

Assessment of 21st Century Skill and Employability Preparedness of Selected University students in China: Towards Career Development Program

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Abstract

The concept of "skills for the twenty-first century" arose from research on critical competencies performed by the OECD, the EU, the United States, and other international organizations and governments. These abilities include critical thinking, problematic thinking, problem solving, communication and teamwork, creativity, and others. The primary objective of the study is to determine if there is a significant correlation between 21st-century skills and the employability readiness of a sample of students. The study also aimed to determine whether there is a significant difference between the level of 21st century skills and employability readiness when respondents are categorized according to their demographic profile. The final product will serve as the foundation for the program recommendation for career development. Findings showed that the skills and dimensions of the 21st century have a significant relationship with employability readiness. The correlation coefficients are positive, indicating that as 21st century skills improve, so does employability readiness, and vice versa. This research contributes significantly to the advancement of theory and has significant practical implications.

Keywords

21st century skills, Employability preparedness, Career development program.

1. Introduction

The modernization of Chinese education urgently needs to cultivate students' the modern key competence for employment. Remarkable progress has been made in the development of education at all levels and kinds, and the modernization of education has resulted in leapfrogging development. However, looking back on the history of Chinese educational modernization, it is easy to see that the core and direction of China's educational modernization are not solely based on domestic growth but are heavily impacted by foreign influences (Ding et al., 2021). From the spread of Western learning to the East in the Ming and Qing dynasties, to the emergence of a modern school system in the late Qing dynasty, to the early formation of modern education in the Republic of China after the 1911 Revolution, and even from the founding of New China to the "two hundred year" crossroads, the process of China's educational modernization has been constantly influenced by foreign education. Education modernization, as a concept and a globally acknowledged aim, has reasonably objective and generally applicable norms. As a result, in order to promote educational modernization, China must rely on and fully learn from western educational ideals and experience. However, in China, this type of referential growth has not resulted in the formation of a separate theory of educational modernization development with Chinese features.

A particular Chinese viewpoint is required to grasp and support the modernization of Chinese education. The best way is to use existing key competence training standards with Chinese elements as a starting point for offering all-around help to students' careers. Only in this way

will we be able to develop modern skills in order to attain the educational goal of "intellectual support and service counseling" [1].

The fast-changing technology, information, and employment environments have encouraged individuals to ponder the type of competency required for the 21st century and beyond. Thus, the notion of "skills for the 21st century" was born. The research on 21st century skills stem from the research on key competencies conducted by the OECD (Organization for Economic Cooperation and Development), the EU, the US, and other important international organizations and nations in order to meet the challenges and demands of the 21st century. Its fundamental components include critical thinking, problematic thinking, issue solving, communication and teamwork, creativity, and other important abilities. [2] Both the idea of core literacy for the growth of Chinese students and the worldwide conversation on skills in the 21st century indicate that educational goals prioritize the mastery of information and the training of a complete problem-solving capacity. To modernize education, China must develop a definition and training program for 21st-century capabilities.

The importance of employability skills has been increasingly emphasized in recent times. Employability skills are a group of essential abilities that involve the development of a knowledge base, expertise level, and mindset that are increasingly necessary for success in the modern workplace. In spite of this, employability is a relatively broad state of human ability and personality, which is difficult to evaluate and improve with targeted training, and easily leads to confusion and low self-efficacy of students. Career guidance integrated with 21st century skills will more effectively provide operable concrete content, methods and ways for the improvement of employability.

With the promotion of 21st-century skills, vocational and career advising at colleges and universities is also undergoing change. The purpose of career and employment counseling in colleges and universities is to provide college students with systematic assistance for the enhancement of 21st-century core competencies, as a potent means of acquiring 21st-century skills, and as a conduit for communicating the academic and social nature of education.[3]

In relation to the current issue, the primary goal of the current study is to assess the existence and relationship of 21st century skills and employability preparation among chosen university students, and the outcome would be the basis for a career development program.

2. Research Design

In this study, the researcher determined the demographic factors, levels of 21st century skills, and employability preparedness of selected college students at Huizhou University, Guangdong Province. Similarly, the researcher determined if there are significant differences between the levels of 21st century skills and employability preparedness when the respondents are classified according to their demographic factors. The main objective of the present study was to determine if 21st century skills and employability preparedness have a significant relationship. In order to obtain the research objectives, the following processes was employed: Data gathering was conducted using modified, standardized research instruments, and appropriate statistical treatments such as the independent sample t-test and one-way analysis of variance was applied using specific statistical software. Based on the findings, the output was to recommend a career development program that can be used by the guidance office at Huizhou University.

2.1. 21st Century Attributes (Skills) as Contributors to Employability

This measured the 21st century skills that composed of creativity and innovation (ability to think unconventionally, question the herd, imagine new scenarios and produce astonishing work), critical thinking (assess the credibility, accuracy, and value of information; analyze and

evaluate information; make reasoned decisions; and take purposeful action), meta-cognition ability (a typical learning strategy, which refers to the effective monitoring and control of students' cognitive process and results), communication (expression of oral and written ideas clearly, convincingly and concisely), collaboration and teamwork (cooperation with others, contribution to a positive team atmosphere), information literacy and ICT skills (a trait that can improve learning efficiency with break through time and distance barriers), career development skills (skills needed to survive in the world, including life and career management), and personal and social responsibility (including cultural awareness and social accomplishment).

2.2. Aspects of Employability

This measured the employability preparedness of the students, in which, the domains are personal qualities (e.g., Belief that some characteristics (for example, intellect) may be cultivated rather than fixed), professional ability (e.g., I am very familiar with the industry in the employment field covered by my major), and process skills (e.g., Ability to work cross-culturally both within and beyond the culture you familiar)

In order to administer the questionnaire, the researcher conducted pilot testing with thirty (30) participants who share the same characteristics. This will enable the researcher to assess the dependability or internal consistency. Browne (1995) recommends a sample size of at least thirty (30) participants for the pilot testing of the questionnaire instrument in order to determine the reliability measure, also known as Cronbach's alpha.

3. Result

The main purpose of the study was to determine if there is a significant relationship between 21st century skills and employability preparedness of selected students. The study also sought to find if there is a significant difference between the level of 21st century skills and employability preparedness when the respondents are classified based on their demographic profile. The final output will serve as the basis for the recommendation of a career development program.

3.1. Demographic Profile

Majority of the respondents are female, with ages between 21 and 23 years old, specializing in either electronic information or electrical engineering, and participated professional courses.

3.2. Assessment of 21st Century Skills

The degree of 21st century talents, including creativity and innovation, critical thinking, meta-cognitive ability, communication, collaboration and teamwork, information literacy and ICT skills, career development skill, and personal and societal responsibility, was found to be above average. This contradicts the findings of Cai et al. [4] and Mutohhari et al. [5], which indicated that the level of 21st century abilities is not very high and that students experienced difficulty. This indicates that students at Huizhou University's Zhongkai School of Information are already competent to apply 21st-century abilities.

3.3. Assessment of Employability Preparedness

Employability preparedness which composed of personal qualities, professional ability, and process skills also found to be above average. This is opposite to the findings of Teng, et al [6] that university students from China are not strengthening their soft employability skills. This shows that the old approach to learning at the surface level is still engrained in educational procedures, leaving a soft skills deficit in the current provision of employable skills. The findings of this study suggest that Zhongkai School of Information is able to equip its students

with a variety of employability abilities that make them marketable and competitive in the industry.

3.4. Significant Difference between 21st Century Skills, Employability Preparedness and Demographic Profile

Male respondents were more creative, innovative, and career-oriented than female respondents. This contradicts Cai et al., who found that there is no significant difference between the levels of 21st century abilities when respondents are classified by gender, indicating that boys' skills are at the same level as girls'. According to the current study, physiological and cultural factors may explain gender disparities in student competency advancement. In terms of employability preparedness, male students also obtained higher level particularly on professional ability and process skills.

Regardless of their age, their level of 21 century skills and employability preparedness is the same. This is also supported by Tindowen et al.[7], wherein they found that critical thinking, collaboration, communication, creativity, invention, self-direction, and global linkages do not vary significantly among age groups, but there are major disparities in local contacts and ICT skills.

Those students from electronic information and electrical engineering scored higher in career development skills and process skills than those students from literature and communication. Moreover, students from architecture and civil engineering and electronic information and electrical engineering scored higher in the level of personal qualities than those students from literature and communication. According to the research carried out by Szafranski et al.[8], effective engineering training is hard to achieve without engineering training in laboratories and industrial internships.

The level of 21st century skills are the same for those who participated and did not participate in career and vocational guidance as well as entrepreneurship courses. On the other hand, those who participated in the professional practice course obtained higher level of personal and social responsibility than those who did not participate. As for the level of employability preparedness, regardless whether they attended or not the entrepreneurship and professional practice, their level is still the same except for career and vocational guidance.

3.5. Relationship between 21st Century Skills and Employability Preparedness

The 21st century skills together with its dimensions have significant relationship to employability preparedness. The correlation coefficients are positive, showing that when the level of 21st century skills increase, so does the level of employability preparedness, and vice versa.

4. Conclusion

According to the findings, the researcher has come to the conclusion that the students at Huizhou University have above-average levels of 21st-century skills and employability preparedness. This finding suggests that the school monitored and implemented it for different students, such as those who attend the schools of electronic information and electrical engineering, computer science and engineering, architecture and civil engineering, geography and tourism, literature and the arts, and so on. When the respondents were classified based on their demographic factors, in particular their sex, schools, and participation in courses, there were substantial discrepancies in the degrees of 21st century skills and employability preparation that they possessed. In conclusion, the preparation for employability and the skills necessary for the 21st century have a major positive link, such that a growth in the level of employability will also result in an increase in the level of employability that is obtained. This study makes a significant contribution to theory-building, and also has important practical

implications. It contributes to the literature by confirming the existence and the relationship between the 21st century skills and employability preparedness. Another practical implication of the present study is to encourage other schools in China to implement and train the students to develop the 21st century skills and employability preparedness.

5. Recommendations

Based from the findings of this study, the following are therefore recommended:

Implementing competencies for the twenty-first century requires not only replacing the current content and goals of education with those demanded by the knowledge society, but also redefining which aspects of the curriculum should be considered the most fundamental.

Other universities in China may want to further develop their curriculum and change their teaching and learning approach to improve the degree of students' 21st century skills and employability preparedness.

This study can help teachers figure out how to use competency-based lessons in Chinese classrooms. For example, one of the main goals of the elementary school curriculum should be to help students get better at learning and solving problems. When students are in middle school, they should be focusing on curriculum that is competency-based.

To provide additional avenues for women to improve their abilities and employment prospects, the school may wish to place greater emphasis on developing the 21st century talents, especially their level of creativity, innovativeness, process skills, and career orientation.

Administrators and faculty members may incorporate at least the four most important 21st century skills into the syllabi and pedagogy of every course offered on campus. In this way, students will not only master specific academic disciplines, but also acquire proficiency in 21st century abilities. In every lesson, not only should students be evaluated on the discipline-specific elements, but also on how to use these abilities in the workplace.

Teachers in universities may be encouraged to act as facilitators by promoting their students' careers throughout their study and emphasizing the need of concentrating on future employment.

The school may want to encourage the students from communication and literature to improve their level of 21st century skills particularly career development skills and process skills.

The students may encourage to attend more trainings that tackle about career and vocational guidance.

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