

The 21st Century Competency Based Management of Art Design

Education in Universities Under Liaoning Province

การบริหารฐานสมรรถนะแห่งศตวรรษที่ 21 ของสาขาวิชาการออกแบบศิลปศึกษา¹ ในมหาวิทยาลัยมณฑลเหลียวหนิง²

Qing Zhou^{1*}, Kamolmal Chaisirithanya² and Chuanchom Chinatangkul³

โจ จิง^{1*}, กมลมาลัย ไชยศิริรัณญา และชานชม ชินตะงกุล

¹Doctor of Education Program in Educational Administration

²⁻³Faculty of Education, Bangkokthonburi University

¹หลักสูตรศึกษาศาสตรดุรรัมภ์บัณฑิต สาขาวิชาการบริหารการศึกษา

²⁻³คณะศึกษาศาสตร์ มหาวิทยาลัยกรุงเทพนบุรี

*ผู้รับผิดชอบ e-mail: 6163110014.edu@bkkthon.ac.th

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ABSTRACT

The objectives of this research were: (1) to propose the 21st century competency based management of Art Design Education in universities under Liaoning Province; and (2) to develop the future wheels for the 21st century competency based management of Art Design Education in universities under Liaoning Province.

The research methodology was a qualitative research with Delphi technique. Key informants were 17 experts in the Higher Art Design Educational Ability Foundation Program. Data from the two-round interview was encoded and classified using the Delphi technique and the future wheels study. The instruments used for data collection were open-ended interview form, and a five-level rating scale questionnaire. The statistics used for data analysis were mode, median, inter quartile range as well as content analysis was employed.

The research findings were revealed that: (1) five dimensions of the 21st century competency based management of Art Design Education in universities under Liaoning Province namely as follows: personal potential competence, professional knowledge competence, operational skills competence, technological innovation competence, and life and social skills competence; and (2) the future wheels for the 21st century competency based management of Art Design Education in universities under Liaoning

Province were developed, based on the results of an analysis of the feasibility trends of the 21st century competency based management of Art Design Education in Universities under Liaoning Province of a group of experts. Researcher used the analysis results to create a picture of the future wheels.

Keywords: Competency Based Management; Art Design Education; Liaoning Province

บทคัดย่อ

การวิจัยครั้งนี้มีวัตถุประสงค์เพื่อ (1) เพื่อเสนอการบริหารฐานสมรรถนะแห่งศตวรรษที่ 21 ของสาขาวิชาการออกแบบศิลปศึกษาในมหาวิทยาลัยมณฑลเหลียวหนิง และ (2) เพื่อพัฒนาวงล้อแห่งอนาคตของการบริหารฐานสมรรถนะแห่งศตวรรษที่ 21 ของสาขาวิชาการออกแบบศิลปศึกษาในมหาวิทยาลัยมณฑลเหลียวหนิง

การวิจัยนี้เป็นการวิจัยเชิงคุณภาพใช้เทคนิคเดลไฟ ผู้ให้ข้อมูลหลักคือผู้เชี่ยวชาญ 17 คน ในโครงการมุ่งนิธิความสามารถทางการศึกษาด้านการออกแบบศิลปะขั้นสูง เก็บข้อมูลด้วยการใช้เทคนิคเดลไฟส่องรอบ ข้อมูลจากการสัมภาษณ์รอบแรกรับการติดตามและจัดประชุมเป็นแบบสอบถามในรอบที่สอง และใช้การศึกษาวงล้อในอนาคต เครื่องมือที่ใช้ในการเก็บรวมข้อมูล ได้แก่ แบบสัมภาษณ์ปลายเปิด และแบบสอบถามแบบมาตราส่วนประมาณค่า 5 ระดับ สถิติที่ใช้ในการวิเคราะห์ข้อมูล ได้แก่ ฐานนิยม ค่ามัธยฐาน ช่วงพิสัยระหว่างค่าวอร์ทล์ และใช้การวิเคราะห์เนื้อหา

ผลการวิจัยพบว่า (1) การบริหารฐานสมรรถนะแห่งศตวรรษที่ 21 ของสาขาวิชาการออกแบบศิลปศึกษาในมหาวิทยาลัยมณฑลเหลียวหนิงประกอบด้วย 5 ด้าน ได้แก่ สมรรถนะด้านศักยภาพส่วนบุคคล สมรรถนะด้านความรู้สายอาชีพ สมรรถนะด้านทักษะในการปฏิบัติงาน สมรรถนะด้านนวัตกรรมทางเทคโนโลยี และสมรรถนะด้านชีวิตและทักษะทางสังคม และ (2) วงล้อแห่งอนาคตของการบริหารฐานสมรรถนะแห่งศตวรรษที่ 21 ของสาขาวิชาการออกแบบศิลปศึกษา ในมหาวิทยาลัยมณฑลเหลียวหนิง ได้รับการพัฒนาโดยอิงจากผลการวิเคราะห์แนวโน้มความเป็นไปได้ของการบริหารฐานสมรรถนะแห่งศตวรรษที่ 21 ของสาขาวิชาการออกแบบศิลปศึกษาในมหาวิทยาลัยมณฑลเหลียวหนิงจากกลุ่มผู้เชี่ยวชาญ ผู้วิจัยนำผลการวิเคราะห์มาสร้างภาพล้อแห่งอนาคต

คำสำคัญ: การบริหารฐานสมรรถนะ; การออกแบบศิลปศึกษา; มณฑลเหลียวหนิง

Introduction

In recent years, with the rapid development of the economy in any

perspective, whether in developed countries or in developing countries and underdeveloped countries, whether

individual organization, or national organization, no one will deny, refuse or do not want education, education is in a fundamental position in the formation of comprehensive national strength. Education is the whole process of cultivating the new generation ready to engage in social life, and it is also the key link to inherit and carry forward the production experience of human society (Yang Yingqiao & Jiang Fenfen, 2020). The new situation puts forward new and more urgent requirements for education in cultivating and creating a generation of high-quality new citizens in China. In the 21st century, art design education is an extremely important factor or tool in the development of education system.

Specifically, "China's Education Modernization 2035" proposed to "comprehensively strengthen and improve the aesthetic education in schools". In the stage of higher education, the Ministry of Education issued the Opinions on Effectively Strengthening the Aesthetic Education of Higher Education in the New Era, which set the positioning, policies and responsibilities for the reform and development of aesthetic education in colleges and universities. Through a series of policy collaborative design, the basic structure is a step-by-step aesthetic

education system, and a relatively perfect aesthetic education content and curriculum system are initially formed.

This research addresses an aspect of art and design education that is competency-based management and under-researched. Particularly, This research can help art educator and leaders in higher education reach a common framework for competency based management. By interviewing experts in competency based management, the researcher hoped to create a future wheels to inform the effective the 21st century competency based management of art design education in universities under Liaoning Province. The researcher works as a lecturer in art design education and has worked in Liaoning University for ten years, therefore, the researcher is particularly interested in the 21st century competency based management of university art design education in Liaoning, which provides objective and necessary conditions for this research. Proposed the competence of art and design education management in universities in Liaoning Province in the 21st century is an important link in the institutionalization and standardization of college teachers, and also a fundamental measure to ensure the practical results of art and design education.

Research Objectives

(1) To propose the 21st century competency based management of Art Design Education in universities under Liaoning Province.

(2) To develop the future wheels of the 21st century competency based management of Art Design Education in

universities under Liaoning Province.

Research Framework

Research framework was shown in the figure 1 below. The qualitative research design with Delphi technique was based on a convergent design of two methodologies as below Figure 1.

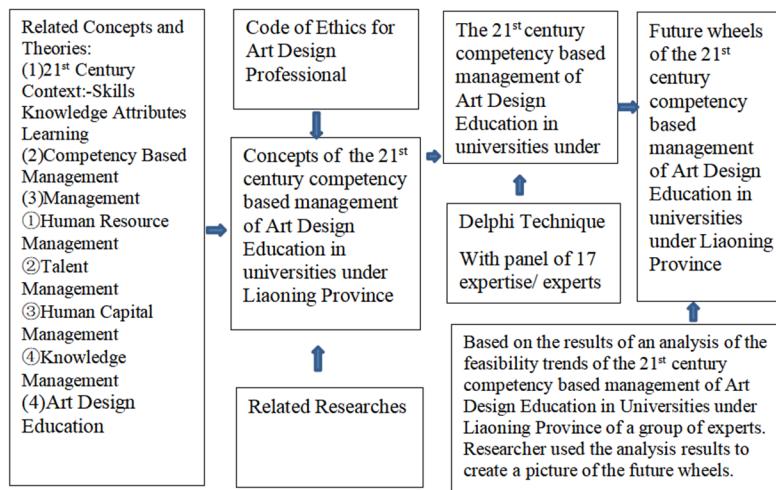


Figure 1 Research Framework

Methodology

The research methodology was qualitative research based on Delphi Technique. There were three processes of research which were research proposal preparation, research procedures, and research report. The research procedures consisted of three steps; (1) studying concept and ideology of the 21st century

competency based management of Art Design Education in universities under Liaoning Province; (2) proposing the 21st century competency based management of Art Design Education in universities under Liaoning Province; and (3) developing the future wheels for the 21st century competency based management of Art

Design Education in universities under Liaoning Province. Details were as follows: -

Step (1) studying competency concept and ideology in the 21st century competency based management of Art Design Education in universities under Liaoning Province.

Qualitative research: The researcher has studied related literatures about the concept, principles, and theories, related on the 21st century competency based management of Art Design Education in universities under Liaoning Province in order to gain the conceptual variables and concepts for further step.

The collected data was analyzed by content analysis. Document material was simplified, classified and interpreted, and the literature scope analysis was visualized using Cite Space. Through literature analysis, five-dimensional models were developed, including cognitive competence (conceptual skills, theoretical knowledge/skills, situational knowledge, procedural knowledge), functional competence (leadership, human resource management, team management, administrative skills, professional skills), social competence (personality and competency traits, social skills, ethics and values) and meta-

competence (thinking, learning and application, self-development).

Step (2) proposing the 21st century competency based management of Art Design Education in universities under Liaoning Province

Qualitative Research: The researcher used the concepts of the 21st century competency based management of Art Design Education in universities under Liaoning Province from step (1) to prepare an open-ended interview form as an instrument to collect data from the panel of expert/expertise in order to propose the 21st century competency based management of Art Design Education in universities under Liaoning Province. The researcher set up project research group and identified consulting experts, form expert working group to adopt competency matching comparison method, used open ended structure interview to further determine the elements of competence management, and summarized through 2 rounds of Delphi technique to develop the 21st century competency based management of Art Design Education in universities under Liaoning Province.

The panel of key informants consisted of 17 experts, those were from Shenyang, Dalian and Anshan, Beijing Jilin;

10 key Informants had Doctoral Degree, 7 key Informants had Master's Degree. All

17 Key informers were all professors who participated in higher Art Design Education over 15 years. Four of those had experience in developing direct assessment of certification, competency-based programs in art education internationalization in higher education.

Key informants were selected based on experience developing competency-based management in art education. There was an assumption that those with experience developing this type of competency-based management have gained expertise that can contribute to a better understanding of the 21st century competency based management of Art Design Education in universities under Liaoning Province. There was also an assumption that key informants would answer questions thoroughly and honestly.

For the first round of Delphi Technique, the researcher employed an open-ended interview form to interview the panel of key informants in order to ensure high fidelity, mainly with recording pen and recording interview and gain more concepts of the 21st century competency based management of Art Design Education in universities under Liaoning Province. After that, the content of interviews were

summarized and analyzed, into the second round of Delphi Technique.

For the second round of Delphi Technique, the researcher prepared a questionnaire which composed of the 21st century competency based management of Art Design Education in universities under Liaoning Province in a five-level rating scale questionnaire, sent by online, and mail to the key informants to independently answer the questions. As the result of data analysis, there were consensus of saturated data from key informants. The researcher used a descriptive statistics when analyzing the data, and when considering the list, data statistics from 17 experts, mode range was between 4 – 5 and median was between 4 – 5, inter quartile range was 0.00. It was acceptable quartile range 0.00-1.50. The data trend set, with a skewed distribution.

The researcher decided to end Delphi technique at the second round.

The data of demographic variables were analyzed by descriptive statistics; frequency, and percentage. The 21st century competency based management of Art Design Education in universities under Liaoning Province were analyzed by mode, median, inter quartile range.

Step (3) developing future wheels for the 21st century competency based

management of Art Design Education in universities under Liaoning Province.

Qualitative Research: The researcher used the 21st century competency based management of Art Design Education in universities under Liaoning Province from step (2) to develop future wheels for the 21st century competency based management of Art Design Education in universities under Liaoning Province.

Results

Results based on the research objective were revealed as follows: (1)

there were five important dimensions and 91 items of the 21st century competency based management of Art Design Education in universities under Liaoning Province, namely; Personal Potential Competence, Professional Knowledge Competence, Operational Skills Competence, Technological Innovation Competence, and Life and Social Skills Competence; and (2) the future wheels for the 21st century competency based management of Art Design Education in universities under Liaoning Province were developed as below Figure 2

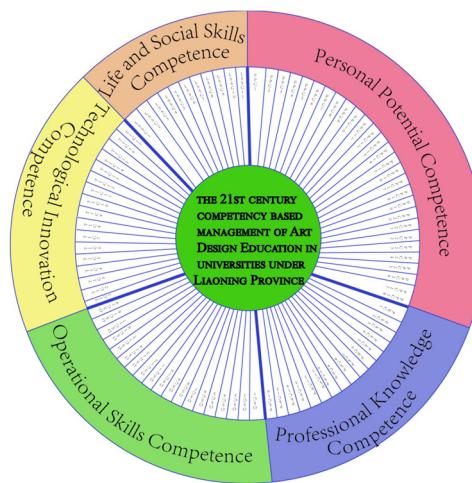


Figure 2 Future Wheels

Discussions: Based on the research objectives, the discussion will be presented as follows:-

(1) There were five dimensions of the 21st century competency based management

of Art Design Education in universities under Liaoning Province, namely as follows: Personal Potential Competence, Professional Knowledge Competence, Operational Skills Competence, Technological Innovation

Competence, Life and Social Skills Competence. The research findings were revealed as such because of the reform of the system and the renewal of management ideas. Under the background that competency-based human resource management is attracting more and more attention. In order to complete the important task of training high-quality talents needed by the society, art education must constantly improve the level of competence. In my opinion, the 21st century competency based management of Art Design Education in universities under Liaoning Province in these five dimensions are exploratory domain. This research finding was in accordance with the theories or research of Li Zhonghua. Guo Yanmei (2016) pointed out 24 competent characteristic elements such as "people-oriented"; through factor analysis, they construct a five-dimensional competency characteristic model including educational concept, knowledge system, teaching and research ability, personal characteristics and professional development; (1) educational concept includes people-oriented, inquiry viewpoints, teaching in accordance with their aptitude, lifelong learning; (2) the knowledge system includes professional knowledge, basic quality, procedural

knowledge, subject knowledge and strategic knowledge; (3) teaching and scientific research ability includes teaching regulation ability, scientific research ability, innovation ability, course resource development ability, language expression ability, and team cooperation ability, etc; (4) personal characteristics include responsibility, confidence, dedication, flexibility and artistry, and belief ; (5) professional development includes self-reflection, career planning, achievement orientation, and applied research.

Also, the findings were in the same direction with Dodeen, H. (2013) used the questionnaire to divide 29 items into 5 dimensions: taught knowledge and organization (7 items), clear interpretation (6 items), scoring and evaluation (6 items), teaching methods (4 items), and relationship with students (6 items).

Yingwei, Dong., & Zhilong ,Y. (2021) point out competence components are problem-solving ability, persuasion, cooperation ability, oral expression ability, listening ability, affinity and appeal.

Moreover, from the research of Competence was developed by experts and scholars in the field or by using the Delphi approach to develop capabilities

available for course-based models (Bölsche, D., Klumpp, M., & Abidi, H. (2013).

Ye Xia (2021) mentioned the construction of a collection of two-teacher competency elements from four aspects: knowledge, skills, quality and individual quality, and subdivided the four categories into six dimensions, forming 29 influence factors. Competent characteristics consists of basic theoretical knowledge, professional practice ability, professional teaching ability, academic research ability, personal personality, professional ethics dimensions, including basic cultural knowledge, education professional knowledge, professional practice skills, professional teaching skills, practice teaching skills, enterprise work experience, industry influence, theory and practice, stress capacity, professional ethics, devotion, industry professionalism, understand industry demand and other 29 competence characteristics.

According to McLeland and Spencer (1993), "competence" is generally divided into three categories: basic, discriminative, and translational and developmental competence. Research competence refers to the general lack of art and design education, once art and design education in such competence and improved, then

will greatly improve its work performance (Five dimensions), according to the current characteristics of art and design education in Liaoning province, ignore competence and transformation and developmental competence into art and design education competence in Liaoning province.

(2) The future wheels for the 21st century competency based management of Art Design Education in universities under Liaoning Province were developed. As such, the future wheels was a way for organizations to think and question the future as a structured competency of Art Design Education. Therefore, future wheels could help develop multiple concepts about possible future development by providing future-conscious perspectives. After two rounds of Delphi analysis, 91 competency items were determined in five dimensions, via data analysis, to provide the basis for the future round, to develop its own competency language for its own organization. Future wheels were able to provide rich visual data for abstract competency feature extraction. Moreover, future wheels could make decisions to provide organizational strategies. Like the future wheels in research that we can know competency of the 21st century

competency based management of Art Design Education in universities under Liaoning Province in five dimensions. The major findings were revealed as such Charles Handy (2011) whose research finding was in accordance with the theories competency model of 21st century managers. In the research, it proposed that 21st century managers must have five competent features: (1) knowledge and technical expertise, reflected in a number of research results; (2) cross-functional and transnational work experience, which reflects the globalization of the 21st century; leadership of (3) collaboration, (4) self-management ability, and (5) personality characteristics. Also, from the research of Yangjie Huang (2020) Abstract: It was found that the competence of college entrepreneurship education teachers can be divided into three dimensions: entrepreneurial skill factors, traditional academic factors and entrepreneurial attitude factors; the first two abilities mainly depends on learning and training mechanism, and the enhancement of entrepreneurial attitude factors mainly depends on communication and cooperation mechanisms; the entrepreneurial skill factor improves the performance of entrepreneurial education. To improve

the performance of entrepreneurship education in colleges and universities, we should start from the aspects of learning and training mechanism construction, enhancing teachers' entrepreneurial skills, and establish innovation and entrepreneurship models, and consider three competency factors and adopt classified measures.

Arifin, M. A., & Rasdi, R. M. (2017). competency can lead to effective job performance. Suwanroj et al. (2019) it can be certainly concluded that competence is a behavioral trait, mainly from knowledge and skill, and possibly from other complementary psychological traits, which increases one's ability to achieve the desired goal or purpose.

Morpurgo, M. T., & Azevedo, A. (2021) studied manager competence from a unique perspective and from a training perspective. They studied management training in the organization, summarized the content of management training, and developed five characteristics of manager competence, namely conceptual skills and creativity, leadership, interpersonal skills, administrative technology, and ability.

Therefore, it is likely that there are 5 important dimension of the 21st century competency based management of Art

Design Education in universities under Liaoning Province.

Prasanth, M. Daniel, Solomon (2013) "competence" as a combination of knowledge, skills and behavior used to improve performance; or as the state or quality of being adequately or well qualified, having the ability to perform a specific role.

Another interesting phenomenon is that according to the seriousness and meticulous of the questionnaire filling, almost analyzing ability, self-development ability, personality characteristics, quick-reaction capability, spirit of dedication, implementation capacity, education system concept, answers are different. The field of higher education is in need of best practices to help guide the development of programs that measure competency (Carnegie Foundation for the Advancement of Teaching, 2014). It should not simply give the conclusions. This Multi-dimensional thinking in itself is of great research value.

Suggestions

It may provide itemized recommendations based on research findings in three aspects:

With the continuous advancement of management competence research, the mature models and methods in organization

management are also reflected and applied in other fields. Especially in the field of higher art and design education, it is a process of spreading knowledge from people to people, which actually puts forward higher requirements for competency knowledge managers. How is the competence in the post, how to distinguish between excellent performance and mediocre performance? Therefore, the competency theory is naturally translated to the field of art and design education.

The competency model is not the objective of the research, but the corresponding management model must support a certain management mode. According to the above research results, (Five dimensions) the researchers summarized the following model, and took the contents in the formal map as the ability evaluation model of the art and design education, and as a reference to explore the establishment of the art and design education management model. The so-called "five-dimensional competency model" refers to the establishment of different majors, universities, selection and evaluation based on the conclusions of this study. Establish a talent management mode with the "five-dimensional ability

model" as the development tool, and improve the accuracy of the appointment of art and design education and scientific management in universities.

Referring to the above basic situation and 91 items of the creative competency model, summarized Five-dimensional competency model Figure 2.

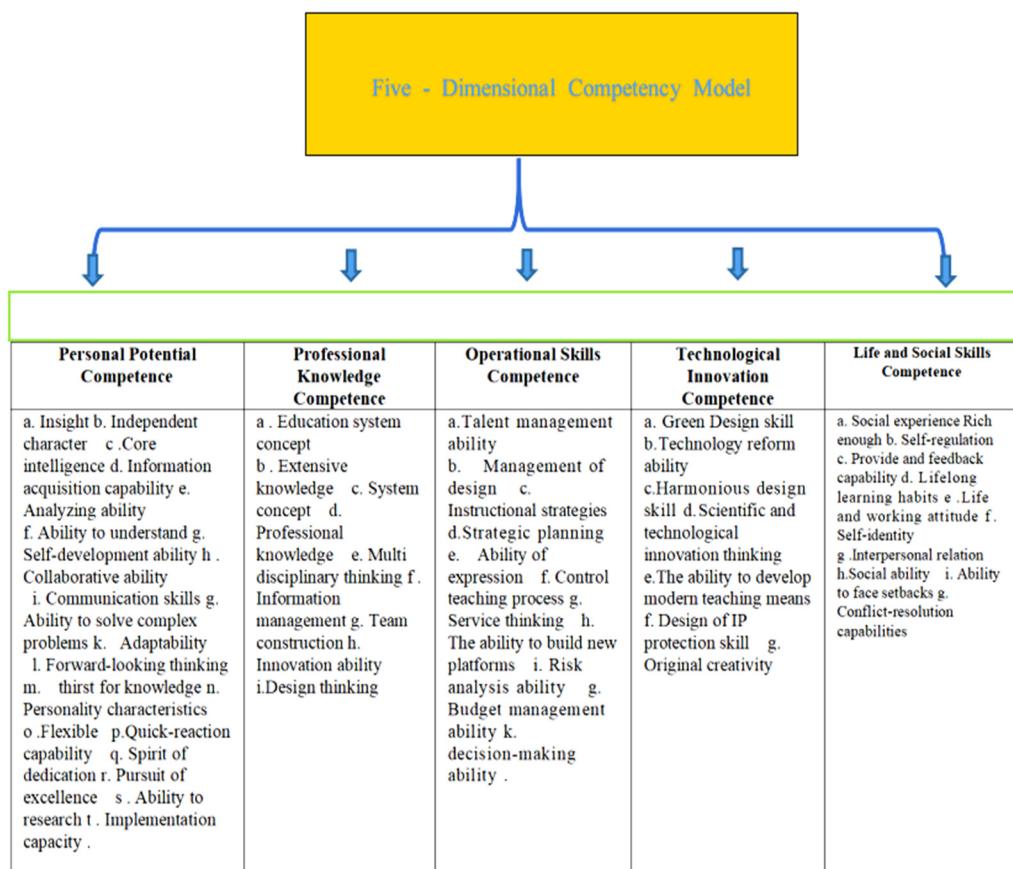


Figure 2 Five-Dimensional Competency Model

Research is universal and extensive. In today's reform of the art and design education system, ability management has always been a common problem that must be highly valued and actively solved. The study of outstanding industry talents has become

an important part of the organizational system reform and an important index of all countries. Therefore, the ability research of art and design education is not only a theoretical problem, but also a development subject with great practical significance and

far-reaching historical significance. This major topic has been addressed through the exploration of competence, and research conclusions can be applied to different

domains, (1) Radio, television, television, press and distribution (2) Sports development (3) Internet culture (4) Entertainment development (5) Tourism development.

Reference

Arifin, M. A., & Rasdi, R. M. (2017). The competent vocational college teacher: A proposed model for effective job performance. *International Journal of Academic Research in Business and Social Sciences*, 7(2), 829-837.

Bölsche, D., Klumpp, M., & Abidi, H. (2013). Specific competencies in humanitarian logistics education. *Journal of Humanitarian Logistics and Supply Chain Management*.

Carnegie Foundation for the Advancement of Teaching. (2014). 50-state scan of course credit policies working draft. Retrieved from http://cdn.carnegiefoundation.org/wp-content/uploads/2013/08/CUP_Policy_MayUpdate1.pdf

Dodeen, H., (2013). Validity, Reliability, and Potential Bias of Short Forms of Students' Evaluation of Teaching: The Case of UAE University. *Educational Assessment*, p235-250. doi:10.1080/10627197.2013.846670

Handy, C. (2011). *Beyond Certainty: the changing worlds of organisations*. Random House.

Morpurgo, M. T., & Azevedo, A. (2021). Investigating the Role of Professional Accounting Education in Enhancing Meta-Competency Development: Aligning With Industry Perceptions. In Integration and application of business graduate and business leader competency-models (pp. 1-26). IGI Global.

Prasanth. M., Daniel Solomon. (2013). Leadership Competency. IOSR. *Journal of Humanities and Social Science*.

Spencer, L.M.,Spencer ,S.M.(1993). *Competence at Work: Models for Superior Performance*. New York: John Wiley&Sons Inc,:199.220.

Suwanroj, Leekitchwatana and Pimdee. (2019). Confirmatory Factor Analysis of The Essential Digital Competencies for Undergraduate Students in Thai Higher Education Institutions. *Journal of Technology and Science Education JOTSE*, p340-356 – Online ISSN: 2013-6374 – Print ISSN: 2014-5349 <https://doi.org/10.3926/jotse.645>

Yingwei, Dong., &Zhilong,Y. (2021). Study on the competence evaluation index system of university organizations. *Economic research guide* No.32, 2021 Serial No.490 Article number: 1673-291X (2021). 32-0076-05.

Yinqiao, Yang., Fenfen, Jiang., (2020). *Study on Art Teaching Theory and its Teaching Methods*. Jilin People's Publishing Press.

Ye, Xia. (2021). *Research on Hunan Rural Human Capital Investment Optimization Based on Hierarchical Analysis Method*. Inner Mongolia Science and Technology and Economy.

YangJie, H. (2020). Research on College Teacher Competency and Performance of Entrepreneurship. *Education Journal of Higher Education*, 2020, 1000-4203, 01-007-07.

Zhonghua, L., Yanmei, Guo. (2016). An Empirical Study of the Qualified Characteristic Model of the College Teacher Educator. *Journal of Educational Science of Hunan Normal University*, 2016, 1671-6124: 06-0116-07.