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Impact of Entrepreneurship Education: A Comparative Study of the U.S. and Korea

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Abstract. Over the last two decades, entrepreneurship has emerged as a mainstream business discipline in the United States. Even after the collapse of the dotcom phenomenon, the global explosion of e-business and new business opportunities created by advances in information and telecommunication technologies (ICT) have widely popularized entrepreneurship for new venture creation. But while entrepreneurship is becoming more prevalent throughout the world, its education by country differs according to cultural context. This paper presents the results of a study on the impact of entrepreneurship education in the U.S. and Korea.

Keywords: entrepreneurship education, venture creation, culture, competitiveness

Entrepreneurship education provides students motivation, knowledge, and skills essential for launching a successful venture company (Cho, 1998). Nevertheless, the extent of entrepreneurship education by country differs according to each country's unique cultural context (Lee and Peterson, 2000). For example, high school students in the U.S. are already quite familiar with entrepreneurship. On the other hand, the city government of Tokyo, Japan officially announced its plan to launch entrepreneurship education for the first time to high school students in January, 2001 (Chosun Daily Newspaper, November 29, 2000). Also in Korea, only a few colleges have developed entrepreneurship as a business field of study. Most Korean colleges have introduced entrepreneurship-related courses as part of the requirements for fulfilling general education rather than a specialization area.

American entrepreneurs, great cultivators of entrepreneurial spirit, have greatly contributed to economic growth within the U.S. by creating and successfully managing countless venture companies. On the other hand, lack of entrepreneurship education in Korea has resulted in deficiency of entrepreneurial culture in Korea—which may be

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one of the reasons that South Korea is still struggling to overcome the financial crisis that began in 1997.

It is meaningful to conduct a comparative study of the impact of entrepreneurship education between the U.S. and Korea for the following reasons: (1) It can identify the mediating role of cultural differences between entrepreneurship education and its effects; (2) It could suggest a meaningful new direction for entrepreneurship education both in the U.S. and Korea; and (3) The results of this study may be broadly applied to other countries where strong entrepreneurship can contribute to building a more solid economy. This is an empirical study conducted in the U.S., where there exists strong entrepreneurship tradition, and in Korea, where entrepreneurship is just beginning to emerge as an important business discipline.

Theoretical framework

Entrepreneurship and entrepreneurs

There is no universal definition of entrepreneurship and scholars' view of the topic has changed considerably since Schumpeter (1934) defined it for the first time. Drucker (1985) called entrepreneurship an "innovative act, which includes endowing existing resources for new wealth-producing capacity." Gartner (1985) described it as the "creation of a new organization." It is important to note, however, that entrepreneurship, a primary source of innovation, may involve the development of new visions and business methods for established companies as well as the creation of new organizations (Carnier, 1996). Therefore, entrepreneurship can be applied to all kinds of organizations including non-profit institutions.

Although many studies assert that entrepreneurs are different from non-entrepreneurs, there is no unified definition description of entrepreneurs. Instead, scholars have developed various definitions of entrepreneurs (Brockhaus, 1980a, 1980b). Gartner (1985) attempted to find differences in personality and background between entrepreneurs and non-entrepreneurs—namely, that entrepreneurs are cultivated by cultural, economic, social, political, and educational backgrounds that are fundamentally different from those of non-entrepreneurs and that each entrepreneur has his/her unique motivation, goals, and talents for venture creation according to his/her unique background.

More recently, Watson, Hogarth-Scott, and Wilson (1998) cited personal background, motivation for start-up, and growth orientation as factors for successful venture creation. According to Morrison's (1999) study, the profile of an entrepreneur is one who: (1) is intelligent and analytical, (2) is an effective risk manager and a networker, (3) possesses a strong set of moral, social and business ethics, (4) exhibits a basic trader's instinct, and (5) is dedicated to life-long learning in many forms. The talents included in Morrison's definition are important requirements for becoming successful entrepreneurs in the knowledge era.

Lee and Peterson (2000) state that even those individuals who are motivated by such factors as financial rewards, achievement, social, career, and individual fulfillment need a national culture that supports and encourages entrepreneurial activity.

Watson, Hogarth-Scott and Wilson's (1998) and Morrison's (1999) studies also contend that entrepreneurial spirit needs appropriate social and cultural background to initiate motives for venture creation and aspiration for excellence in various academic areas in order to create successful venture. Watson et al. (1998), Morrison (1999), and Lee and Peterson (2000) agree that great entrepreneurs do not grow by themselves, but that they are products of entrepreneurship-oriented societies and cultures.

Entrepreneurship education and entrepreneur

As Watson et al. (1998) pointed out, entrepreneurs are different from non-entrepreneurs in many aspects. Many previous studies have tried to prove this. Furthermore, as Gartner (1985) assumed when he developed his own conceptual framework for describing the phenomenon of new venture creation based on previous studies, the difference among entrepreneurs or new ventures is more considerable than between entrepreneurs and non-entrepreneurs in terms of personality and background. These facts strongly imply that entrepreneurial talents can be "matured-up" by postnatal education since: (1) inborn nature is not sufficient to explain the difference and (2) most factors identified in previous studies were achievable through proper education. So an individual's personality and ability can be uniquely developed according to the context of his or her education and willpower, and motivation can be differentiated according to postnatal environment where an individual grows. Thus, great diversity exists among entrepreneurs based on their "growing background" of social, cultural, and educational environments (Mckelvy, 1982).

Gartner (1989) suggested job satisfaction, previous work experiences, entrepreneurial parents, age, and education as the factors which differentiate entrepreneurs from non-entrepreneurs. According to previous studies, education in particular is one of the critical factors in distinguishing entrepreneurs from non-entrepreneurs. Based on the point that home-education from parents has a significant impact on an individual's life, entrepreneurial parents should also be included in the education category. In addition, many organizations allocate a great deal of resources to training their members through external as well as internal education opportunities. Thus, previous work experiences can be included in the category of education in a broad sense. Consequently, we can generalize that the relative importance of education is very high.

Cho (1998) also maintained that if entrepreneurial talent were innate and could not be built up postnatally, entrepreneurship education would lose its significance and that entrepreneurial talent should therefore not be perceived as innate. Furthermore, Cho's (1998) study reveals that entrepreneurship education promotes the intention of venture creation because entrepreneurship-related knowledge and skills stimulate an individual's motivation to create a new venture.

Timmons (1999) stated that team-based venture creation is more common than individual venture creation. Since it is difficult for every entrepreneur to have all required managerial knowledge, individuals with complementary backgrounds make effective teams for creating new venture companies. He also emphasized the importance of

entrepreneurship education by maintaining that skills required for successful venture creation are gained through postnatal learning such as teamwork experiences.

Entrepreneurship education in the U.S.

In the U.S., the number of universities and colleges with entrepreneurship curricula has increased dramatically since the late 1960s. Many schools offer entrepreneurship-related courses such as “Entrepreneurship & Venture Creation,” “Small Business Management,” “Enterprise Development,” etc. as an important part of their curricula. A greater number of colleges and graduate schools are establishing entrepreneurship as a major field (Solomon, Fernald and Weaver, 1993; Timmons, 1999).

The following are some examples of entrepreneurship-related curricula in the U.S.:

- Babson College undergraduate, MBA, and executive education programs in entrepreneurship. The undergraduate program offers twelve elective entrepreneurship courses, while its MBA program has fifteen independent entrepreneurship courses that fall into three broad categories including “Foundations Classes (fundamental and holistic entrepreneurship skills),” “Specialty Classes (specific discipline within entrepreneurship),” and “Support Classes (deep knowledge in one specific area study).” Its MBA program focuses on “educating creative leaders capable of initiating, managing, and implementing change.” The executive program is designed to promote opportunity recognition, team development, and resource leveraging (<http://www3.babson.edu/ESHIP/academics>).
- The Sloan School of Management at MIT “New Product and Venture Development” MBA program track. The track offers about seventeen entrepreneurship-related subjects that address marketing, sales, strategy, finance, new product development, and other disciplines required to guide the creation and growth of new high-tech ventures. Its emphases are “(1) How to take an idea or an invention and turn it into an innovation, that is, manage it to market; and (2) How to develop the hands-on leadership skills required in this multi-functional implementation process” (<http://entrepreneurship.mit.edu>).

In the U.S., more than 1500 colleges and universities offer entrepreneurship-related training and more than 100 active university-based entrepreneurship centers (Charney and Libecap, 2000). Small Business Management, Entrepreneurship, and New Venture Creation are the most frequently offered classes in two- and four-year colleges in the U.S., and Small Business Management is predominantly taught by colleges (Solomon, Duffy and Tarabishy, 2002). Not surprisingly then, graduates from entrepreneurship programs are three times more likely to be involved in new venture creation than non-entrepreneurship business graduates (Chaney and Libecap, 2000).

Entrepreneurship-oriented education and culture in the U.S. have been the foundation of strong infrastructures for creating many world-class organizations such as: Microsoft, Oracle, Dell, and Wal-Mart—as well as 36 million new jobs (Timmons, 1999).

These successful venture companies have additionally increased the wealth of the nation and strengthened competitive advantage of U.S. firms by creating innovative new products and services (Zahra, 1999).

Entrepreneurship education in Korea

The entrepreneurial education history of Korea is very short compared to that of the U.S. Currently, an increasing number of colleges and graduate schools are developing entrepreneurship-related courses to meet students' growing interests (JoongAng Daily Newspaper, March 2, 1999) and the job market for students majoring in Entrepreneurship is expected to grow due to increasing demand for entrepreneurial talents (Han and Lee, 1998). Concurrently, the Korean government has strongly supported venture creation by enacting the "Special Law for Venture Companies." The Ministry of Education has also created \$150 million to support entrepreneurial activities in colleges. Colleges may apply for these loans from the government by submitting well-prepared supporting plans for "On-Campus Venture Creations," where additional loans may be obtained once on-campus ventures have successfully paid off the loans. The paid loan is then re-loaned to the same university to support new "On-Campus Venture Creation" (MunHwa Daily Newspaper, March 13, 1999).

As mentioned earlier, venture creation is encouraged for all individuals regardless of age or the education level in the U.S. Meanwhile, though many Korean colleges began venture creation education after the Asian financial crisis in 1997, only two universities (SungSil and Hoseo Universities) established the venture creation management major in 1999, with Hoseo University establishing a "Professional Graduate School of Venture Creation." Currently, there are just a few entrepreneurship-related courses available at the junior college level. Thus, Korean education systems should more proactively provide opportunities to students who are interested in venture creation.

Theoretical background related to the research

Entrepreneurship, along with strong intent, are the two basic requirements for successful venture creation. Launching ventures without relevant knowledge is reckless even when there is strong intention for venture creation. Thus, appropriate entrepreneurship education is a precondition for bringing up the right perception and intention about entrepreneurship.

According to Schumpeter (1934), Timmons (1999) and Carnier (1996), corporate entrepreneurs who plan new start-ups within their organizations or participate in the process of creative destruction can be classified as entrepreneurs alongside their individual business counterparts. Thus, college students who hope to work in established companies and non-profit organizations as well as those who plan to launch their own ventures may be categorized as potential entrepreneurs. Consequently, entrepreneurship education should be available to all college students regardless of major to enhance competitive advantage, not only for students but the societies and nations where they are involved.

There have been just a few empirical studies on entrepreneurship education in Korea (Chang, 2000; Chang and Hong, 2001). These studies focused on the need for entrepreneurship education (Park, 1993), curriculum, course content and development of the major (Cho, 1998). In addition, Han and Lee (1998) emphasized continuous improvement in the quality of entrepreneurship-related courses and urged that the long-term effect of entrepreneurship education should be evaluated with results reflected in new program development. Continuous evaluation and systematic program development are essential for improving entrepreneurship education programs.

So while Korean students' interest and intention of venture creation have increased dramatically since the Asian financial crisis of 1997, they have been cultivated for relatively short period of time compared to their U.S. counterparts. It is therefore meaningful to conduct a comparative study on the impact of entrepreneurship education in terms of interest, intention, and confidence in venture creation between college students in the U.S. and Korea.

This study will identify differences in terms of interest and intention for venture creation between student groups of heterogeneous cultural backgrounds and between students who have taken entrepreneurship-related courses (takers) and those who have not taken them (non-takers). The result of this study will contribute to the understanding of global entrepreneurship culture by discerning that students with different cultural backgrounds have different characteristics and levels of entrepreneurship according to their cultural context.

Research method

Sample groups

The main purpose of this study is to identify the differences in the impact of entrepreneurship education between the U.S. and Korea by focusing on students' interest and intention for venture creation. To conduct this study, the following four groups were formed.

Group A: American students who took entrepreneurship/venture creation course(s)

Group B: American students who did not take any entrepreneurship/venture creation course(s)

Group C: Korean students who took entrepreneurship/venture creation course(s)

Group D: Korean students who did not take any entrepreneurship/venture creation course(s)

We collected data for group A (60 students) and group B (102 students) from the University of Nebraska-Lincoln in the U.S., and those for group C (102 students) and group D (115 students) from Kyonggi University in South Korea.

Since the difference between the two universities in terms of curricula could have some effect on students' entrepreneurial interest, we compared the contents of the U.S.

curriculum with those of two Korean universities. We then concluded that the contents of curriculum would not make significant difference between the two universities as their curricula are quite similar.

Selected Universities

The University of Nebraska-Lincoln. The University of Nebraska-Lincoln (UNL) is the flagship campus of the University of Nebraska system with more than 24,000 students and 5,000 faculty and professional staff. The programs of the UNL College of Business Administration are fully accredited by the Association to Advance Collegiate Schools of Business (AACSB). The business school has been a charter member of AACSB since 1916 and is ranked 62nd in the U.S. by the U.S. News & World Report in 2003 (<http://www.usnews.com/usnews/edu/college/rankings/business>). The UNL Business College's entrepreneurship program was rated 30th among all collegiate entrepreneurship programs in the U.S. by Money Magazine in 2001. Thus, we can assume that students of UNL's business school represent typical American college students majoring in business administration.

Kyonggi University Located in the Seoul metropolitan area, Kyonggi University has 13,000 students. The average college entrance exam score, SAT of Korea, is more than 85 percentile of all candidates in Korea (<http://www.kice.re.kr/NEW/index.html>). The Korean University Education Association evaluated Kyonggi University's business school as excellent in 1996. Thus, we can assume that students of Kyonggi University's business school represent typical Korean college students majoring in management.

Distribution of questionnaires

Questionnaires with the same contents were simultaneously distributed in both countries. Questionnaires used in Korea were in Korean and those used in the U.S. were in English. To ensure that questions written in Korean measure the same construct, the Korean questionnaire was translated back into English and compared with the original one written in English. There was no significant difference. Because questionnaires were administered during the regular class time, all of them were collected.

Data analysis method

All of the questionnaires collected were properly answered, and thus all were used for data analysis. First, factor analysis was conducted to check construct validity of each question and to identify meaningful factors. Then, using factors identified in the previous step, MANOVA was performed to identify whether any significant differences exist among the four groups.

Variables related to the effects of entrepreneurship education

According to Watson et al. (1998), motivation for venture creation is one of the critical factors for successful entrepreneurship and Clark, Davis and Harnish (1984) and Cho (1998) stated entrepreneurship education could provide motivation for venture creation. Therefore, effective entrepreneurship education and a good concept of venture creation will enhance entrepreneurship, and strengthened entrepreneurship will result in increased intention and desire for venture creation. Finally, students with increased intention of venture creation will pursue more knowledge of entrepreneurship and realize the importance of teamwork (Timmons, 1999). Concurrently, confidence and ability in venture creation will also increase (Han and Lee, 1998).

Based on previous studies, this study developed the questionnaire with 16 questions on: (1) intention and desire for venture creation, (2) knowledge of venture creation, (3) desire for taking entrepreneurship education, (4) confidence in venture creation, and (5) intention of overseas venture creation with teamwork. A five point Likert type scale was used (1. strongly disagree, 2. disagree, 3. neither agree nor disagree, 4. agree, and 5. strongly agree) for each question.

As a result of factor analysis (see Table 1), four meaningful factors were extracted and used to measure the entrepreneurship variables related to the effects of entrepreneurship education. Operational definitions of the four factors are as follows:

Table 1. Result of factor analysis.

Factor	Eigen values	Variable name	Factor loading	Operational definition
1	5.10	Venture creation before graduation	.76	Intention of venture creation and confidence in it
		Confidence in getting funding for venture creation	.58	
		Preference of venture creation over getting a job	.80	
		Intention of changing major to entrepreneurship	.73	
		Confidence in successful venture creation	.66	
		Lifelong commitment to venture creation	.72	
		Intention to overcome opposition of venture creation from other people	.59	
2	2.06	Knowledge about entrepreneurship	.82	Knowledge and ability of venture creation
		Ability for independent venture creation	.68	
		Ability for choosing business with opportunity	.49	
		Superior talents	.78	
3	1.67	Preference of team-based venture creation to individual one.	.46	Intention of overseas venture creation with teamwork
		Overseas venture creation	.89	
		Targeting overseas markets	.77	
4	1.04	Entrepreneurship education in high school	.70	Recognition of the importance of Entrepreneurship education
		Effectiveness of entrepreneurship education on venture creation	.61	

- (1) *Intention of venture creation and confidence in it.* The results of previous studies (Cho, 1998; Clark et al., 1984) show that entrepreneurship education often triggers motivation for venture creation. They supported that intention of venture creation can be increased by entrepreneurship education. According to Han and Lee (1998), increased confidence in venture creation is the main effect of entrepreneurship education.
- (2) *Knowledge and ability for venture creation.* Timmons (1999) suggested that if an individual had appropriate knowledge of entrepreneurship and intention of venture creation, he/she could create a venture and succeed in it. If effective education is provided including topics on launching a company and expanding it, resource and team management, business plan, marketing, etc. to individuals with interest in venture creation but who do not have confidence in it, their confidence and ability will be increased simultaneously. In short, increased knowledge of venture creation results in increased ability for venture creation.
- (3) *Intention of overseas venture creation with teamwork.* Timmons (1999) asserted that entrepreneurship education is very important since various talents required for venture creation could be obtained through postnatal education. Since overseas venture creation is difficult to be achieved by an individual entrepreneur but requires teamwork and an open paradigm, this study introduced “intention of overseas venture creation with teamwork” as an operational definition.
- (4) *Recognition of the importance of entrepreneurship education.* Entrepreneurship education increases knowledge about venture creation. Thus, individuals who took entrepreneurship education should recognize that it is important for successful venture creation. Moreover, this perception will accelerate the effect of entrepreneurship education as time passes.

Results and dicussion

Correlation among factors

Before conducting MANOVA using the four factors to discern the differences in entrepreneurship-related perceptions and impact of entrepreneurship education between the American and Korean student groups, correlation analysis was performed among the factors to check whether MANOVA was the proper analytical method. As seen in Table 2, MANOVA can be used as three factors, except “the intention of overseas venture creation with teamwork,” showed significant interrelations among them. *T*-test was conducted to compare the intention of overseas venture creation with teamwork between the U.S. and Korean groups.

Differences in entrepreneurship and pedagogical impact

Differences in entrepreneurship between course takers and non-takers: USA (Groups A and B) Before conducting MANOVA, Box’s M test was employed to test the

Table 2. Correlation among factors.

	Intention of venture creation and confidence in it	Knowledge and ability of venture creation	Intention of overseas venture creation with teamwork	Recognition of the importance of entrepreneurship education
Intention of venture creation and confidence in it	1.00	0.46*	-0.00	0.31**
Knowledge and ability of venture creation		1.00	-0.09	0.41**
Intention of overseas venture creation with teamwork			1.00	0.04
Recognition of the importance of entrepreneurship education				1.00

* $p < .05$.** $p < .01$.*** $p < .001$.

homogeneity of variance between the two groups. As seen in Table 3, the result was not significant. Thus, we can conclude that MONOVA could be used.

As shown in Table 3, there is a significant difference between American students who took entrepreneurship-related course and those who did not. The students who took the class improved both "the intention of venture creation and confidence in it" and "knowledge and ability of venture creation." Thus, it can be concluded that there is definite pedagogical impact of venture education on the U.S. students.

According to Table 4, a statistically significant difference is shown in entrepreneurship in terms of "the intention of venture creation and confidence in it" and "knowledge and ability of venture creation" between groups A and B at the α level of .1. Table 4 shows that "the intention of venture creation and confidence in it" and "knowledge and ability of venture creation" are variables that contribute to differentiating entrepreneurship between the two groups.

Difference in entrepreneurship between course takers and non-takers: Korea (Groups C and D). Table 3 shows that Korean students who took entrepreneurship-related courses achieved higher levels of improvement in all three factors than the other group of students. As seen in Table 5, there was a statistically significant difference in entrepreneurship in terms of "the intention of venture creation and confidence in it," "knowledge and ability of venture creation," and "the recognition of importance of entrepreneurship education" between groups C and D at the α level of .05. Table 5 shows all three factors contribute to the differentiating entrepreneurship between the two groups. This means there is a statistically significant difference in entrepreneurship between Korean students who took the entrepreneurial course and those who did not.

Table 3. Result of MANOVA analyses.

Group A (The U.S. Takers): Group B (The U.S. Non-takers): Box's M: 4.238 Sig : .659			Group C (Korea takers): Group D (Korea Non-takers): Box's M: 22.738 Sig : .001		
Mean values			Mean values		
Factors	Group	Mean	Factors	Group	Mean
Intention of V. C.	U.S. Takers (>)	2.99	Intention of V. C.	Korea Takers (>)	3.29
	U.S. Non-takers	2.63		Korea Non-takers	2.71
Knowledge and Ability of V. C.	U.S. Taker (>)	4.00	Knowledge and Ability of V. C.	Korea Takers (>)	3.43
	U.S. Non-takers	3.82		Korea Non-takers	2.89
Recognition of the Importance of EE	U.S. Taker (=)	4.00	Recognition of the Importance of EE	Korea Takers (>)	4.02
	U.S. Non-takers	4.00		Korea Non-takers	3.27
Hotellings Trace: F: 2.87 Sig: .03*			Hotellings Trace F: 28.09 Sig: .00***		
Group A (The U.S. Taker): Group C (Korean Taker): Box's M: 11.936 Sig : .070			Group B: (The U.S. Non-takers) Group D: (Korean Non-takers) Box's M: 26.637 Sig : .000		
Factors	Group	Mean	Factors	Group	Mean
Intention of V. C.	U.S. Takers (<)	2.99	Intention of V. C.	U.S. non-takers (=)	2.63
	Korean Takers	3.29		Korea Non-takers	2.71
Knowledge and Ability of V. C.	U.S. Takers (>)	4.00	Knowledge and Ability of V. C.	U.S. Non-takers (>)	3.82
	Korea Takers	3.42		Korea Non-takers	2.89
Recognition of the Importance of EE	U.S. Takers (=)	4.00	Recognition of the Importance of EE	U.S. Non-takers (>)	4.00
	Korean Takers	4.02		Korea Non-takers	3.27
Hotellings Trace: F: 26.92 Sig: .00***			Hotellings Trace F: 82.09 Sig: .00***		

* $p < .05$.
** $p < .01$.
*** $p < .001$.

Table 4. Test of between subject effects (U.S. course takers and non-takers).

	Type III sum of squares	Df	Mean square	F	Sig
The intention of venture creation and confidence in it	4.42	1	4.42	8.09	.00**
Knowledge and ability of venture creation	1.07	1	1.07	3.21	.075*
Recognition of the importance of entrepreneurship education	0.00	1	.00	0.00	1.00

* $p < .05$.
** $p < .01$.
*** $p < .001$.

Table 5. Test of between subject effects (Korean course takers and non-takers).

	Type III sum of squares	<i>Df</i>	Mean square	<i>F</i>	Sig
The intention of venture creation and confidence in it	17.66	1	17.66	39.41	.00***
Knowledge and ability of venture creation	14.72	1	14.72	41.50	.00***
Recognition of the importance of entrepreneurship education	29.61	1	29.61	61.78	.00***

* $p < .05$.** $p < .01$.*** $p < .001$.

The result shows that the level of difference in entrepreneurship between groups C and D is much greater than that between U.S. groups A and B. The variable “recognition of the importance of entrepreneurship education” especially differentiates the two Korean groups, while this variable did not differentiate the two American groups. This result implies that regardless of whether American students take the class or not, they already are quite familiar with entrepreneurial culture; thus, students from both American groups equally recognized the importance of entrepreneurship education. However, in Korea, only the entrepreneurship-educated group appears to recognize its importance, perhaps because Korean people generally began to recognize the importance of venture creation only after the 1997 Asian financial crisis. In short, as expected, the impact of entrepreneurship education in Korea is much greater than in the U.S.

Difference in pedagogical impact between the U.S. and Korean course takers (Groups A and C). As seen in Table 3, American students have a higher level of “knowledge and ability of venture creation” than Korean students after taking an entrepreneurship-related course. This could mean that entrepreneurship-oriented culture in the U.S. may have helped American students possess knowledge and ability of venture creation. However, group C showed a higher score than group A in terms of “the intention of venture creation and confidence in it.” This result could be interpreted as Korean students having a higher sense of achievement after taking the entrepreneurship class than American students at the end of the semester since Korean students had much less knowledge about venture creation before the course due to younger entrepreneurship-oriented culture in Korea. Thus, their sense of achievement in the entrepreneurship class and the social environment encouraging venture creation resulted in a higher level of intention of venture creation and confidence than American students. Before taking the courses, recognition of the importance of entrepreneurship education of American students was higher than that of Korean students, but the recognition of the importance of entrepreneurship education of the two groups was about the same after the course. Thus, we can conclude that the impact of entrepreneurship education in Korea is greater than in the U.S.

Table 6. Test of between subject effects (U.S. and Korean course taker groups).

	Type III sum of squares	<i>Df</i>	Mean square	<i>F</i>	Sig
The intention of venture creation and confidence in it	3.16	1	3.16	6.44	.012*
Knowledge and ability of venture creation	11.71	1	11.71	36.79	.00***
Recognition of the importance of entrepreneurship education	2.293E-02	1	2.293E-02	0.06	.80

* $p < .05$.** $p < .01$.*** $p < .001$.

Table 4 shows that “the intention of venture creation and confidence in it” and “knowledge and ability of venture creation” are variables that differentiate the effects of entrepreneurship education between the two groups. As previous results of analysis showed, American students still have a higher level of “knowledge and ability of venture creation” than their Korean counterparts even after taking an entrepreneurship-related course, by virtue of a deeper and more mature foundation of entrepreneurship-oriented culture in the U.S.

Differences in entrepreneurship between the U.S. and Korean course non-taker groups (Groups B and D). As shown in Table 3, group B has a higher level of “knowledge and ability of venture creation” and “recognition of the importance of entrepreneurship education” than group D. This result shows strong influence of the entrepreneurship-oriented culture in the U.S. on American students. Thus, it is evident that there is some difference in entrepreneurship knowledge between the American and Korean students even before taking the entrepreneurship courses.

As seen in Table 7, there was a statistically significant difference in entrepreneurship in terms of knowledge and ability of venture creation and recognition of the importance

Table 7. Test of between subject effects (U.S. and Korean course non-taker groups).

	Type III sum of squares	<i>Df</i>	Mean square	<i>F</i>	Sig
The intention of venture creation and confidence in It	.31	1	.31	.65	.42
Knowledge and ability of venture creation	43.18	1	43.18	117.08	.00***
Recognition of the importance of entrepreneurship education	26.38	1	26.38	56.17	.00***

* $p < .05$.** $p < .01$.*** $p < .001$.

of entrepreneurship education between groups B and D at the α level of .05. The table also shows that “knowledge and ability of venture creation” and “recognition of the importance of entrepreneurship education” are factors which differentiate the two groups.

According to a survey by The Small and Medium Business Administration (SMBA) of Korean Government, since the 1997 financial crisis the number of start-up ventures officially certified by SMBA increased dramatically: 1998—2,042; 1999—4,934; 2000—8,798; June, 2001—10,762. These statistics show a growing interest in venture creation in Korea to overcome the financial crisis. This social environment and limited job opportunities in Korea since 1997 may have provided a strong stimulus to Korean students’ intention for venture creation. While they had been influenced by a mature entrepreneurial culture, American students showed relatively weak intention of venture creation as a result of a prosperous economy with wide-ranging job opportunities. Thus, no significant difference was found between the two groups in terms of “the intention of venture creation and confidence in it.”

Intention of overseas venture creation with teamwork

As seen in the result of *t*-test in Table 8 and that of mean score analysis in Table 9, Korean students’ intention of overseas venture creation with teamwork is higher than that of American students regardless of their entrepreneurial education. However, no significant difference was found between the U.S. takers (A) and the U.S. non-takers (B), and between Korean takers (C) and Korean non-takers (D). This result strongly

Table 8. Teamwork and overseas venture creation between groups.

A and B		C and D		B and D		A and C	
<i>F</i>	Sig	<i>F</i>	Sig	<i>F</i>	Sig	<i>F</i>	Sig
3.60	.70	1.26	.112	5.74	.017	8.54	.00**

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 9. Mean score of intention of overseas venture creation with teamwork.

Groups	Mean	St. D.	No of samples
U.S. Takers	3.38	.84	55
U.S. Non-takers	3.43	.66	90
Korean Takers	3.79	.60	98
Korean Non-takers	3.66	.55	112
U.S. Non-takers	3.43	.66	90
Korean Non-takers	3.66	.55	112
U.S. Takers	3.38	.84	55
Korean Takers	3.79	.60	98

indicates that entrepreneurship education does not have any impact on “intention of overseas venture creation with teamwork.”

Export has been very important for the growth of Korean economy. The Korean government has encouraged export through financial incentives and public education since President Park’s administration in the early 1960s. Because of this unique context of Korea, Korean students have very strong intention of overseas venture creation.

Conclusion

Previous studies maintain that entrepreneurs are cultivated during their lifetime, and that social and cultural environment, personal experience, and education are very important to building entrepreneurship. This study analyzed the impact of entrepreneurship education between American and Korean college students. The results of this study imply that unique cultural context has differentiated American students from their Korean counterparts in terms of “the intention of venture creation and confidence in it,” “knowledge and ability of venture creation,” “recognition of the importance of entrepreneurship education” and “intention of overseas venture creation with teamwork.” Moreover, the impact of entrepreneurship education in each country is different because of each country’s unique culture in regards to entrepreneurship.

The results of this study show that Korean students, who have a lower level of “the intention of venture creation and confidence in it,” “knowledge and ability of venture creation,” and “recognition of the importance of entrepreneurship education” than their American counterparts, can reach about the same levels after taking entrepreneurship-related courses. Although the level of “knowledge and ability of venture creation” of Korean students was still lower than that of American students even after taking the course, it became much higher after entrepreneurial education. American students who took the course did not show any significant improvement in terms of “recognition of the importance of entrepreneurship education,” but Korean students who took the class showed a significant improvement.

Korean students who have grown up in a unique environment where export has been the catalyst for economic development showed a higher level of “the intention of overseas venture creation with teamwork” than American students. But entrepreneurship education did not influence this variable in both the U.S. and Korea.

Based on the result of this study, we can conclude that the impact of entrepreneurship education in Korea is much greater than that in the U.S. This result strongly suggests that the impact of entrepreneurship education in countries where entrepreneurship-oriented culture is poor or still in the embryonic stage of development will be greater than that in countries with a strong entrepreneurship-oriented culture.

Appendix: Five preliminary constructs and 16 questions

Intention and Desire for Venture Creation

- (1) I want to launch a new venture company of my own before graduation.

- (2) I am more interested in establishing my own venture company than getting a job.
- (3) I think that founding a new venture company is the only way to succeed in life.
- (4) I would dedicate my life to establishing a new venture company even if my parents were strongly against it.
- (5) Even if I launch new ventures and fail many times, I will keep on trying until I succeed.

Knowledge of Venture Creation

- (6) I have some knowledge about entrepreneurship.
- (7) I am very intelligent and capable of accomplishing whatever I set out to do.

Desire for Taking Entrepreneurship Education

- (8) If a major in entrepreneurship were available, I would change my major to it.
- (9) Entrepreneurship should be taught in high school.
- (10) I think that a class entitled "Entrepreneurship" would be very helpful for those interested in starting their own venture companies.

Confidence in Venture Creation

- (11) If I launch a new venture company, I can provide my own funds and human resources
- (12) I am confident that I can successfully launch a new venture company on my own.
- (13) I am confident that I can select a business with good potential if I launch a new venture company of my own.

Intention of Overseas Venture Creation with Teamwork

- (14) A venture company should be launched individually rather than in a partnership, because many negative things can happen between partners.
- (15) If I launch a new venture company, I will limit its area of operation to my own country.
- (16) If I launch a new venture company, I will expand its business to all over the world.

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