



Vocational Student Learning Skill and Development

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ABSTRACT

Vocational education plays a critical role in driving society development; therefore, how to drive student learning motivation and increase student learning performance to strengthen society development has become a valuable issue and attracted much eyesight of the public in the recent years. In order to understand the importance of vocational education, the objective of the study is to explore vocational student learning performance and development. The study employed random sampling to send out questionnaires to conduct the pilot study. The results indicated that the reliability and validity of the instrument are pretty satisfied. Moreover, the study finally provides discussion for the related authority to make strategic policies.

Keywords: Learning performance, Learning skill, Vocational student

1 Introduction

Vocational education plays a critical role in driving society development, because the power of society improvement is implemented by advanced and skilled technique. In the recent years, how to drive student learning motivation and increase student learning performance to strengthen society development has become a valuable issue and attracted much eyesight of the public. In order to understand the importance of vocational education, the objective of the study is to explore vocational student learning performance and development so that the suggestions could be referential for the practitioners and policy makers.

1. Theory

1.1 Learning

Lefrancois reported that learning is the obtaining and changing that involves “information”, “knowledge”, “skill”, “habit”, “”, “attitude”, and “belief” (Lefrancois, 2011). The change in learning results from student individual experiences. Meanwhile, the alteration of learning gets involved in student disposition which refers to the tendency whether students would do the things. In addition, learning also including the turning of skill or capability when carrying on something. Learner’s actual performance usually turns to be the accordance for instructor’s evaluation (Lefrancois, 1999). Broadly speaking, learning is the altering procedure for individuals to form new habits and thus leads to the behavior to be more lasted under a certain circumstance to obtain knowledge and skill practice. In other words, learning is the procedure and outcome of obtaining knowledge and holding skill. Accordingly, the process of individual behavior altering is learning, while the results of individual behavior evolution are also learning (Zhang, 1989 ; Yuan & You, 1990 ; Huang, 2005).

Achievements generally refer to obtaining the expected goals, and which is proved to have beneficial results through implementing practical action; or the efficiency of the perceived objects have been affirmed. To some extent, outcome is not the point to evaluate learners’ academic performance, but the really acquired ability after learning activity. Learning effectiveness basically covered the types that including knowledge, skill, and attitude. Knowledge is learner’s understanding degree about the knowledge after learning; skill effectiveness means what the learners can do after learning;

attitude effectiveness refers to the attitude or ambition in behavior toward what s/he would like to do after learning. Of which, the evaluation of attitude effectiveness is the most difficult part, therefore, it is also the most important part for students to try their efforts to do (National Academy for Educational Research, 2016 ; Chih, 2011). In addition, it is reported that the definition of learning covers the following three parts: 1) the alteration of behavior or knowledge is long-lasting; 2) the point of alteration is learner's behavior or the knowledge content of individual perception structure; 3) the reason to alter is caused by learner's practice or experience rather than motivation, exhaustion, medicine or other physiological factors. Therefore, one can define learning to be the behavior or perception altering process of learner's interaction with the environment (Chen, 2000).

1.2 Vocational course essence

Moreover, the five principal basic course outlines of home-economics students included: 1) Student-centered learning: the student-centered learning subject highlighted the practice-oriented course features of vocational education; 2) Nurture by nature: assisting learners to reach adapted development and career planning so that the basic knowledge could be connected with skill. It is expected that learners could be cultivated to be specialized in home economics in the foreseeable future; 3) Pragmatism: the core concept of vocational education is pragmatism. The design of course outline results from functional analysis, which is closely connected with industry-academy relationship in order to go further to shorten the gap between theory and practice so that the learners' competitiveness could be highly increased; 4) Life-long learning: cultivating learners to have home-economics-based skills and competence to adopt the demands of working so that they would be adaptive to the challenging environment and requirements and holding advanced skills when facing career alteration; 5) Career development: focusing on cultivating learner's with the related skills and core literacy, including fashion aesthetic, apparel, and life application. Integrating with the newest profession with course outline to attend simultaneously to career vision and future so that learners could hold international vision and mobility while focusing on professional development (Ministry of Education, 2018; National Academy for Educational Research, 2016).

1.3 Vocational skill and core competency

Skill is a series of intentional action to carry out individual objective or accomplish a specific job. However, generally speaking, skill refers to motor skill, while skill learning usually requires the collocation of multiple abilities. For example, the learning of motor skill must be the basic cooperation of perception and action (National Academy for Educational Research, 2018). Basic skills are the survival skills for individuals to exist in the society or work place. The majority of people concerned that in order to survive; one has to hold more knowledge and skill for the improvement of technology and surging of knowledge (National Academy of Educational Research, 2017).

Core competence is called "basic skill" or "key capability", it is the most important part to face the modern era and future life challenge and the cause to make society and individual be successful and responsible. Meanwhile, competence is translated to be ability; it is alternatively used with ability, capacity skill, and proficiency. The key capability including the widely defined terms, such as "knowledge", "perception", "skill", "attitude", "emotion", "value", and "motivation". Basic competence is even the common basic course of varied professional groups. The contents of core competence have to be ever-lasting enlarged, updated, and implemented. Basic competence is not only the dependence for life-long learning but also the reliance of which to be advanced in the related profession. Therefore, in spite of the difference in varied countries, core competence of vocational students is of peak importance in strengthening not only their own but also society competitiveness.

1.4 Vocational skills and development

Vocational skills are the complicated operating system that is constructed in applying professional knowledge or individual experience in vocational activities based on real practice or implementation. The features of vocational skill including the following parts: 1) Vocational skill is the outcome of vocational implementation and acquired efforts; 2) Vocational skill is closely related to vocational activities, it ensures the smooth of vocational activities; 3) Vocational skill is a conscious and purposeful manipulating way. In other words, it is under the control of vocational consciousness; 4) Vocational skill is the manipulating way to satisfy vocational needs, it could be utilized or terminated (Che, 1993). In addition, university career and competency assessment network (UCAN) describes vocational skill to be the critical capability that individual has to possess what carrying out a specific job. It is mainly to find out and confirm what are the points to facilitate excellent work performance and the related profession and behavior could be beneficial for organization or individual to realize how to effectively increase work performance. Spencer & Spencer (1993) proposed iceberg

model theory, argued that vocational competence is a series of synthesized performance just like a huge iceberg, which including the parts of above and under water level. The parts of under water level are the ones that are not easy to be found by the outs; those are individual's latent basic personality traits such as motivation, trait, and self-concept; while the parts that are above water level refer to knowledge and skill, which are easy to be seen by the others and the ones to be obtained through training and developing (University Career and Competency Assessment Network, 2017). On the other side, learning outcome is the consequence of knowledge and ability that a person or machine acquired after learning process (National Academy for Educational Research, 2003). Student learning outcomes are the knowledge acquired and performance demonstrated after learners finishing the learning or obtaining the degree (Huang & Chih, 2010). Learning outcome is regarded as an important indicator of student learning performance. The objective of evaluating student learning performance is the make the students realize their own learning situation and provide base for instructors to improve instruction efficiency and increase student learning performance (Ho & Peng, 2016; Guay, Ratelle, & Chanal, 2008). The contents of evaluating learning performance including the parts like "perception", "affection", and "skill". From the standpoint of learning, learning performance refers that after a period of learning activity. One goes further to employ various possible evaluating approaches to understand the achieved outcomes that a student acquired through the tested consequence. In other words, the evaluation of learning performance is an indicator of understanding learning outcomes (Keng, 2015).

Table 1 The contents of core competencies defined by varied organizations

Organizations	The contents of core competencies
United Nations Educational, Scientific and Cultural Organization (UNESCO)	Interpreting the five key points of life-long learning from the standpoint of core competencies, including "learning to know, learning to do, learning to live together, learning to be, and learning to change."
Organization for Economic Cooperation and Development, (OECD)	Competence refers to applying social psychological resources to adapt changes under the complicated demanding ability in a certain circumstance; the conception of competence is wider than knowledge and skill. Therefore, the essence of competence also including attitude. The core competence initiated by OECD in 2003 mainly covered three critical layers: using tools interactively; interacting in heterogeneous groups, and acting autonomously. Each layer also contains the contents of solid depth.
European Union (EU)	Defining competence refers to the integration and utilization about knowledge, skill, and attitude; EU proposed the eight critical competences to promote life-long learning, which including mother tongue communication, foreign language communication, mathematical ability, basic technological capabilities, digital capability, learning how to learn, interpersonal, trans-cultural, social competence, civic competence, entrepreneurship, and cultural expression, ..., etc..

2. Method

The study employed questionnaire to collect data. The instrument development process is described as the follows:

2.1 Instrument

In order to acquire concise and clear response from the respondents, the study adopted structured-item questionnaire. That is, all of the items in the questionnaire are closed; the respondents could select a most suitable option to express their own opinion toward the item. There are a total of four constructs in the questionnaire. The first construct is demographics, which including 6 items to understand the respondents background; the rest three constructs covered "aesthetic literacy", "self-efficacy", and "learning performance". A total of 50 items were included in the three constructs.

In addition, the study adopted five-point Likert-type scale (5= strongly agree; 1= strongly disagree) to evaluate the respondents' attitude toward the items. The closed structure makes the respondents much easier to select an appropriate answer and enables the results of the questionnaire to be more referential.

3.2 Pilot study sampling

To be referential, the study utilized random sampling to conduct the investigation. In the pilot study, a total of 30 copies were randomly sent to vocational high schools of beautification department students. All of which were successfully collected. The effective response rate was 100%.

3. Results and discussion

3.1 Reliability and validity

The study firstly calculated mean and standard deviation for each item to understand the descriptive statistics of the items, and then analyzed the reliability and validity of the pilot study to make sure the reliability and internal consistency of the instrument. First, the descriptive statistics show that the respondents' attitude all lean to five, which implies that the respondents mostly agree with the item description. Second, the results indicated that the coefficients of reliability and validity are all above the suggested threshold. Specifically, the closer the coefficients of Cronbach's α to 1, the higher the items internal consistency. If the coefficient of item Cronbach's α is below 0.7, then the item has to be eliminated. The study conducted reliability analysis through SPSS18 and the reliability of the questionnaire in the pilot study turns out to be 0.958, which implies that the reliability of the instrument is pretty satisfied. On the other hand, in terms of validity, the study employed expert validity to confirm. Two professions of the related area were invited to review the manuscript of the questionnaire, and who provided suggestions to revise the items to confirm the instrument validity after reviewing the manuscript. (See Table 2 and 3 for reference.)

4.2 Discussion

The results of the pilot study showed that the range of standard deviation value is dispersed, which implies that the respondents opinion toward the items are diversified, while the results of mean value are above three, which indicate that the respondents hold favorable opinion toward the items.

In sum, the results of the pilot study are quite referential and worthy to go further to deeply understand the respondents attitude about the issue.

Table 2 The descriptive statistics of the pilot study

Item	Min	Max	Mean	SD
1. Life style and attitude are classified into aesthetic range.	3	5	4.40	0.56
2. Aesthetic delight comes from the experience and exploration of new things.	3	5	4.47	0.57
3. Aesthetic implies the appropriate etiquette of manners.	3	5	4.43	0.68
4. Keep trying and accept criticism could better ensure the style appearance of fashion aesthetic.	3	5	4.27	0.74
5. Widely reading various magazines would enable comprehensive understanding in aesthetic.	3	5	4.20	0.71
6. It is professional aesthetic expression to fulfill the learned knowledge in the real life.	3	5	4.23	0.63
7. It is always joyful for me when enjoying the aesthetic things.	3	5	4.57	0.63
8. I like to appreciate the aesthetic aspect of multi-dimensional culture, such as the related activities of various ethnic group or religion.	3	5	4.27	0.74
9. Touching the aesthetic things could stimulate positive sense of hope in the life.	3	5	4.43	0.57
10. I can find out there exist aesthetic things from a tiny place.	3	5	4.40	0.68
11. I am always willing to share and discuss aesthetic things with the others.	3	5	4.47	0.63
12. It takes time and respectful and opening attitude to develop aesthetic literacy.	3	5	4.17	0.75
13. Aesthetic is competitiveness, it could doubly reflect in the workplace.	3	5	3.83	0.83
14. Developing the related aesthetic competence is the life-long learning power..	3	5	4.27	0.64
15. Aesthetic literacy should originated from daily life and eventually go back to our usual lives.	3	5	4.37	0.67

16. The aesthetic creative talent ought to possess aesthetic literacy competence.	3	5	4.37	0.67
17. I believe that if only I pay efforts, my professional skill would be enhanced.	3	5	4.23	0.77
18. I am confident that I can perform better in professional skill and knowledge.	3	5	4.27	0.64
19. I am confident that I can acquire knowledge from exploring problems in the real life.	3	5	4.23	0.73
20. I am confident that I can apply my learned knowledge and skill to the real life self-beautification and maintenance.	3	5	4.23	0.73
21. I am confident that I can think about the problems with my classmates from various perspectives to reach consensus.	3	5	4.30	0.70
22. I am confident that I can fully cooperate with my classmates in order to reach the objective of a certain work.	3	5	4.13	0.63
23. Self-confidence perspective would promote my fulfillment of personal behavior.	3	5	4.27	0.64
24. In the process of participating learning activities makes me increase my self confidence and affirmation.	3	5	4.33	0.66
25. I am confident that I can orderly learn the concept and skill of school class step by step.	3	5	4.17	0.65
26. I am confident that I can properly assign and control time and learn to planed work.	3	5	4.03	0.77
27. I am confident that I can properly express my own feeling and conception.	3	5	4.17	0.83
28. I am confident that I can control the ways to make myself be happy.	3	5	4.17	0.79
29. I am confident that I can develop varied interests and make my own leisure life be more fulfilling and joyful.	3	5	4.33	0.76
30. I am confident that I can obtain more learning opportunities in the process of self reflection.	3	5	4.33	0.71
31. I am confident that I can have multi-dimensional thinking and analyzing ability after learning.	3	5	4.20	0.71
32. I am confident that I can release my emotion with correct and proper approach when facing pressure.	3	5	4.23	0.63
33. I am confident that I can understand popular fashion information after reading the related magazines.	3	5	4.20	0.85
34. I can acquire the related competence demanded by the future after learning.	3	5	4.27	0.69
35. I have clear oral communication ability after the class learning.	3	5	3.97	0.72
36. I am able to properly review my self-learning and effectively control my own learning progress	3	5	4.00	0.70
37. I can memorize the professional knowledge and skill instructed by the teacher.	3	5	4.33	0.71
38. I can understand the professional knowledge instructed by the teacher.	3	5	4.43	0.68
39. I am able to apply the professional knowledge to the real situation after the class instruction.	3	5	4.10	0.76
40. I've learned coordination in a group and reach the objective after the class leaning.	3	5	3.97	0.77
41. I've learned how to connect the theory and practice after the instruction courses.	3	5	4.20	0.66
42. I have the ability to solve the problems after the class learning.	3	5	4.27	0.74
43. I am motivated to take the related courses and knowledge after the class learning.	3	5	4.30	0.75
44. I am motivated to go further to explore the related knowledge about the subject after the class learning.	3	5	4.07	0.83
45. I have a better understanding about the related developing industries after the practical class learning.	3	5	4.13	0.68
46. I can figure out a more comprehensive strategy after considering various situation when facing a professional problem.	3	5	4.17	0.65
47. I know how to improve my demerits after class learning.	3	5	4.23	0.63
48. I know how to correctly operate the professional tools after the practical learning.	3	5	4.43	0.63
49. I've made significant improvement in professional skill after the practical learning.	3	5	4.30	0.65
50. I've learned the varied professional skill through the practical learning.	3	5	4.40	0.62

Table 3 The reliability coefficients of the pilot study

Items	Cronbach's Alpha if item deleted
1. Life style and attitude are classified into aesthetic range.	0.957
2. Aesthetic delight comes from the experience and exploration of new things.	0.957
3. Aesthetic implies the appropriate etiquette of manners.	0.957
4. Keep trying and accept criticism could better ensure the style appearance of fashion aesthetic.	0.958
5. Widely reading various magazines would enable comprehensive understanding in aesthetic.	0.957
6. It is professional aesthetic expression to fulfill the learned knowledge in the real life.	0.957
7. It is always joyful for me when enjoying the aesthetic things.	0.957
8. I like to appreciate the aesthetic aspect of multi-dimensional culture, such as the related activities of various ethnic group or religion.	0.956
9. Touching the aesthetic things could stimulate positive sense of hope in the life.	0.956
10. I can find out there exist aesthetic things from a tiny place.	0.957
11. I am always willing to share and discuss aesthetic things with the others.	0.957
12. It takes time and respectful and opening attitude to develop aesthetic literacy.	0.957
13. Aesthetic is competitiveness, it could doubly reflect in the workplace.	0.956
14. Developing the related aesthetic competence is the life-long learning power..	0.956
15. Aesthetic literacy should originated from daily life and eventually go back to our usual lives.	0.957
16. The aesthetic creative talent ought to possess aesthetic literacy competence.	0.957
17. I believe that if only I pay efforts, my professional skill would be enhanced.	0.956
18. I am confident that I can perform better in professional skill and knowledge.	0.956
19. I am confident that I can acquire knowledge from exploring problems in the real life.	0.956
20. I am confident that I can apply my learned knowledge and skill to the real life self-beautification and maintenance.	0.956
21. I am confident that I can think about the problems with my classmates from various perspectives to reach consensus.	0.958
22. I am confident that I can fully cooperate with my classmates in order to reach the objective of a certain work.	0.956
23. Self-confidence perspective would promote my fulfillment of personal behavior.	0.956
24. In the process of participating learning activities makes me increase my self confidence and affirmation.	0.956
25. I am confident that I can orderly learn the concept and skill of school class step by step.	0.957
26. I am confident that I can properly assign and control time and learn to planed work.	0.956
27. I am confident that I can properly express my own feeling and conception.	0.957
28. I am confident that I can control the ways to make myself be happy.	0.956
29. I am confident that I can develop varied interests and make my own leisure life be more fulfilling and joyful.	0.956
30. I am confident that I can obtain more learning opportunities in the process of self reflection.	0.957
31. I am confident that I can have multi-dimensional thinking and analyzing ability after learning.	0.957
32. I am confident that I can release my emotion with correct and proper approach when facing pressure.	0.957
33. I am confident that I can understand popular fashion information after reading the related magazines.	0.957
34. I can acquire the related competence demanded by the future after learning.	0.958
35. I have clear oral communication ability after the class learning.	0.958
36. I am able to properly review my self-learning and effectively control my own learning progress	0.957

37. I can memorize the professional knowledge and skill instructed by the teacher.	0.957
38. I can understand the professional knowledge instructed by the teacher.	0.956
39. I am able to apply the professional knowledge to the real situation after the class instruction.	0.957
40. I've learned coordination in a group and reach the objective after the class learning.	0.957
41. I've learned how to connect the theory and practice after the instruction courses.	0.957
42. I have the ability to solve the problems after the class learning.	0.956
43. I am motivated to take the related courses and knowledge after the class learning.	0.956
44. I am motivated to go further to explore the related knowledge about the subject after the class learning.	0.956
45. I have a better understanding about the related developing industries after the practical class learning.	0.956
46. I can figure out a more comprehensive strategy after considering various situation when facing a professional problem.	0.957
47. I know how to improve my demerits after class learning.	0.959
48. I know how to correctly operate the professional tools after the practical learning.	0.957
49. I've made significant improvement in professional skill after the practical learning.	0.958
50. I've learned the varied professional skill through the practical learning.	0.959

Alpha value = 0.958

Number of cases = 30

4. Conclusion

The study firstly interpreted the importance of vocational education and how to improve student learning, and then described vocational course essence with an attempt to illustrate the competence of vocational student competitiveness.

Based on the results provided above, it is apparent that vocational education has doubtlessly become the competence to strengthen society competitiveness and improve learners working skills or technique in the future. Striving in the highly competed society, the study argues that both government decision makers and practitioners have to ponder over the issue about how to increase society competitiveness through the help of well-developed vocational education.

Finally, it is suggested that future researchers could go further to explore the more detailed factors about improving vocational learning performance such as personality, learning style, or life style....., etc.

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