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IS BUSINESS EDUCATION MEETING JOB MARKET DEMAND AND STUDENT INTEREST?

Jensen J. Zhao, Ball State University, jzhao@bsu.edu
Allen D. Truell, Ball State University, atruell@bsu.edu
Melody W. Alexander, Ball State University, malexand@bsu.edu
Edward J. Lazaros, Ball State University, ejlazaros@bsu.edu

ABSTRACT

The global workforce is in transition with more and more human jobs replaced by computer automation and artificial intelligence. Research reported that an increasing percentage of activities that human workers will do in the future will be in categories such as managing and leading other people and interacting with others, which require skills such as social and emotional sensing and reasoning, and applying creativity to problem-solving. Successfully navigating an increasing complex world would require creativity more than rigor, management discipline, integrity or even vision. However, 87% of business executives contended that most college graduates lacked the important skills needed to succeed: creativity and critical thinking; these skills are often not part of the formal curriculum in traditional school programs. The problem addressed in this case study was to investigate whether the current business education meets the job market demand for and student interest in creativity and innovation. The findings indicate that (a) creativity and innovation courses are offered in the entrepreneurship programs at undergraduate and graduate levels for their majors only, (b) only 18% of the business students have been taught creativity and innovation, and (c) although 98% of business students are interested in learning creativity and innovation.

Keywords: Creativity, Innovation, Intelligence quotient, Emotion quotient, Creativity quotient, Integration of 3Qs.

INTRODUCTION

An IBM 2010 global study (IBM, 2010) conducted in-person interviews with 1,541 chief executive officers, general managers, and senior public sector leaders who represented different sizes of organizations in 60 countries and 33 industries and found out that creativity was selected as the most crucial factor for future success. Most business leaders believed that successfully navigating an increasing complex world would require creativity more than rigor, management discipline, integrity or even vision. Over 60% of the business leaders believe that industry transformation is the top factor contributing to uncertainty and they need to discover innovative ways of managing an organization's structure, finances, people, and strategy.

Similarly, a research study by McKinsey Global Institute (Manyika et al., 2017) analyzed the current global workforce transitions driven by computer automation and artificial intelligence and reported that an increasing percentage of activities that workers will do in the future will be in categories such as managing and leading other people and interacting with others, which require skills such as social and emotional sensing and reasoning; applying creativity and collaborative problem-solving; and developing technology innovations.

However, a national survey of business executives reported that 87% of the executives contended that most college graduates lacked the important skills needed to succeed: creativity and critical thinking (Moore, 2017) and these skills are often not part of the formal curriculum in traditional school programs (Manyika et al., 2017). As our educational programs have been compartmentalized or subject-based, the programs very often give little to almost no room for teaching creativity and innovation nor facilitating students' integration of intelligence quotient (IQ), emotion quotient (EQ), and creativity quotient (CQ) for synergy (e.g., Forrester & Hui, 2007; Taylor, 1986; Zhao & Zhao, 2010).

Research also found that the first thing innovative companies do to stay on top of competition is that all employees should be creative and look for better ways to do things on their jobs. With this mentality as a corporate culture, innovative ideas thrive in the company and so do new products and services (Bort, 2013; Nussbaum, 2005).

Business executives and educators pointed out that we are in a flattening world, where innovation is the key to success, and as a nation we are failing to give our young people the tools they need to compete. These executives and educators are warning that the U.S. isn't producing innovative technology experts in quantity and quality that it needs to remain the leadership of the global market (Augustine, 2011; Brews, 2016; Hamm, 2007; Overby, 2003).

To assure that our business students—the future business leaders and professionals—will be creative and innovative in solving problems and finding better ways to do things on their jobs, a need exists for investigating whether the current business education meets the job market demand for and student interest in creativity and innovation. We selected an AACSB-accredited U.S. college of business at a Midwest state university as a pilot case study.

PROBLEM STATEMENT AND RESEARCH QUESTIONS

The problem addressed in this case study was to investigate whether the current business education meets the job market demand for and student interest in creativity and innovation. In order to investigate the problem, we raised the following two research questions:

1. How does an AACSB-accredited U.S. college of business offer creativity and innovation program and courses?
2. How interested are college business students in enhancing their creativity and innovation for identifying and solving problems?

PURPOSE STATEMENT

The purpose of the case study was to provide information of the case college's creativity and innovation program and course offerings at undergraduate and graduate levels in comparison with the job market needs and student interest in creativity and innovation. The findings of the study would enable other business colleges to evaluate their creativity and innovation program or course offerings for continuous improvement.

METHODS

First, to determine how the U.S. college business education meets the job market demand, we conducted a case study of an AACSB-accredited U.S. college of business at a Midwest state university. To explore how the college offers creativity and innovation programs and courses at undergraduate and graduate levels for students to meet the job market needs, this study used a Web content mining approach to discover and extract information from the college Web site. The extracted course descriptions and syllabi were further reviewed to determine the teaching and learning methods of developing and enhancing students' creative and critical thinking skills and innovation ideas and processes. The Web content analytics is one of the dominant research methods used for assessing organizations' Web contents, deliveries, and strategies (e.g., Boggs & Walters, 2006; Campbell & Beck, 2004; Wilkinson & Cappel, 2005; Zhao & Zhao, 2010; Zhao & Zhao, 2015).

Second, to investigate how the business education of the case college meets student interest in enhancing their creativity and innovation, we conducted a survey among a sample of 337 business students at the college. The survey instrument consists of questions regarding (a) student demography, (b) student pre-existing learning experience of creativity and innovation, (c) the teaching styles that students received at K-12 schools and college, (d) student pre-existing learning experience of integrating their IQ, EQ, and CQ for problem solving, and (e) student interest in enhancing their creativity and innovation. Frequency counts, percentage distributions, and cross-tabulations were prepared for data analysis. Table 1 illustrates the demographic profile of the 337 participating business students.

Table 1. Demographic Profile of Participating Students (N = 337)

Item		Frequency	Percentage
Gender			
	Female	138	41%
	Male	199	59%
		337	100%
Class Standing			
	Freshmen	58	17%
	Sophomore	127	38%
	Junior	130	39%
	Senior	21	6%
		337	100%
Major			
	Business Admin.	97	29%
	Accounting	82	24%
	Marketing	59	18%
	Finance	36	10%
	Management	29	9%
	ISOM	24	7%
	Economics	10	3%
		337	100%

FINDINGS

Research Question 1 asked, "How does an AACSB-accredited U.S. college of business offer creativity and innovation program and courses?" The Web content mining of the case college's web sites identified that the college offers the following programs at both bachelor- and master-degree levels. The Bachelor of Science degree in Entrepreneurial Management major has been offered ranked as No. 20 of the nation's top 25 colleges for undergraduate entrepreneurship programs of 2018 by *Princeton Review* (2018). This nationally ranked program includes two creativity- and innovation-focused courses: *Product and Service Design* (3 credit hours) and *Business Model Generation* (3 credit hours). However, these two courses are open only to entrepreneurial management majors.

The Master of Business Administration (MBA) degree with Entrepreneurship concentration offers three concentration courses of *Entrepreneurial Innovation* (3 credit hours), *Entrepreneurial Planning and Feasibility* (3 credit hours), and *Entrepreneurial Strategy* (3 credit hours). All these three courses are open only to the college's graduate business students.

Research Question 2 asked, "How interested are college business students in enhancing their creativity and innovation for identifying and solving problems?" As Table 2 indicates, more than 98% of the participating students reported that they are interested in integrating their IQ, CQ, and EQ (3Qs) for innovative solutions to school and job assignments and nearly 98% of the students are interested in exploring their potential in 3Qs.

By contrast, only 18% of the students reported that they had been taught at school to integrate their 3Qs for identifying and solving problems innovatively. Similarly, only around 15% of the students stated that they had been taught in their daily life or on their job, respectively, how to integrate their 3Qs.

Table 2. Student Interest and Pre-Training in Integrating their IQ, CQ, and EQ (N = 337)

Statement	Frequency	Percentage
• I am interested in integrating my 3Qs for innovative solutions to school and job assignments.	332	98.5%
• I am interested in exploring my potential in 3Qs.	329	97.6%
• I have been taught to integrate my 3Qs at school.	61	18.1%
• I have been taught to integrate my 3Qs in my life.	51	15.1%
• I have been taught to integrate my 3Qs on the job.	50	14.8%

Table 3 shows the student pre-existing learning experience of creativity and innovation. The majority (56%) of the participating students reported that their college professors had required students to do assignments exactly in their professors' ways. Similarly, the majority (55%) of the participants' K-12 teachers also had required students to do assignments exactly in their teachers' ways when they were in K-12 schools.

Table 3. Student Pre-Existing Learning Experience of Creativity and Innovation (N = 337)

Statement	Frequency	Percentage
• My college professors required me to do assignments exactly in their ways.	189	56%
• My K-12 teachers required me to do assignments exactly in their ways.	185	55%
• My K-12 teachers encouraged me to be creative and innovative in doing school assignments.	152	45%
• My college professors encouraged me to be creative and innovative in doing assignments.	148	44%
• My teachers and professors helped me find creative and innovative ideas for school assignments or career opportunities.	128	38%
• I have taken a course/workshop that taught me how to systematically explore my potential in creativity and innovation.	61	18%

By contrast, only the minority (45%) of the participating students reported that their K-12 teachers and college professors had encouraged students to be creative and innovative in doing school assignments. Only 38% reported that their teachers and professors had helped them find creative and innovative ideas for school assignments or career opportunities. Overall, only 18% of the participants reported having taken a course or workshop that taught them how to systematically explore their potential in creativity and innovation for identifying and solving problems.

In response to the last survey question of "Please write your additional comments here:" a frequent comment is "Some of our teachers and professors encouraged us to be creative and innovative, but they have never taught us how to be creative and innovative."

SUMMARY, DISCUSSION, AND CONCLUSIONS

First, the case college offers entrepreneurial management programs at both bachelor and MBA levels. However, the two creativity- and innovation-focused courses are open only to entrepreneurial management majors. Similarly, the MBA degree's entrepreneurial creativity and innovation concentration courses are open only to the college's graduate business students. Therefore, undergraduate students of other business majors cannot take these creativity- and innovation-focused courses as electives at the college. This finding supports the related literature that our traditional education programs have been compartmentalized or subject-based and the majority of the programs very often give little to almost no room for teaching creativity and innovation (e.g., Forrester & Hui, 2007; Manyika et al., 2017; Taylor, 1986; Zhao & Zhao, 2010). Obviously, this type of compartmentalized education needs to be improved to meet student interest in creativity and innovation and the demand from U.S. companies for employees with creative thinking and innovative problem-solving skills (Bort, 2013; Moore, 2017; Nussbaum, 2005).

Second, more than 98% of the participating students are interested in integrating their 3Qs for innovative solutions to school and job assignments and nearly 98% are interested in exploring their potential in 3Qs. However, only the minority of the students had been taught at school (18%), in daily life (15%), or on the job (15%) how to integrate their 3Qs for identifying and solving problems innovatively. Therefore, most of the participating students had not been taught how to be creative and innovative. This finding is consistent with the early research findings that our educational programs have an emphasis on developing student IQ (Forrester & Hui, 2007; Taylor, 1986). However, in today's Internet-based and innovation-driven economy, creativity and innovation becomes the key to a nation's success. To enhance college students' creativity and innovation and enable these future business leaders and professionals keep the global leadership, educators need to ensure that the integration of IQ, EQ, and CQ is taught and applied at college because the IQ is no longer central to total brainpower and to the best education possible (Augustine, 2011; Brews, 2016; Hamm, 2007; Overby, 2003).

Finally, the majority (55% - 56%) of the college students reported that their college professors and K-12 teachers had required students to do assignments exactly in the ways given by the teachers and professors. Only 38% reported that their instructors had helped them find creative and innovative ideas for school assignments or career opportunities. Only 18% of the participants reported having taken a course or workshop that taught them how to systematically explore their potential in creativity and innovation for identifying and solving problems. This finding echoes American business leaders' concerns about the higher education's ability to prepare graduates for success in today's innovation-driven workforce (Augustine, 2011; Moore, 2017; Nussbaum, 2005). To meet the growing demand from U.S. companies for employees with creative thinking and innovative problem solving skills, business educators need to consider the opportunity for inspiring, nurturing, and mentoring students in exploring their 3Qs' potentials and for sparking their innovative ideas and solutions to the real-world problems when giving hands-on learning projects.

RECOMMENDATION FOR FURTHER RESEARCH

The generalizability of the findings and conclusions in this case study is limited only to the business colleges holding characteristics similar to this U.S. Midwest business college. A nation-wide study is recommended to determine how the AACSB-accredited U.S. colleges of business offer creativity and innovation program and courses to meet job market demand for and student interest in creativity and innovation.

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