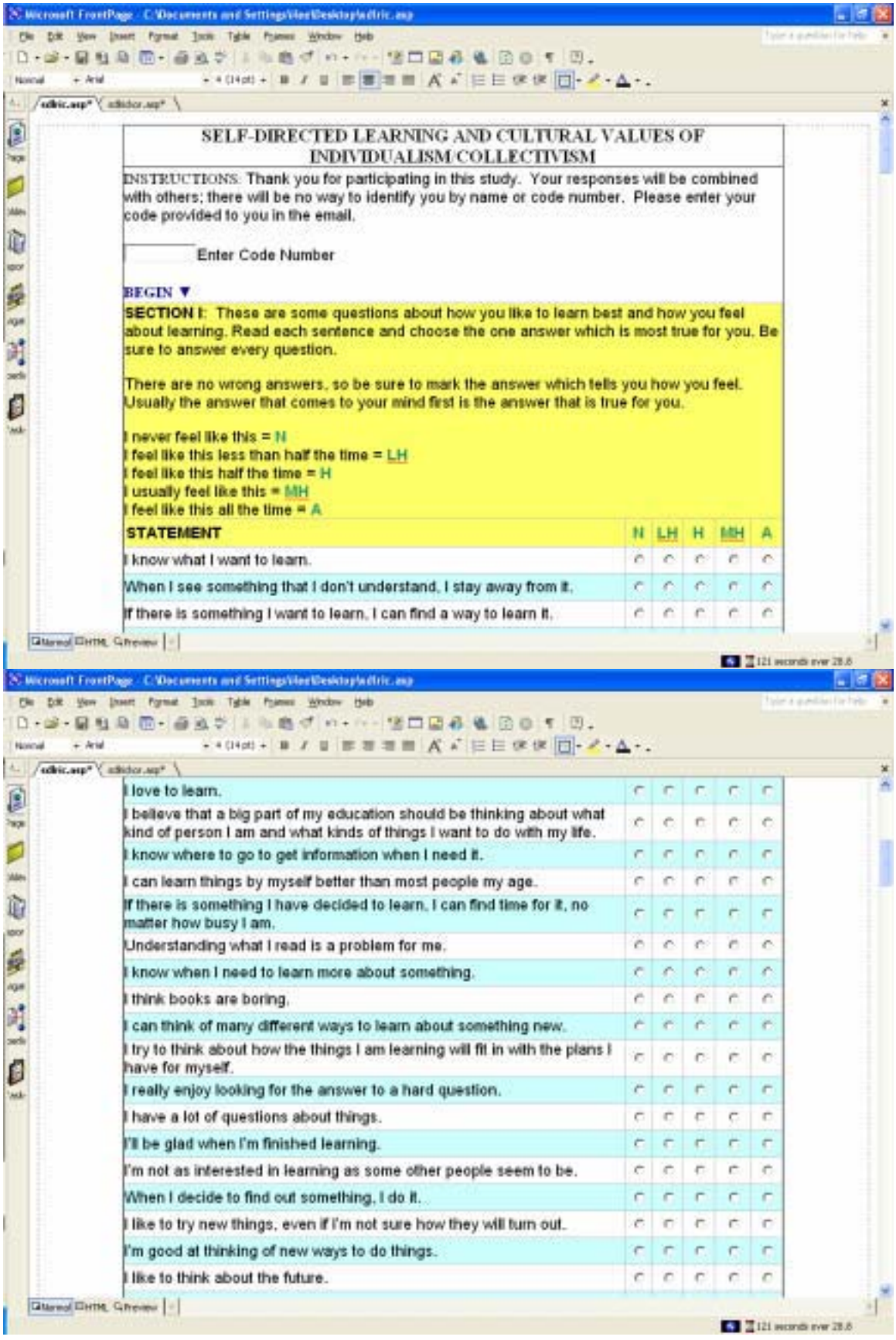
James R. Lindner
Assistant Professor
Department of Agricultural Education
Texas A&M University
2116 TAMU
College Station, Texas 77843-2116

phone: 979-458-2701
fax: 979-458-2698
e-mail: j-lindner@tamu.edu

APPENDIX D

QUESTIONNAIRE

(ENGLISH AND KOREAN VERSION)



SELF-DIRECTED LEARNING AND CULTURAL VALUES OF INDIVIDUALISM/COLLECTIVISM

INSTRUCTIONS: Thank you for participating in this study. Your responses will be combined with others; there will be no way to identify you by name or code number. Please enter your code provided to you in the email.

Enter Code Number

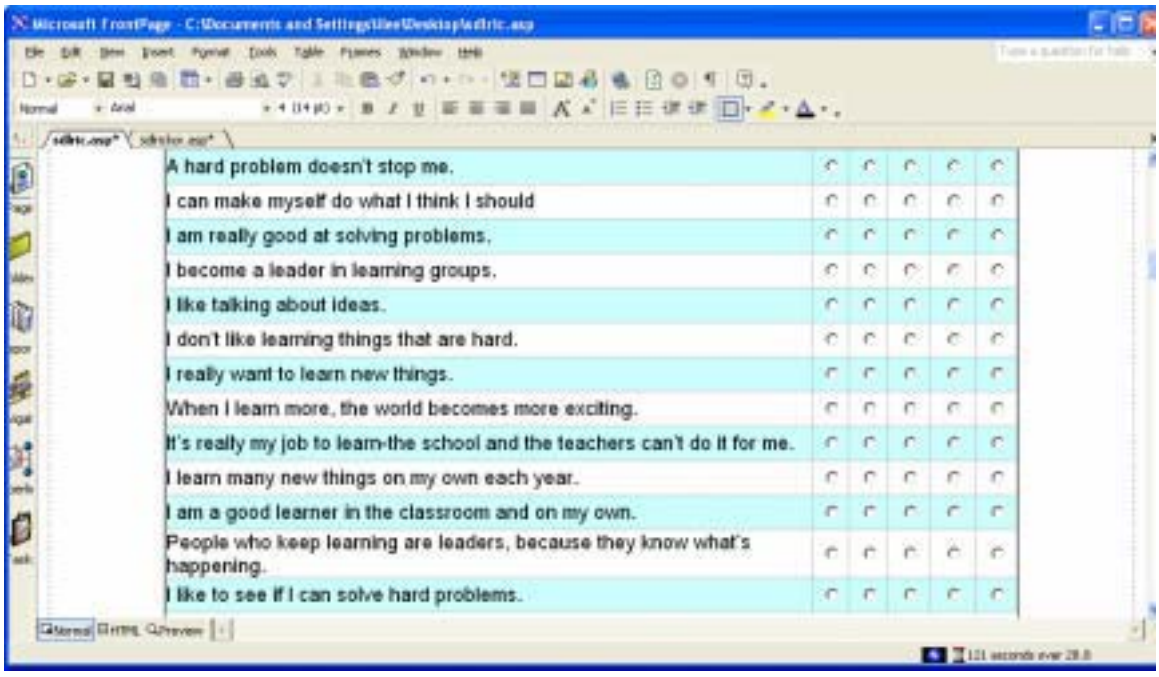
BEGIN ▼

SECTION I: These are some questions about how you like to learn best and how you feel about learning. Read each sentence and choose the one answer which is most true for you. Be sure to answer every question.

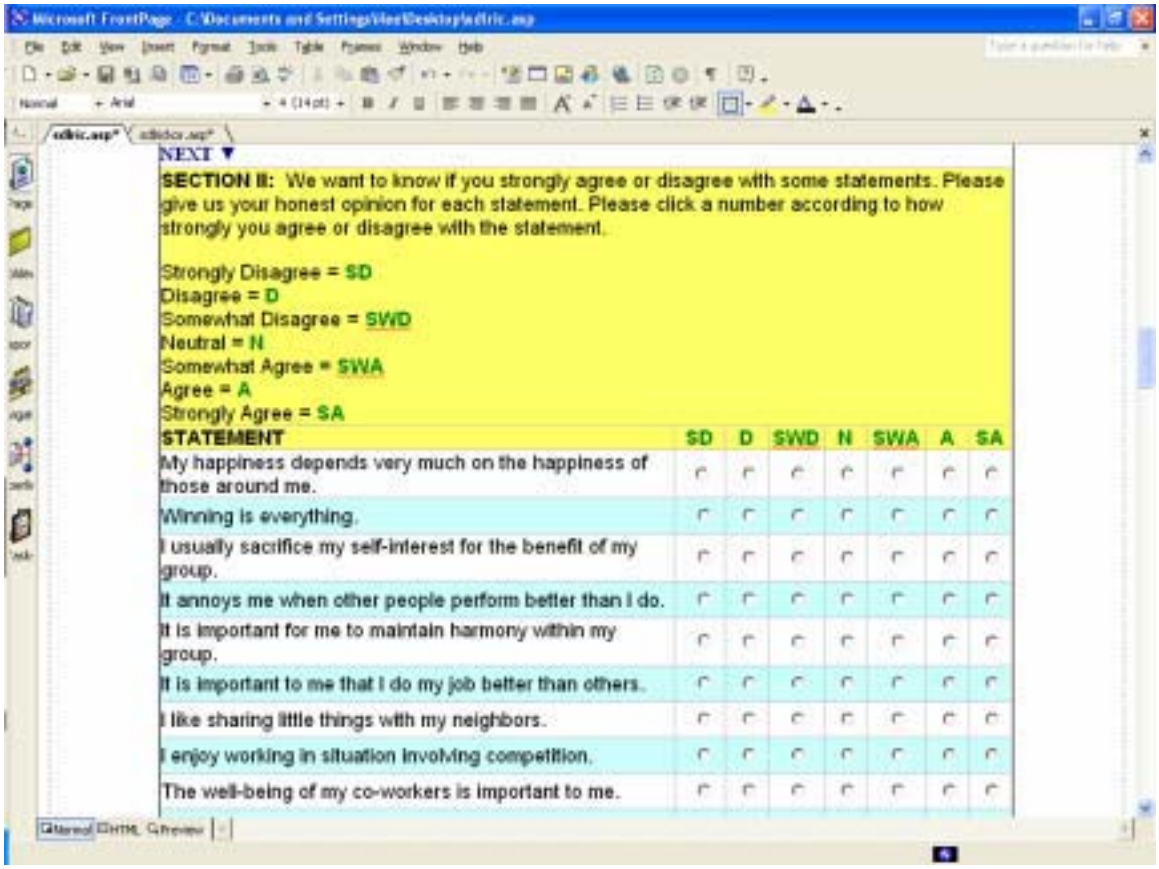
There are no wrong answers, so be sure to mark the answer which tells you how you feel. Usually the answer that comes to your mind first is the answer that is true for you.

I never feel like this = N
I feel like this less than half the time = LH
I feel like this half the time = H
I usually feel like this = MH
I feel like this all the time = A

STATEMENT	N	LH	H	MH	A
I know what I want to learn.	○	○	○	○	○
When I see something that I don't understand, I stay away from it.	○	○	○	○	○
If there is something I want to learn, I can find a way to learn it.	○	○	○	○	○
I love to learn.	○	○	○	○	○
I believe that a big part of my education should be thinking about what kind of person I am and what kinds of things I want to do with my life.	○	○	○	○	○
I know where to go to get information when I need it.	○	○	○	○	○
I can learn things by myself better than most people my age.	○	○	○	○	○
If there is something I have decided to learn, I can find time for it, no matter how busy I am.	○	○	○	○	○
Understanding what I read is a problem for me.	○	○	○	○	○
I know when I need to learn more about something.	○	○	○	○	○
I think books are boring.	○	○	○	○	○
I can think of many different ways to learn about something new.	○	○	○	○	○
I try to think about how the things I am learning will fit in with the plans I have for myself.	○	○	○	○	○
I really enjoy looking for the answer to a hard question.	○	○	○	○	○
I have a lot of questions about things.	○	○	○	○	○
I'll be glad when I'm finished learning.	○	○	○	○	○
I'm not as interested in learning as some other people seem to be.	○	○	○	○	○
When I decide to find out something, I do it.	○	○	○	○	○
I like to try new things, even if I'm not sure how they will turn out.	○	○	○	○	○
I'm good at thinking of new ways to do things.	○	○	○	○	○
I like to think about the future.	○	○	○	○	○



A hard problem doesn't stop me.					
I can make myself do what I think I should					
I am really good at solving problems.					
I become a leader in learning groups.					
I like talking about ideas.					
I don't like learning things that are hard.					
I really want to learn new things.					
When I learn more, the world becomes more exciting.					
It's really my job to learn-the school and the teachers can't do it for me.					
I learn many new things on my own each year.					
I am a good learner in the classroom and on my own.					
People who keep learning are leaders, because they know what's happening.					
I like to see if I can solve hard problems.					

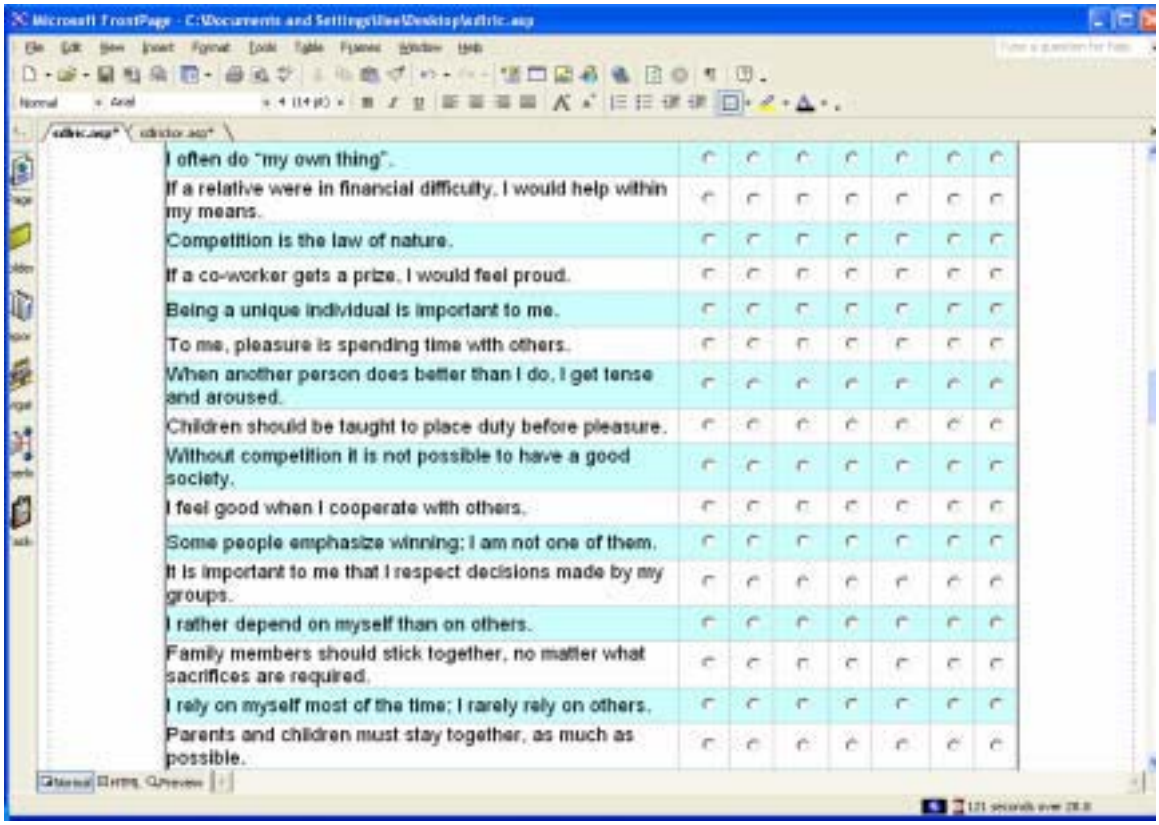


NEXT ▼

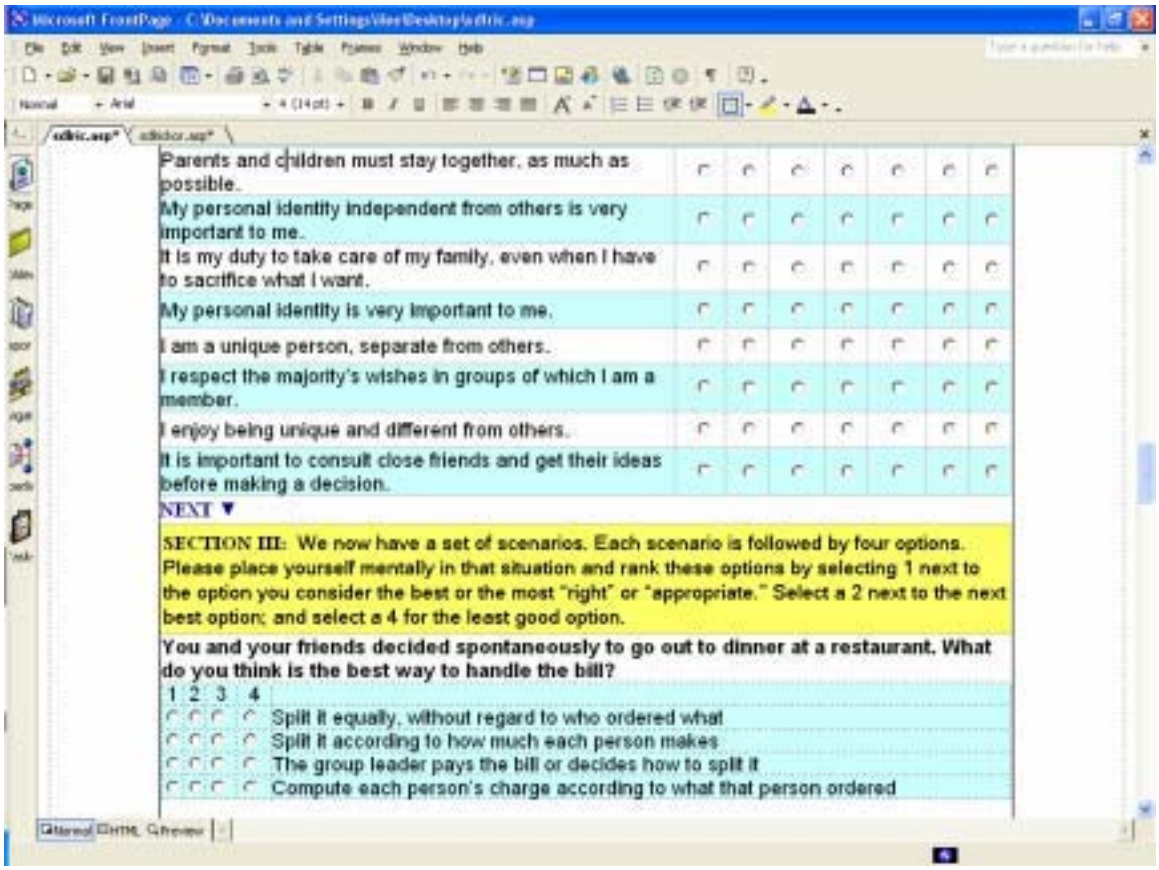
SECTION II: We want to know if you strongly agree or disagree with some statements. Please give us your honest opinion for each statement. Please click a number according to how strongly you agree or disagree with the statement.

Strongly Disagree = SD
Disagree = D
Somewhat Disagree = SWD
Neutral = N
Somewhat Agree = SWA
Agree = A
Strongly Agree = SA

STATEMENT	SD	D	SWD	N	SWA	A	SA
My happiness depends very much on the happiness of those around me.							
Winning is everything.							
I usually sacrifice my self-interest for the benefit of my group.							
It annoys me when other people perform better than I do.							
It is important for me to maintain harmony within my group.							
It is important to me that I do my job better than others.							
I like sharing little things with my neighbors.							
I enjoy working in situation involving competition.							
The well-being of my co-workers is important to me.							



I often do "my own thing".							
If a relative were in financial difficulty, I would help within my means.							
Competition is the law of nature.							
If a co-worker gets a prize, I would feel proud.							
Being a unique individual is important to me.							
To me, pleasure is spending time with others.							
When another person does better than I do, I get tense and aroused.							
Children should be taught to place duty before pleasure.							
Without competition it is not possible to have a good society.							
I feel good when I cooperate with others.							
Some people emphasize winning; I am not one of them.							
It is important to me that I respect decisions made by my groups.							
I rather depend on myself than on others.							
Family members should stick together, no matter what sacrifices are required.							
I rely on myself most of the time; I rarely rely on others.							
Parents and children must stay together, as much as possible.							



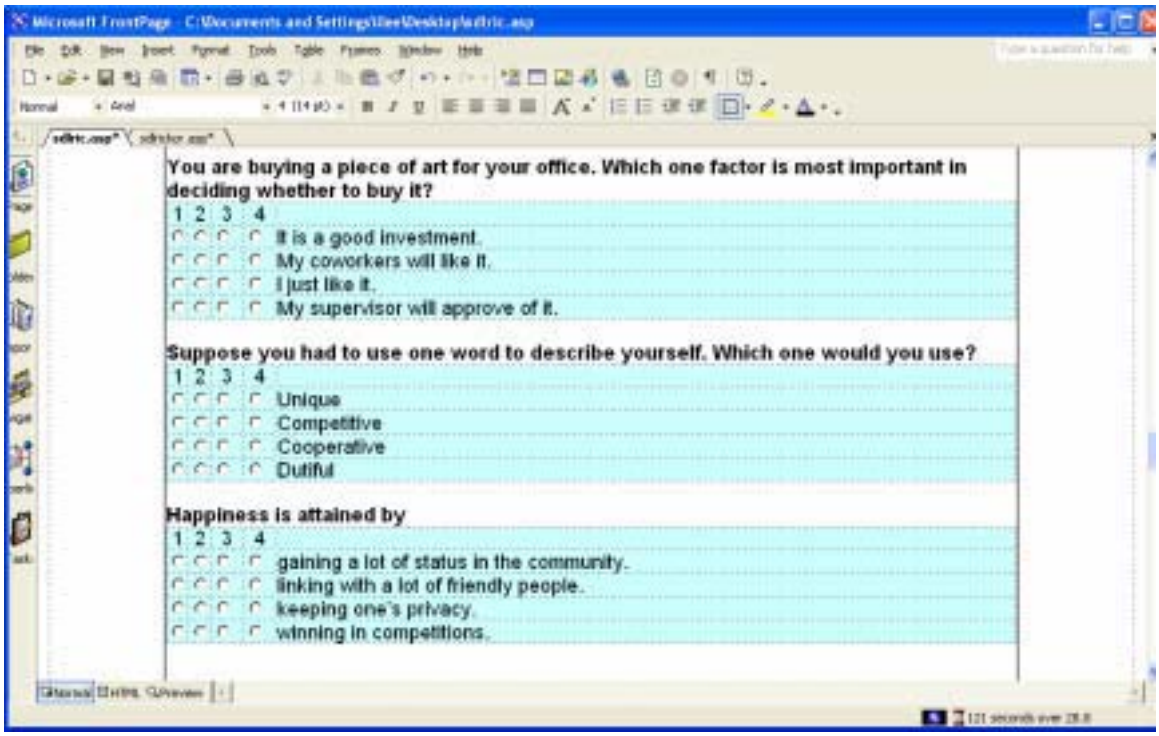
Parents and children must stay together, as much as possible.							
My personal identity independent from others is very important to me.							
It is my duty to take care of my family, even when I have to sacrifice what I want.							
My personal identity is very important to me.							
I am a unique person, separate from others.							
I respect the majority's wishes in groups of which I am a member.							
I enjoy being unique and different from others.							
It is important to consult close friends and get their ideas before making a decision.							

NEXT ▼

SECTION III: We now have a set of scenarios. Each scenario is followed by four options. Please place yourself mentally in that situation and rank these options by selecting 1 next to the option you consider the best or the most "right" or "appropriate." Select a 2 next to the next best option; and select a 4 for the least good option.

You and your friends decided spontaneously to go out to dinner at a restaurant. What do you think is the best way to handle the bill?

1	2	3	4	
				Split it equally, without regard to who ordered what
				Split it according to how much each person makes
				The group leader pays the bill or decides how to split it
				Compute each person's charge according to what that person ordered



You are buying a piece of art for your office. Which one factor is most important in deciding whether to buy it?

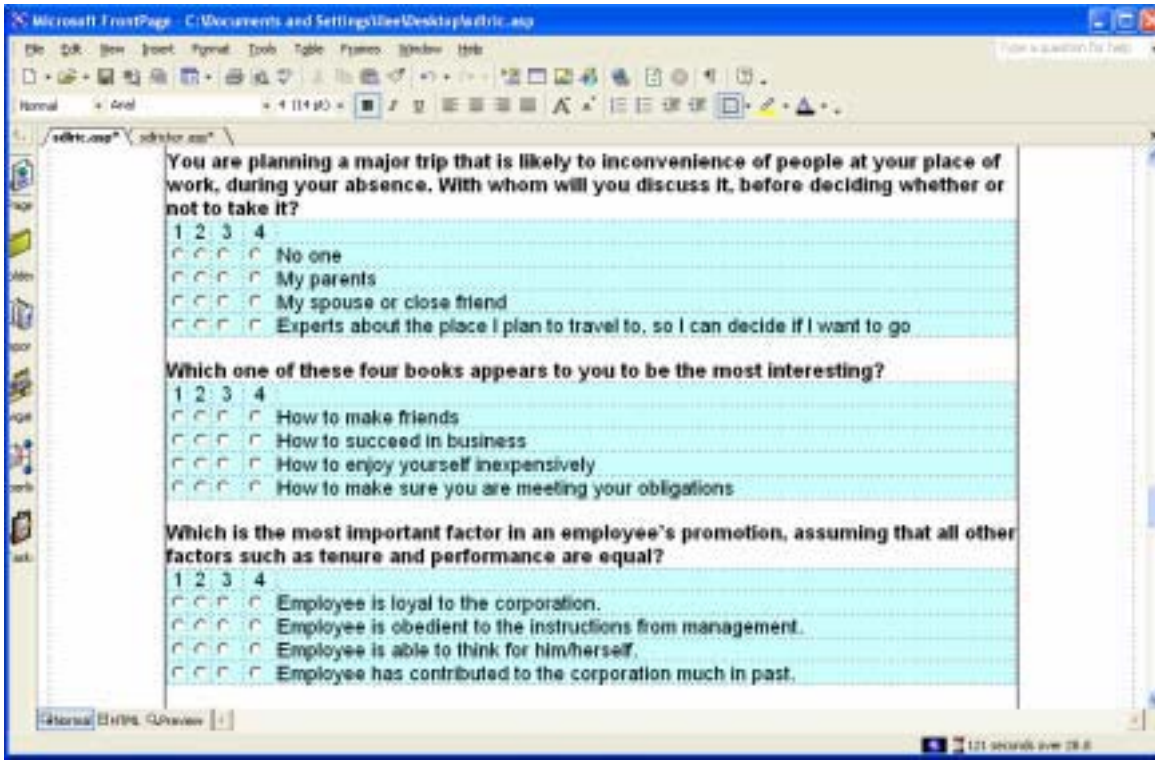
1	2	3	4	
○	○	○	○	It is a good investment.
○	○	○	○	My coworkers will like it.
○	○	○	○	I just like it.
○	○	○	○	My supervisor will approve of it.

Suppose you had to use one word to describe yourself. Which one would you use?

1	2	3	4	
○	○	○	○	Unique
○	○	○	○	Competitive
○	○	○	○	Cooperative
○	○	○	○	Dutiful

Happiness is attained by

1	2	3	4	
○	○	○	○	gaining a lot of status in the community.
○	○	○	○	linking with a lot of friendly people.
○	○	○	○	keeping one's privacy.
○	○	○	○	winning in competitions.



You are planning a major trip that is likely to inconvenience of people at your place of work, during your absence. With whom will you discuss it, before deciding whether or not to take it?

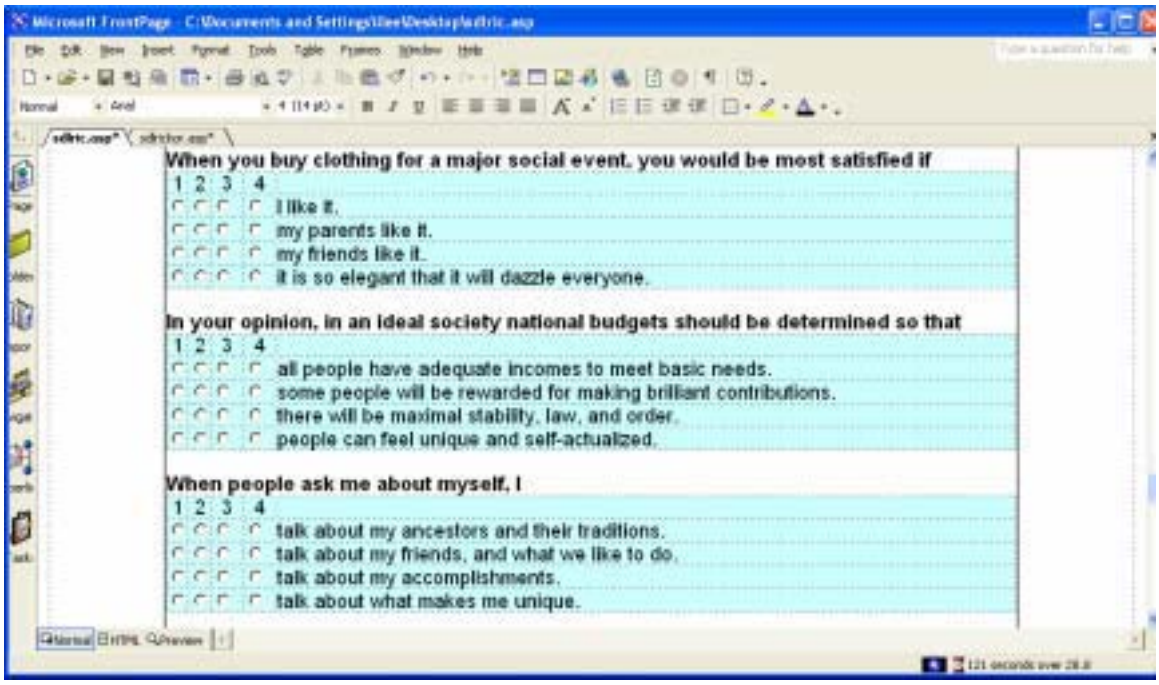
1	2	3	4	
○	○	○	○	No one
○	○	○	○	My parents
○	○	○	○	My spouse or close friend
○	○	○	○	Experts about the place I plan to travel to, so I can decide if I want to go

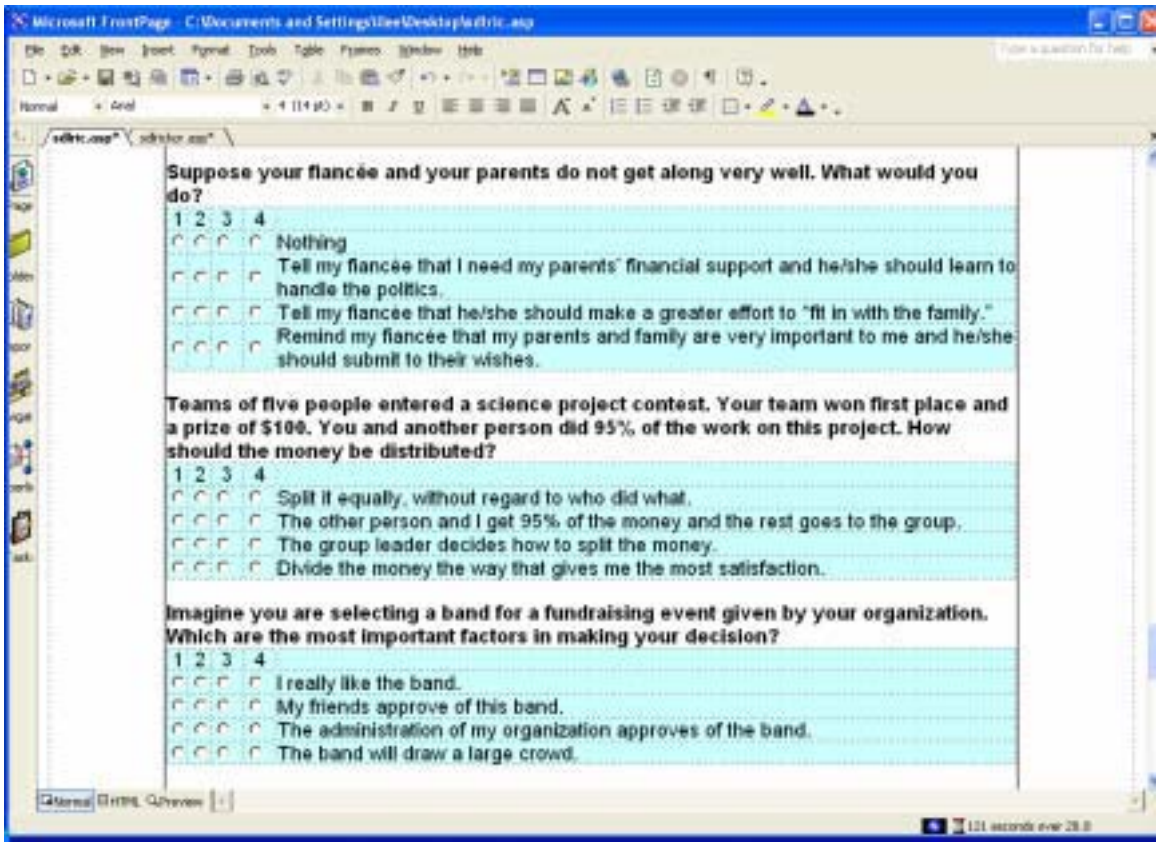
Which one of these four books appears to you to be the most interesting?

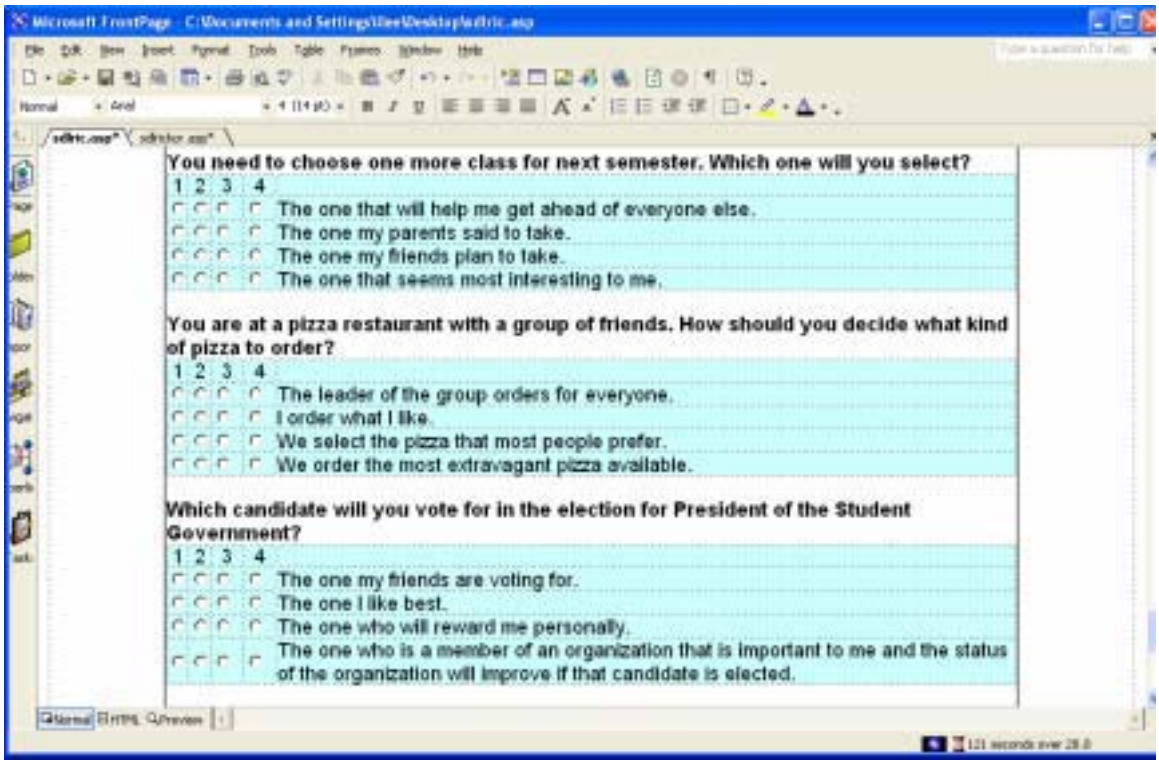
1	2	3	4	
○	○	○	○	How to make friends
○	○	○	○	How to succeed in business
○	○	○	○	How to enjoy yourself inexpensively
○	○	○	○	How to make sure you are meeting your obligations

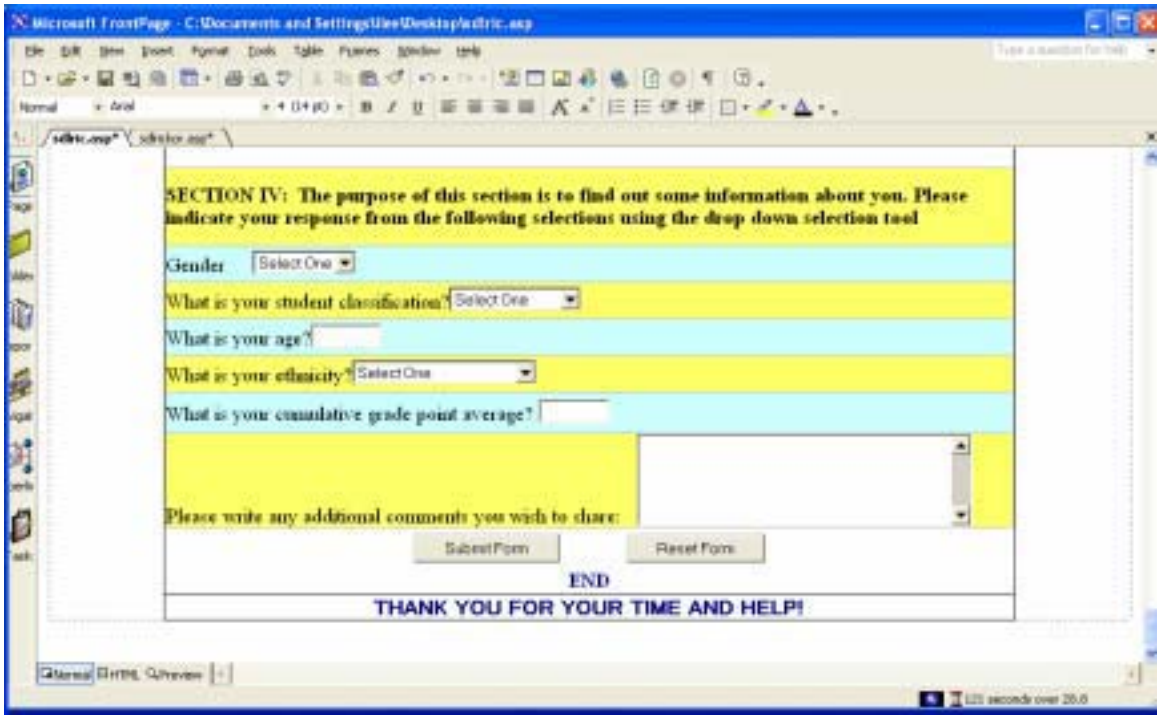
Which is the most important factor in an employee's promotion, assuming that all other factors such as tenure and performance are equal?

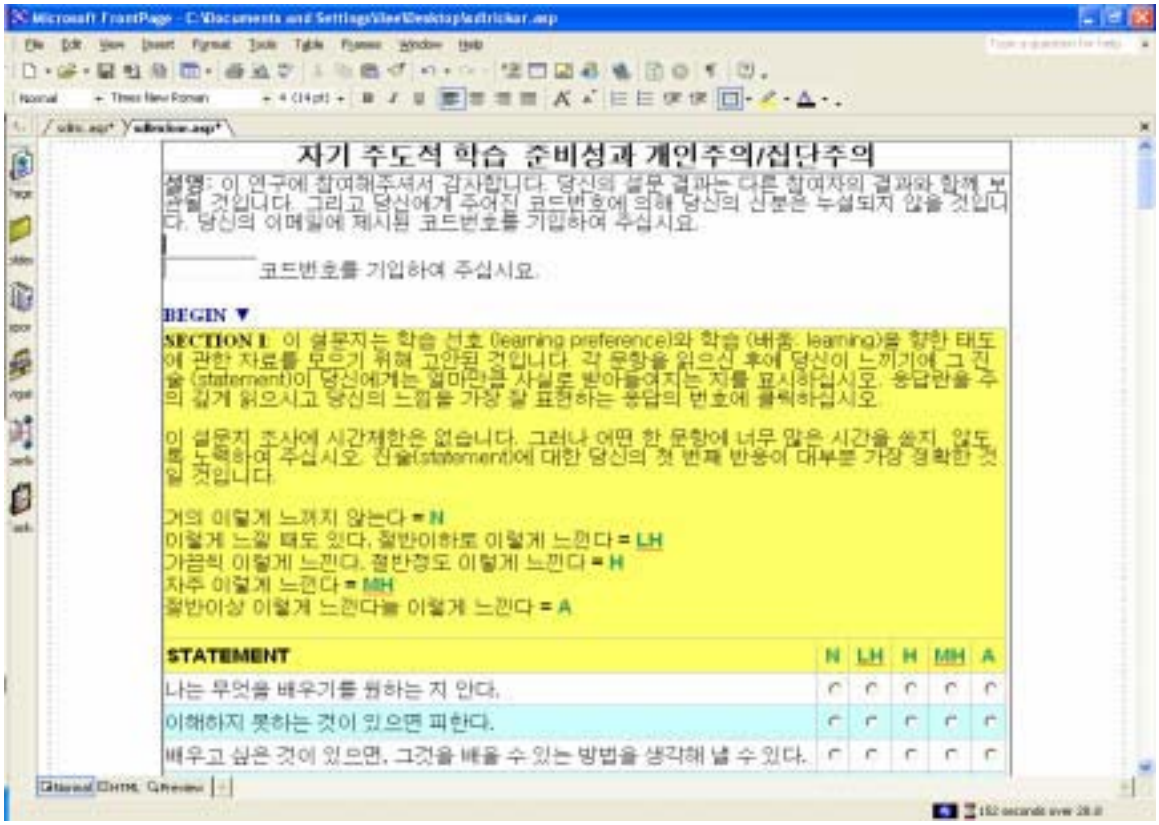
1	2	3	4	
○	○	○	○	Employee is loyal to the corporation.
○	○	○	○	Employee is obedient to the instructions from management.
○	○	○	○	Employee is able to think for him/herself.
○	○	○	○	Employee has contributed to the corporation much in past.


When you buy clothing for a major social event, you would be most satisfied if
1 2 3 4
I like it.
my parents like it.
my friends like it.
it is so elegant that it will dazzle everyone.
In your opinion, in an ideal society national budgets should be determined so that
1 2 3 4
all people have adequate incomes to meet basic needs.
some people will be rewarded for making brilliant contributions.
there will be maximal stability, law, and order.
people can feel unique and self-actualized.
When people ask me about myself, I
1 2 3 4
talk about my ancestors and their traditions.
talk about my friends, and what we like to do.
talk about my accomplishments.
talk about what makes me unique.


Suppose your fiancée and your parents do not get along very well. What would you do?
1 2 3 4
Nothing
Tell my fiancée that I need my parents' financial support and he/she should learn to handle the politics.
Tell my fiancee that he/she should make a greater effort to "fit in with the family."
Remind my fiancée that my parents and family are very important to me and he/she should submit to their wishes.
Teams of five people entered a science project contest. Your team won first place and a prize of $100. You and another person did 95% of the work on this project. How should the money be distributed?
1 2 3 4
Split it equally, without regard to who did what.
The other person and I get 95% of the money and the rest goes to the group.
The group leader decides how to split the money.
Divide the money the way that gives me the most satisfaction.
Imagine you are selecting a band for a fundraising event given by your organization. Which are the most important factors in making your decision?
1 2 3 4
I really like the band.
My friends approve of this band.
The administration of my organization approves of the band.
The band will draw a large crowd.


You need to choose one more class for next semester. Which one will you select?
1 2 3 4
The one that will help me get ahead of everyone else.
The one my parents said to take.
The one my friends plan to take.
The one that seems most interesting to me.
You are at a pizza restaurant with a group of friends. How should you decide what kind of pizza to order?
1 2 3 4
The leader of the group orders for everyone.
I order what I like.
We select the pizza that most people prefer.
We order the most extravagant pizza available.
Which candidate will you vote for in the election for President of the Student Government?
1 2 3 4
The one my friends are voting for.
The one I like best.
The one who will reward me personally.
The one who is a member of an organization that is important to me and the status of the organization will improve if that candidate is elected.


SECTION IV: The purpose of this section is to find out some information about you. Please indicate your response from the following selections using the drop down selection tool
Gender
Select One
What is your student classification?
Select One
What is your age?
What is your ethnicity?
Select One
What is your cumulative grade point average?
Please write any additional comments you wish to share:
Submit Form
Reset Form
END
THANK YOU FOR YOUR TIME AND HELP!



자기 주도적 학습 준비성과 개인주의/집단주의

설명: 이 연구에 참여해주셔서 감사합니다. 당신의 설문 결과는 다른 참여자의 결과와 함께 보관될 것입니다. 그리고 당신에게 주어진 코드번호에 의해 당신의 신분은 누설되지 않을 것입니다. 당신의 이메일에 제시된 코드번호를 기입하여 주십시요.

코드번호를 기입하여 주십시요.

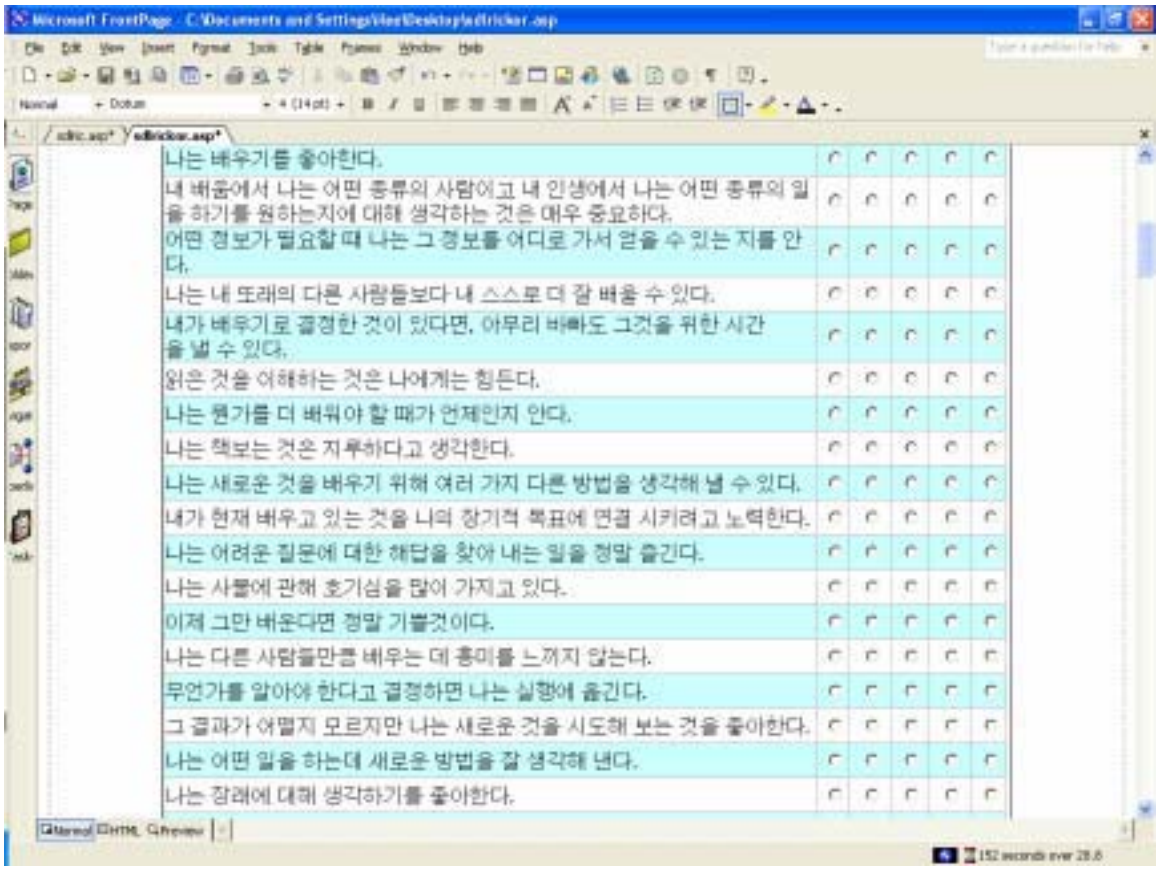
BEGIN ▼

SECTION I: 이 설문지는 학습 선호 (learning preference)와 학습 (배움: learning)을 향한 태도에 관한 자료를 모으기 위해 고안된 것입니다. 각 문항을 읽으신 후에 당신이 느끼기에 그 진술 (statement)이 당신에게는 얼마만큼 사실로 받아들여지는 지를 표시하십시오. 응답란을 주의 깊게 읽으시고 당신의 느낌을 가장 잘 표현하는 응답의 번호에 클릭하십시오.

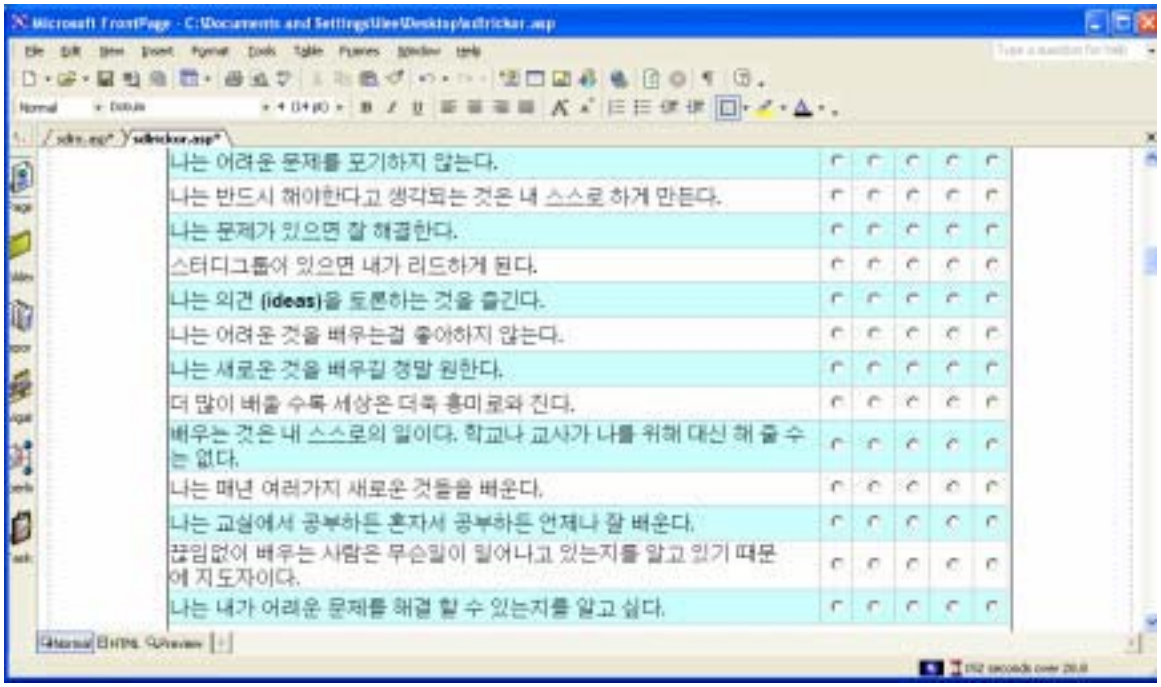
이 설문지 조사에 시간제한은 없습니다. 그러나 어떤 한 문항에 너무 많은 시간을 쓰지 않도록 노력하여 주십시오. 진술(statement)에 대한 당신의 첫 번째 반응이 대부분 가장 정확한 것일 것입니다.

거의 이렇게 느끼지 않는다 = N
이렇게 느낄 때도 있다, 절반이하로 이렇게 느낀다 = LH
가끔씩 이렇게 느낀다, 절반정도 이렇게 느낀다 = H
자주 이렇게 느낀다 = MH
절반이상 이렇게 느낀다늘 이렇게 느낀다 = A

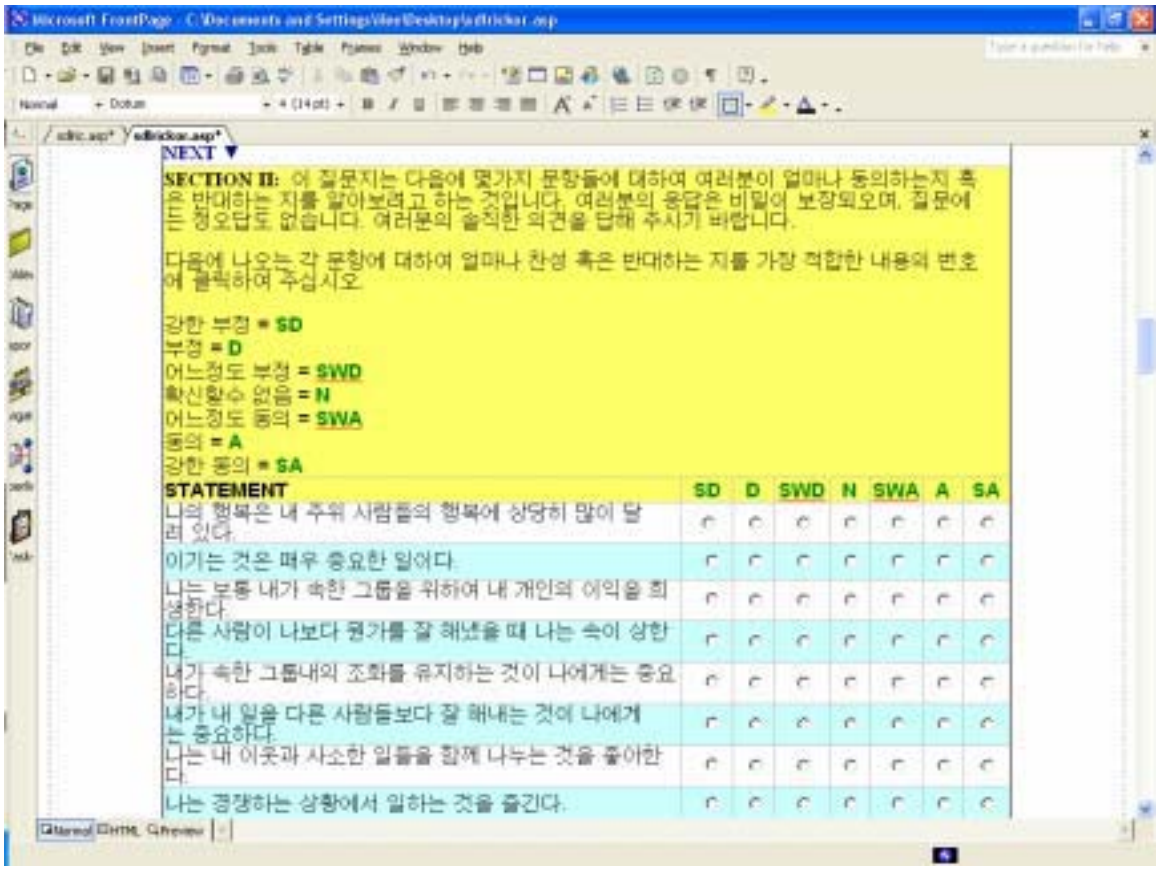
STATEMENT	N	LH	H	MH	A
나는 무엇을 배우기를 원하는 지 안다.	○	○	○	○	○
이해하지 못하는 것이 있으면 피한다.	○	○	○	○	○
배우고 싶은 것이 있으면, 그것을 배울 수 있는 방법을 생각해 낼 수 있다.	○	○	○	○	○



나는 배우기를 좋아한다.	○	○	○	○	○
내 배움에서 나는 어떤 종류의 사람이고 내 인생에서 나는 어떤 종류의 일을 하기를 원하는지에 대해 생각하는 것은 매우 중요하다.	○	○	○	○	○
어떤 정보가 필요할 때 나는 그 정보를 어디로 가서 얻을 수 있는 지를 안다.	○	○	○	○	○
나는 내 또래의 다른 사람들보다 내 스스로 더 잘 배울 수 있다.	○	○	○	○	○
내가 배우기로 결정한 것이 있다면, 아무리 바빠도 그것을 위한 시간을 낼 수 있다.	○	○	○	○	○
읽은 것을 이해하는 것은 나에게는 힘든다.	○	○	○	○	○
나는 뭔가를 더 배워야 할 때가 언제인지 안다.	○	○	○	○	○
나는 책보는 것은 지루하다고 생각한다.	○	○	○	○	○
나는 새로운 것을 배우기 위해 여러 가지 다른 방법을 생각해 낼 수 있다.	○	○	○	○	○
내가 현재 배우고 있는 것을 나의 장기적 목표에 연결 시키려고 노력한다.	○	○	○	○	○
나는 어려운 질문에 대한 해답을 찾아 내는 일을 정말 즐긴다.	○	○	○	○	○
나는 사물에 관해 호기심을 많이 가지고 있다.	○	○	○	○	○
이제 그만 배운다면 정말 기쁠것이다.	○	○	○	○	○
나는 다른 사람들만큼 배우는 데 흥미를 느끼지 않는다.	○	○	○	○	○
무언가를 알아야 한다고 결정하면 나는 실행에 옮긴다.	○	○	○	○	○
그 결과가 어떨지 모르지만 나는 새로운 것을 시도해 보는 것을 좋아한다.	○	○	○	○	○
나는 어떤 일을 하는데 새로운 방법을 잘 생각해 낸다.	○	○	○	○	○
나는 장래에 대해 생각하기를 좋아한다.	○	○	○	○	○



나는 어려운 문제를 포기하지 않는다.					
나는 반드시 해야한다고 생각되는 것은 내 스스로 하게 만든다.					
나는 문제가 있으면 잘 해결한다.					
스터디그룹이 있으면 내가 리드하게 된다.					
나는 의견 (ideas)을 토론하는 것을 즐긴다.					
나는 어려운 것을 배우는걸 좋아하지 않는다.					
나는 새로운 것을 배우길 정말 원한다.					
더 많이 배울 수록 세상은 더욱 흥미로와 진다.					
배우는 것은 내 스스로의 일이다. 학교나 교사가 나를 위해 대신 해 줄 수는 없다.					
나는 매년 여러가지 새로운 것들을 배운다.					
나는 교실에서 공부하든 혼자서 공부하든 언제나 잘 배운다.					
끊임없이 배우는 사람은 무슨일이 일어나고 있는지를 알고 있기 때문에 지도자이다.					
나는 내가 어려운 문제를 해결 할 수 있는지를 알고 싶다.					



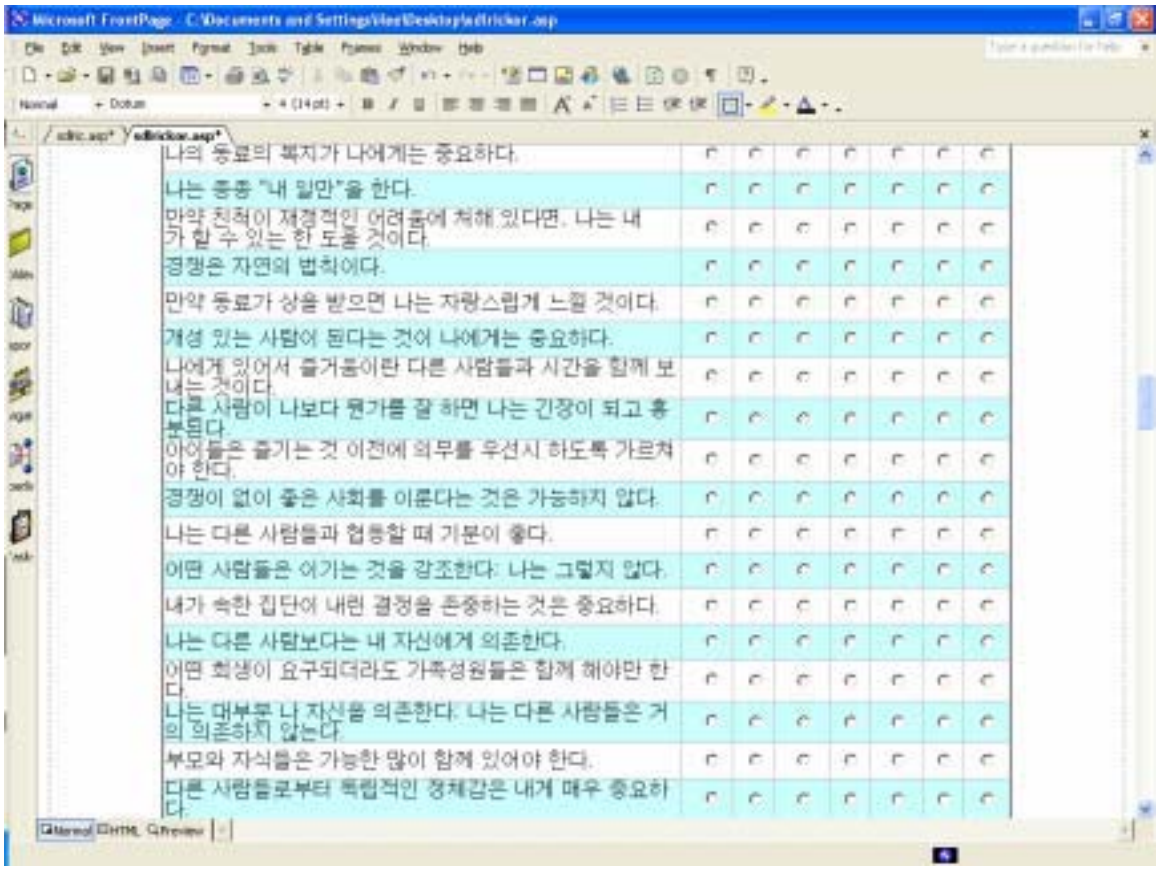
NEXT ▼

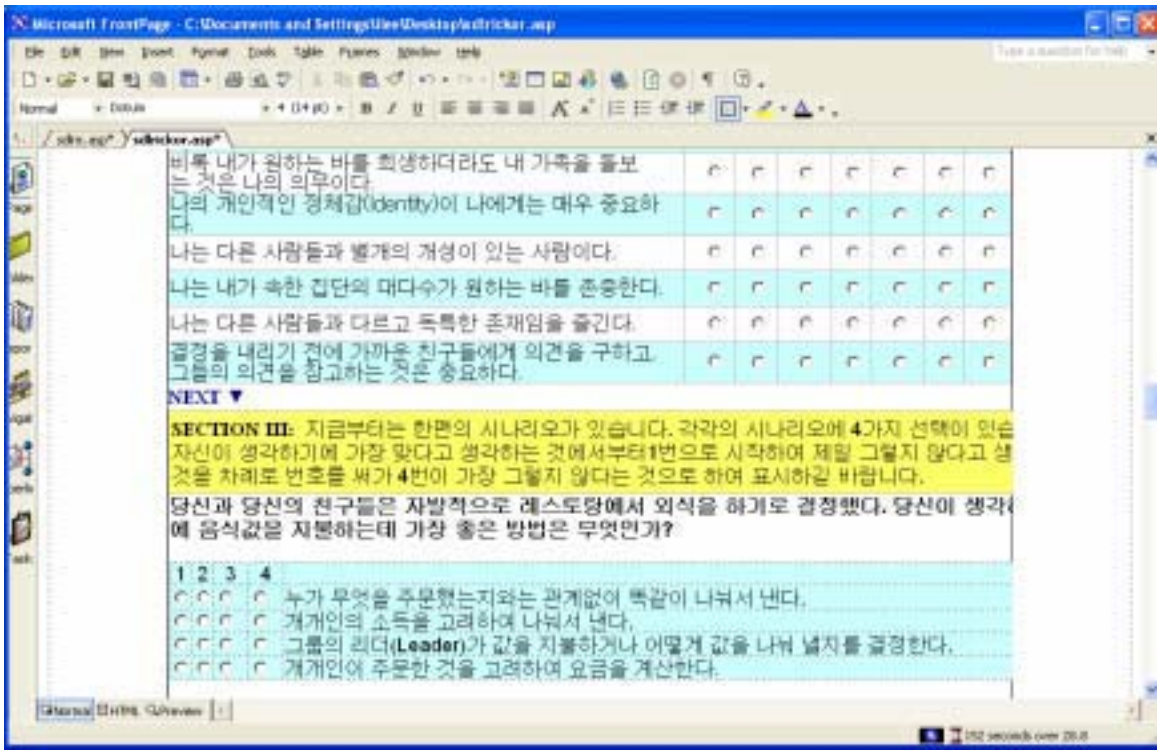
SECTION II: 이 질문지는 다음에 몇가지 문항들에 대하여 여러분이 얼마나 동의하는지 혹은 반대하는 지를 알아보려고 하는 것입니다. 여러분의 응답은 비밀이 보장되오며, 질문에는 정오답도 없습니다. 여러분의 솔직한 의견을 답해 주시기 바랍니다.

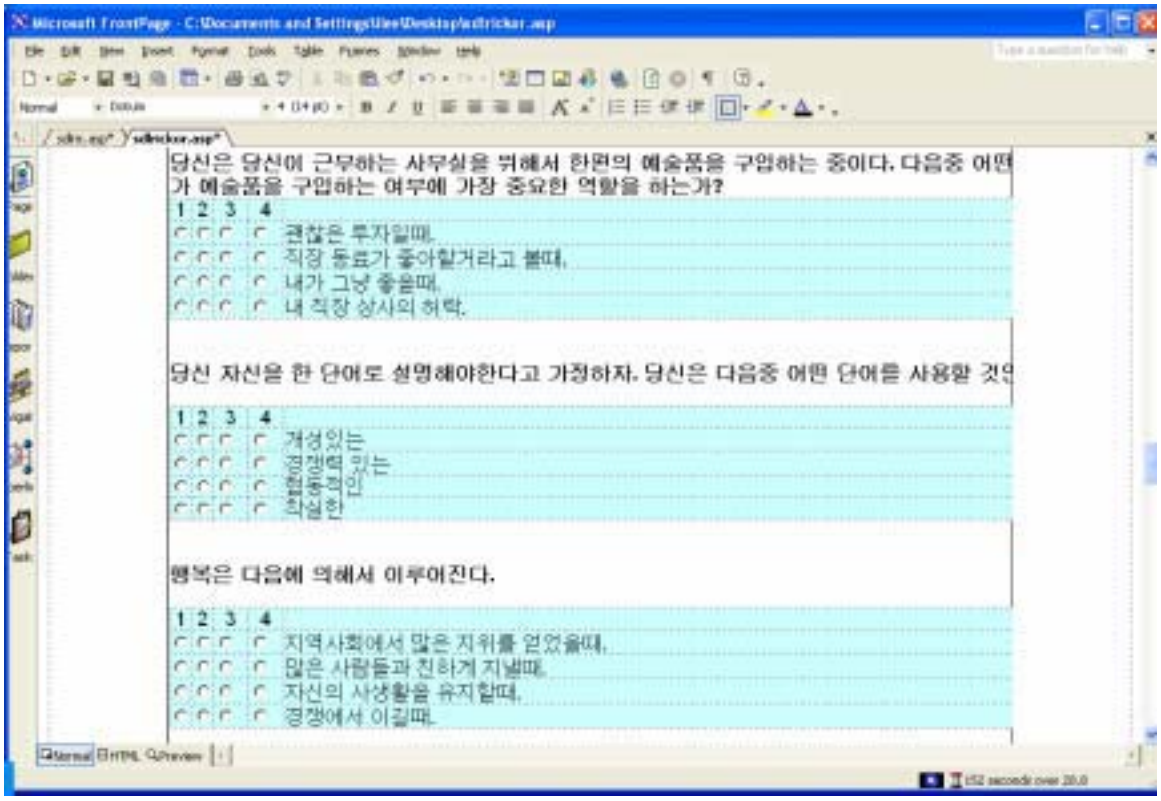
다음에 나오는 각 문항에 대하여 얼마나 찬성 혹은 반대하는 지를 가장 적합한 내용의 번호에 클릭하여 주십시오.

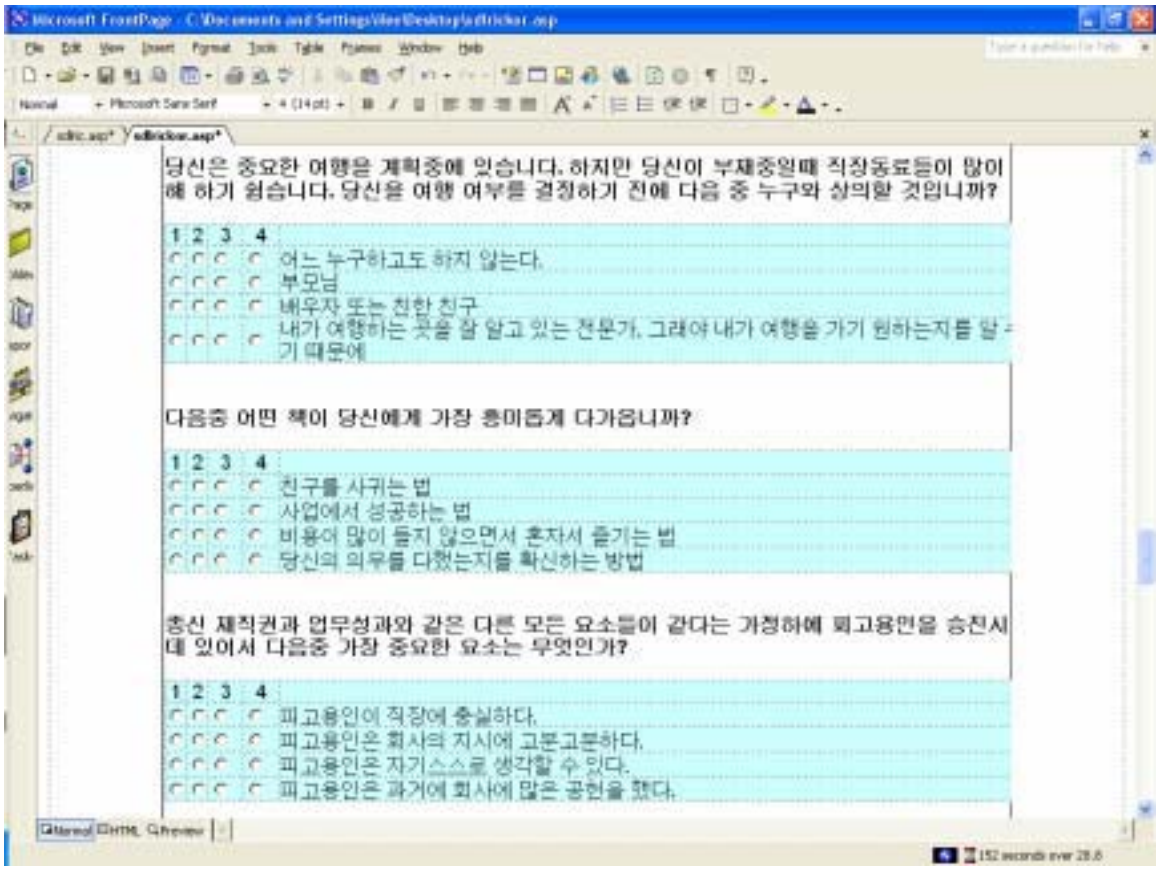
강한 부정 = **SD**
부정 = **D**
어느정도 부정 = **SWD**
확신할수 없음 = **N**
어느정도 동의 = **SWA**
동의 = **A**
강한 동의 = **SA**

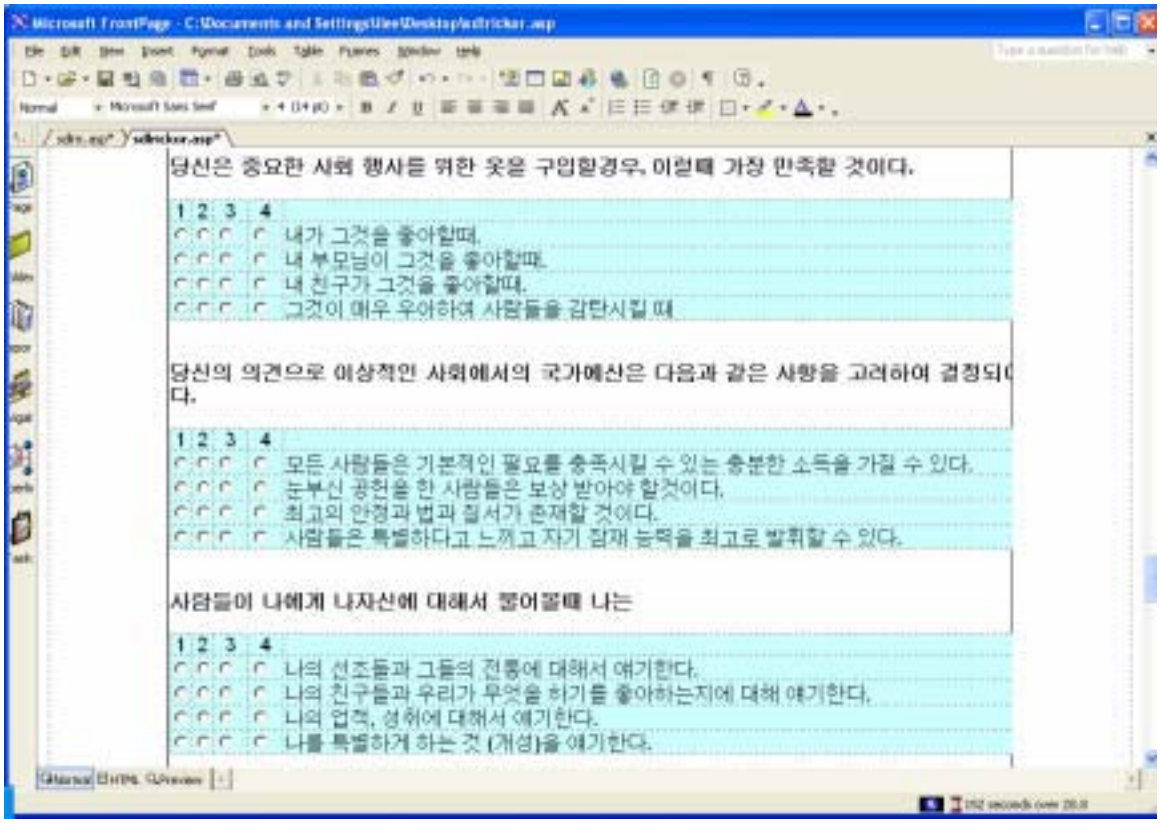
STATEMENT	SD	D	SWD	N	SWA	A	SA
나의 행복은 내 주위 사람들의 행복에 상당히 많이 달려 있다.							
이기는 것은 퍼우 중요한 일이다.							
나는 보통 내가 속한 그룹을 위하여 내 개인의 이익을 희생한다.							
다른 사람이 나보다 뭔가를 잘 해냈을 때 나는 속이 상한다.							
내가 속한 그룹내의 조화를 유지하는 것이 나에게는 중요하다.							
내가 내 일을 다른 사람들보다 잘 해내는 것이 나에게는 중요하다.							
나는 내 이웃과 사소한 일들을 함께 나누는 것을 좋아한다.							
나는 경쟁하는 상황에서 일하는 것을 즐긴다.							

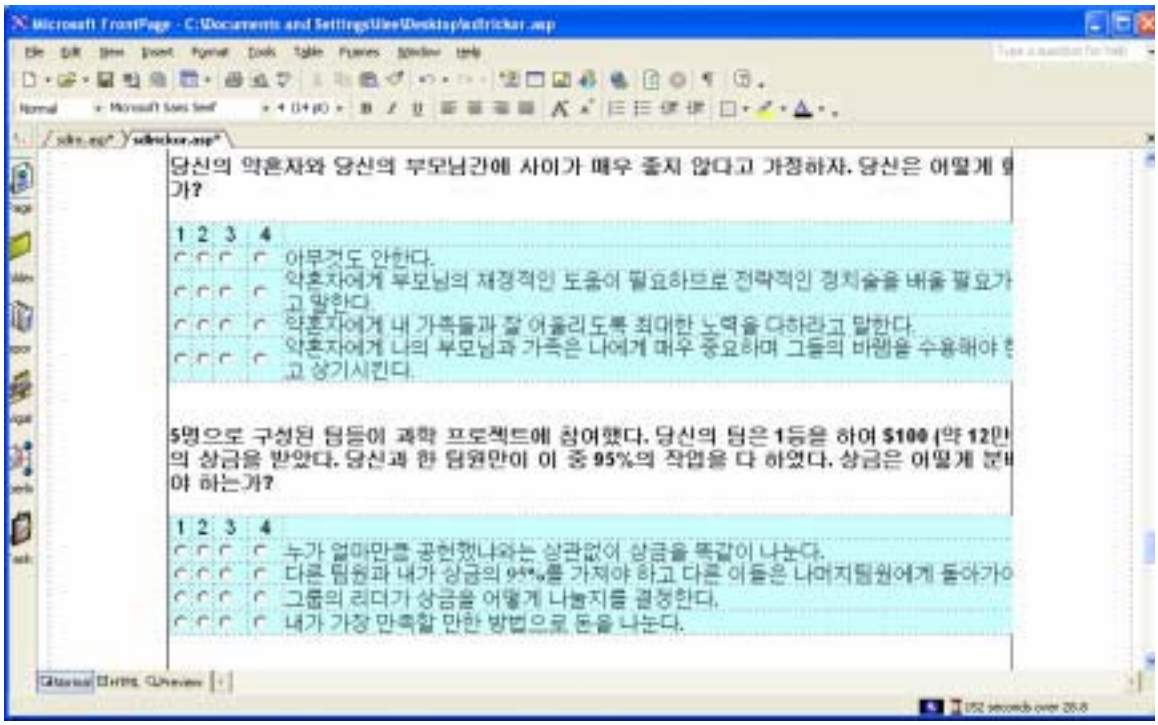

나의 동료의 복지가 나에게는 중요하다.
나는 종종 "내 일만"을 한다.
만약 친척이 재정적인 어려움에 처해 있다면, 나는 내가 할 수 있는 한 도울 것이다.
경쟁은 자연의 법칙이다.
만약 동료가 상을 받으면 나는 자랑스럽게 느낄 것이다.
개성 있는 사람이 된다는 것이 나에게는 중요하다.
나에게 있어서 즐거움이란 다른 사람들과 시간을 함께 보내는 것이다.
다른 사람이 나보다 뭔가를 잘 하면 나는 긴장이 되고 흥분된다.
아이들은 즐기는 것 이전에 의무를 우선시 하도록 가르쳐야 한다.
경쟁이 없이 좋은 사회를 이룬다는 것은 가능하지 않다.
나는 다른 사람들과 협동할 때 기분이 좋다.
어떤 사람들은 어기는 것을 강조한다: 나는 그렇지 않다.
내가 속한 집단이 내린 결정을 존중하는 것은 중요하다.
나는 다른 사람보다는 내 자신에게 의존한다.
어떤 희생이 요구되더라도 가족성원들은 함께 해야만 한다.
나는 대부분 나 자신을 의존한다. 나는 다른 사람들은 거의 의존하지 않는다.
부모와 자식들은 가능한 많이 함께 있어야 한다.
다른 사람들로부터 독립적인 정체감은 내게 매우 중요하다.

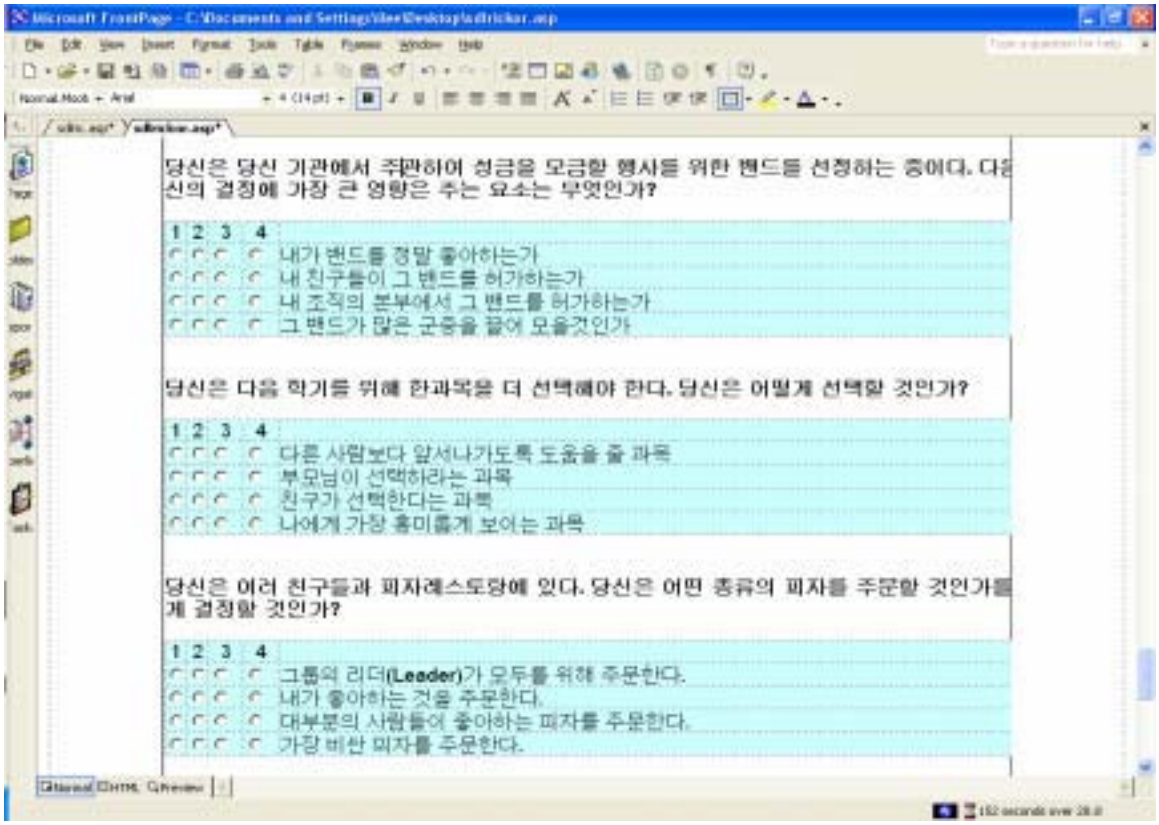

비록 내가 원하는 바를 희생하더라도 내 가족을 돌보는 것은 나의 의무이다.
나의 개인적인 정체감(identity)이 나에게는 매우 중요하다.
나는 다른 사람들과 별개의 개성이 있는 사람이다.
나는 내가 속한 집단의 대다수가 원하는 바를 존중한다.
나는 다른 사람들과 다르고 독특한 존재임을 즐긴다.
결정을 내리기 전에 가까운 친구들에게 의견을 구하고 그들의 의견을 참고하는 것은 중요하다.
NEXT ▼
SECTION III: 지금부터는 한편의 시나리오가 있습니다. 각각의 시나리오에 4가지 선택이 있는
자신이 생각하기에 가장 맞다고 생각하는 것에서부터 1번으로 시작하여 제일 그렇지 않다고 생
것을 차례로 번호를 써가 4번이 가장 그렇지 않다는 것으로 하여 표시하길 바랍니다.
당신과 당신의 친구들은 자발적으로 레스토랑에서 외식을 하기로 결정했다. 당신이 생각
에 음식값을 지불하는데 가장 좋은 방법은 무엇인가?
1 2 3 4
누가 무엇을 주문했는지와는 관계없이 똑같이 나눠서 낸다.
개개인의 소득을 고려하여 나눠서 낸다.
그룹의 리더(Leader)가 값을 지불하거나 어떻게 값을 나눠 낼지를 결정한다.
개개인이 주문한 것을 고려하여 요금을 계산한다.

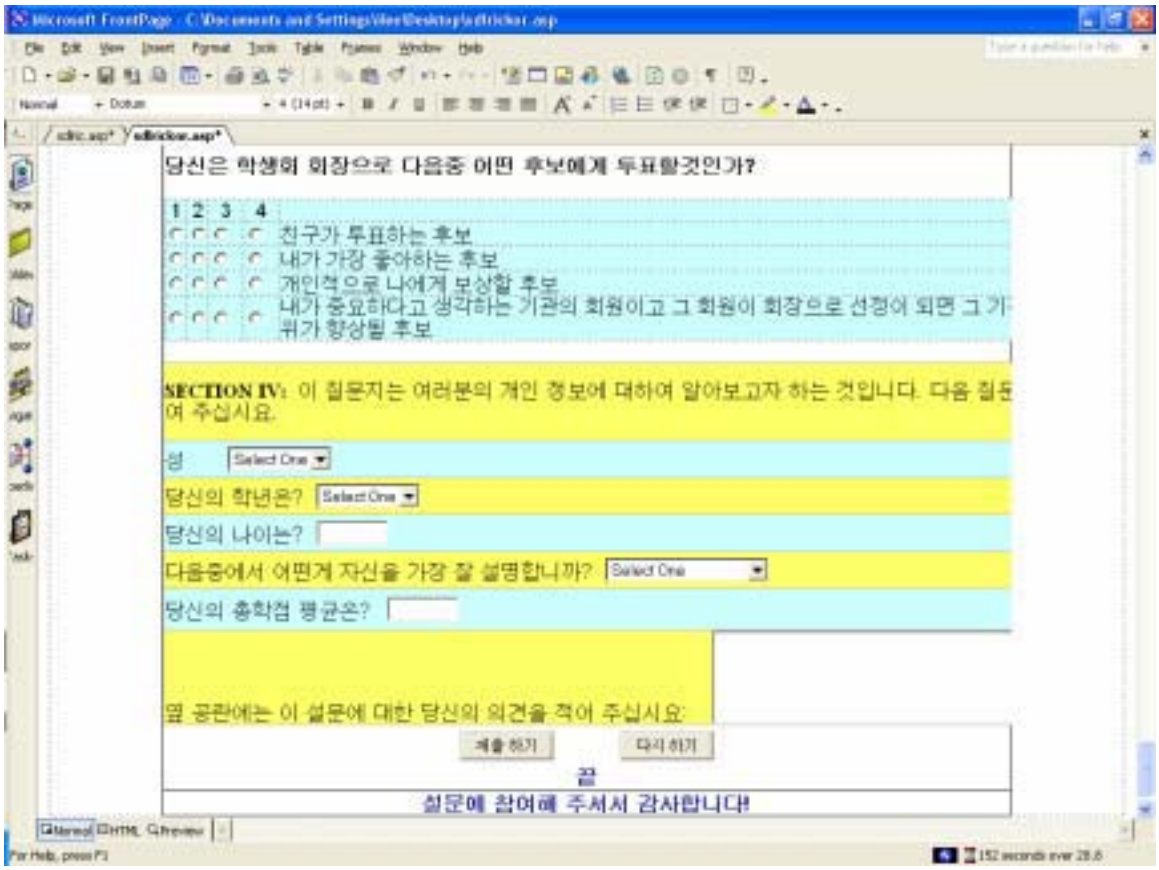

당신은 당신이 근무하는 사무실을 위해서 한편의 예술품을 구입하는 중이다. 다음중 어떤
가 예술품을 구입하는 여부에 가장 중요한 역할을 하는가?
1 2 3 4
관찰은 투자일때.
직장 동료가 좋아할거라고 볼때.
내가 그냥 좋을때.
내 직장 상사의 허락.
당신 자신을 한 단어로 설명해야한다고 가정하자. 당신은 다음중 어떤 단어를 사용할 것인
1 2 3 4
개성있는
경쟁력 있는
협동적인
착실한
행복은 다음에 의해서 이루어진다.
1 2 3 4
지역사회에서 많은 지위를 얻었을때.
많은 사람들과 친하게 지낼때.
자신의 사생활을 유지할때.
경쟁에서 이길때.


당신은 중요한 여행을 계획중에 있습니다. 하지만 당신이 부재중일때 직장동료들이 많이
해 하기 원합니다. 당신을 여행 여부를 결정하기 전에 다음 중 누구와 상의할 것입니까?
1 2 3 4
어느 누구하고도 하지 않는다.
부모님
배우자 또는 친한 친구
내가 여행하는 곳을 잘 알고 있는 전문가. 그래야 내가 여행을 가기 원하는지를 알
기 때문에
다음중 어떤 책이 당신에게 가장 흥미롭게 다가옵니까?
1 2 3 4
친구를 사귀는 법
사업에서 성공하는 법
비용이 많이 들지 않으면서 혼자서 즐기는 법
당신의 의무를 다했는지를 확신하는 방법
종신 재직권과 업무성과와 같은 다른 모든 요소들이 같다는 가정하에 피고용인을 승진시
데 있어서 다음중 가장 중요한 요소는 무엇인가?
1 2 3 4
피고용인이 직장에 충실하다.
피고용인은 회사의 지시에 고분고분하다.
피고용인은 자기스스로 생각할 수 있다.
피고용인은 과거에 회사에 많은 공헌을 했다.


당신은 중요한 사회 행사를 위한 옷을 구입할경우, 이럴때 가장 만족할 것이다.
1 2 3 4
내가 그것을 좋아할때.
내 부모님이 그것을 좋아할때.
내 친구가 그것을 좋아할때.
그것이 매우 우아하여 사람들을 감탄시킬 때
당신의 의견으로 이상적인 사회에서의 국가예산은 다음과 같은 사항을 고려하여 결정되
다.
1 2 3 4
모든 사람들은 기본적인 필요를 충족시킬 수 있는 충분한 소득을 가질 수 있다.
눈부신 공헌을 한 사람들은 보상 받아야 할것이다.
최고의 안정과 법과 질서가 존재할 것이다.
사람들은 특별하다고 느끼고 자기 잠재 능력을 최고로 발휘할 수 있다.
사람들이 나에게 나자신에 대해서 물어볼때 나는
1 2 3 4
나의 선조들과 그들의 전통에 대해서 얘기한다.
나의 친구들과 우리가 무엇을 하기를 좋아하는지에 대해 얘기한다.
나의 업적, 성취에 대해서 얘기한다.
나를 특별하게 하는 것 (개성)을 얘기한다.


당신의 악혼자와 당신의 부모님간에 사이가 매우 좋지 않다고 가정하자. 당신은 어떻게
가?
1 2 3 4
아무것도 안한다.
악혼자에게 부모님의 재정적인 도움이 필요하므로 전략적인 정치술을 배울 필요가
고 말한다.
악혼자에게 내 가족들과 잘 어울리도록 최대한 노력을 다하라고 말한다.
악혼자에게 나의 부모님과 가족은 나에게 매우 중요하며 그들의 바램을 수용해야
고 상기시킨다.
5명으로 구성된 팀등이 과학 프로젝트에 참여했다. 당신의 팀은 1등을 하여 $100 (약 12만
의 상금을 받았다. 당신과 한 팀원만이 이 중 95%의 작업을 다 하였다. 상금은 어떻게 분
야 하는가?
1 2 3 4
누가 얼마만큼 공헌했나와는 상관없이 상금을 똑같이 나눈다.
다른 팀원과 내가 상금의 95%를 가져야 하고 다른 이들은 나머지팀원에게 돌아가
그룹의 리더가 상금을 어떻게 나눌지를 결정한다.
내가 가장 만족할 만한 방법으로 돈을 나눈다.


당신은 당신 기관에서 주관하여 성금을 모금할 행사를 위한 밴드를 선정하는 중이다. 다음 신의 결정에 가장 큰 영향을 주는 요소는 무엇인가?
1 2 3 4
내가 밴드를 정말 좋아하는가
내 친구들이 그 밴드를 허가하는가
내 조직의 본부에서 그 밴드를 허가하는가
그 밴드가 많은 군중을 끌어 모을것인가
당신은 다음 학기를 위해 한과목을 더 선택해야 한다. 당신은 어떻게 선택할 것인가?
1 2 3 4
다른 사람보다 앞서나가도록 도움을 줄 과목
부모님이 선택하라는 과목
친구가 선택한다는 과목
나에게 가장 흥미롭게 보이는 과목
당신은 이러 친구들과 피자레스토랑에 있다. 당신은 어떤 종류의 피자를 주문할 것인가를 계 결정할 것인가?
1 2 3 4
그룹의 리더(Leader)가 모두를 위해 주문한다.
내가 좋아하는 것을 주문한다.
대부분의 사람들이 좋아하는 피자를 주문한다.
가장 비싼 피자를 주문한다.


당신은 학생회 회장으로 다음중 어떤 후보에게 투표할것인가?
1 2 3 4
친구가 투표하는 후보
내가 가장 좋아하는 후보
개인적으로 나에게 보상할 후보
내가 중요하다고 생각하는 기관의 회원이고 그 회원이 회장으로 선정이 되면 그 기관 위가 향상될 후보
SECTION IV: 이 질문지는 여러분의 개인 정보에 대하여 알아보고자 하는 것입니다. 다음 질문 여 주십시요.
성 Select One
당신의 학년은? Select One
당신의 나이는?
다음중에서 어떤게 자신을 가장 잘 설명합니까? Select One
당신의 총학점 평균은?
옆 공란에는 이 설문에 대한 당신의 의견을 적어 주십시요:
계출하기
다시하기
끝
설문에 참여해 주셔서 감사합니다!

VITA

IN HEOK LEE

Address: 107-1301 Daewoo APT. Walgyedong, Gwangsangu, Gwangju Metropolitan City, South Korea

Education: M.S., Major: Agricultural Education
Texas A&M University, College Station, TX, U.S.A., 2004

B.S., Major: Agricultural Education
Minor: Environmental Education
Sunchon National University, Sunchon, South Korea, 2002

Professional: Graduate Assistant
Department of Agricultural Education
Texas A&M University, College Station, Texas, U.S.A.
January 2003 – December 2004

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