



Tertiary Students' Entrepreneurial Ability of Entrepreneurship-Embedded Internship Program in Education Service Industry

Chun-Mei Chou¹, Chien-Hua Shen², Hsi-Chi Hsiao³

¹ National Yunlin University of Science

² Transworld University

³ Cheng Shiu University

ARTICLE INFO

Article History:

Received 16.02.2016

Received in revised form

08.03.2016

Accepted 05.08.2016

Available online

01.09.2016

ABSTRACT

The study aims to explore tertiary students' entrepreneurial ability of entrepreneurship-embedded internship program in education service industry. To achieve this goal, the study uses interviews, and panel discussions to confirm entrepreneurial ability. In addition, the study utilizes transformation of knowledge and ability to select representative knowledge items and to confirm the entrepreneurial ability structure of entrepreneurship-embedded internship program in education service industry through panel discussions. Entrepreneurs in education service industry should have these ten categories, total 42 items, such as essential professional knowledge item; that is, entrepreneurial skills, education ability, marketing ability, computer ability, service ability, and management ability, in order to cultivate entrepreneurs' abilities of education service industry effectively. Core entrepreneurial ability of education service industry entrepreneurs should include 13 items in total, including entrepreneurial skills, education ability, marketing ability and service ability and so on.

© 2016 IJPES. All rights reserved

Keywords:

Tertiary students; Entrepreneurial ability; Entrepreneurship-embedded internship program

1. Introduction

Facing the impact of low birth rate, a knowledge economy, changes in the industrial and economic structure and a high-tech age, the orientation and functions of tertiary education have undergone major changes. As the domestic unemployment rate climbs, employment-oriented tertiary education programs urgently need to find the teaching resources for entrepreneurship education in Taiwan (Chou, Shen, Hsiao, & Chen 2010, Liao & Lee, 2011).

Entrepreneurial education plays the role of helping to reduce the unemployment rate in a country (Gurel, Altinay, and Daniele, 2009; Oosterbeek, van Praag, & Ijsselstein, 2010). Some research found that students' experiences in entrepreneurial education and entrepreneurial ability of entrepreneurship-embedded internship program have provided them with chances to learn new entrepreneurial skills, which may be helpful for their future entrepreneurial endeavours (Boore & Porter, 2011; Cader & Norman, 2006; Culbertson, Smith, & Leiva, 2011; Haynie & Sepherd, 2009). Enterprise educational learning could influence the perceived desirability of starting a business (Bienkowska & Klofsten, 2011; Matlay, 2008; Peterman & Kennedy, 2003).

Amid industrial structure adjustment in Taiwan, Small and Medium Enterprise Administration (SMEs) are mostly concentrated in the service sector, with the proportion being slightly over 80%. 56.72% of SMEs are Sole Proprietorships. In terms of the industries, 50.62% of SMEs are in whole saling and retailing, followed by manufacturing (10.52%) and restaurant industry (9.68%)(Small and Medium Enterprise Administration,

¹ Corresponding author's address: Institute of Vocational and Technological Education, National Yunlin University of Science & Technology, Yunlin, Taiwan

e-mail: choucm@yuntech.edu.tw

<http://dx.doi.org/10.17220/ijpes.2016.03.001>

Ministry of Economic Affairs, 2014).

The service sector is the main driver of Taiwan's economy and responsible for the bulk of local job creation, with sector output reaching NT\$9.4 trillion (US\$32 billion) and accounting for 68.19% GDP in 2012. The industries employed nearly 6.28 million people or 58.6% of the entire workforce in 2012 (Small and Medium Enterprise Administration, Ministry of Economic Affairs, 2014).

The Gross domestic product (GDP) ratio of education services industry accounted for between 4.65% -5.95% and annual rate of change was 1.16%. Education industrial development is a very labor-absorbing effect industry of the knowledge economy and society through the foundation of services and promote industrial restructuring (Council for Economic Planning and Development, 2013).

As the domestic unemployment rate climbs, employment-oriented entrepreneurship-embedded internship programs urgently need to find the teaching resources for providing entrepreneurial education. Tertiary students' professional ability of Teacher Education Center, coupled with their education background, may serve the purposes of education industry with comprehensive professional and entrepreneurial education (Gwynne, 2008; Won, 2008; Xu, 2009). Entrepreneurial education does seem to play an important role in fostering entrepreneurial abilities and intentions of tertiary students (Gurel, Altinay, & Daniele, 2010).

Ojastu, Chiu and Olsen (2011) propose a number of recommendations to people involved in creating and managing entrepreneurship programs are proposed: more attention to selection of students with appropriate attitudes, increased attention to certain under-represented topics (employee management, social networks, marketing and sales skills), more application of experiential and networking approaches, and increased focus on self-learning. From the above, students in the entrepreneurship-embedded internship program should learn entrepreneurial spirit, students should be defined in the education industry to explore market opportunities for entrepreneurs' perception, nurturing risks and management strategies other items of entrepreneurship.

2. Purposes of this study

It is became an important issue to explore the entrepreneurship core competency for education service industry. The object of this study was to understand tertiary students' entrepreneurial abilities and core entrepreneurship competencies in education service industry that as a reference for course development and evaluation of abilities of entrepreneurs.

3. Methodology

3.1 Research Method

3.1.1 Interview method

There are three entrepreneurs of education service industry background. The main goal is to clarify responsibility in the education service industry entrepreneurial abilities included entrepreneurial opportunity, education ability, marketing ability, computer ability, service ability, and management ability and so on, and to confirm entrepreneurial abilities of tertiary students, duty and work in the education service industry (Abebe, 2012; Nejad and Abbaszadeh, 2012; Pihie, 2012).

3.1.2 Panel discussion

This research selects ten industrial and academic experts who are skilled in entrepreneurship and operational knowledge, such as education, computer, marketing, customer service, management and entrepreneurship education knowledge. These experts discuss and confirm necessary entrepreneurship knowledge of education service industry (Van Dam, Schipper, & Runhaar, 2010; Morgan & Gorman, 2012).

3.1.3 Delphi survey method

The Delphi group chose 30 members with education service industry and entrepreneurship background. The Delphi method was conceived as a group technique whose aim was to obtain the most reliable consensus of opinion of a group of experts by means of a series of intensive questionnaires with controlled opinion feedback of entrepreneurial abilities. The interaction of qualitative information that must help, on the one hand, in improving the quality of the group opinion for entrepreneurial abilities and, on the other hand, in compensating emotionally those who contribute their knowledge, as in the following round they see their suggestions included in the questionnaire sent to all the experts. Landeta (2006) has been able to confirm that the Delphi method continues to be used and is a valid instrument for forecasting and supporting decision-making. The questionnaire contains 35 items entrepreneurial abilities of present importance and frequency.

3.2 Participants

The participants in the Delphi technique and expert panel were experts in education, computer, marketing, customer service, management and entrepreneurship education fields. Three representatives from universities and industry were chosen, respectively. A total of 30 research samples were selected. The principles for sample selection were: 1) those who had attended an initial meeting of the job competence model in this study, and were willing to become participants; 2) those who had engaged in professional work for more than five years; and 3) those who could attend at least two group meetings, each lasting at least two hours.

3.3 Data Analysis

After collection of questionnaires of the three round Delphi surveys was completed. To achieve the research purposes, statistical methods, including frequency distribution and Kolmogorov-Smirnov One Sample Goodness of Fit Test, were employed to understand whether the participants shared consistent opinions. The statistical significance level of this study was 0.05.

4. Results

4.1 Tertiary students' entrepreneurial abilities

The tertiary students' entrepreneurial abilities included entrepreneurial skills, education ability, marketing ability, computer ability, service ability, and management ability (Chou, Shen, Hsiao, & Chen, 2010; Memili, Eddleston, Kellermanns, Zellweger, & Barnett, 2010; Morgan & Gorman, 2012). Based on the above statement, the essential entrepreneurial abilities of tertiary students in the education service industry are as follows (Table 1).

Table 1. Tertiary students' entrepreneurial abilities of entrepreneurship-embedded internship program.

Dimensions	Ability Index	Important	Frequency
A. Entrepreneurial skills	A1 Analyze Entrepreneur Characteristics	5	3
	A2 Assess Risks	5	5
	A3 Analyze Entrepreneur role	4	5
	A4 Assess New Business trends	5	2
	A5 Assess Innovation Ability	4	4
	A6 Describe Entrepreneurial Opportunity	5	5
	A7 Solutions Problems	5	5
B. Education ability	B1 Teaching Techniques	4	3
	B2 Teaching Planning	4	3
	B3 Class Manangement	4	3
	B4 Analysis of Teaching effectiveness	4	4
	B5 Teaching Innovation Ability	4	4
	B6 Personnel Communication Ability	4	4
	B7 Technology Innovation Ability	4	4
C. Marketing ability	C1 Student Market Analysis	5	3

	C2 Profit Analysis	5	3
	C3 Product Promotion Ability	4	3
	C4 Product Pricing Ability	4	3
	C5 Budgeting Management	4	3
	C6 Product Selling Ability	3	2
	C7 Establishing Customer Relations	3	2
D. Computer ability	D1 Teaching Management Analysis	4	3
	D2 Evaluation of Using and Selection for Internet	4	3
	D3 Student management	4	3
	D4 Design of Management Information System	4	3
	D5 Maintaining Customer Consumption Records	4	4
	D6 Standardizing service procedures	4	3
	D7 Evaluation of Internet Benefit	4	3
E. Service ability	E1 Service Innovation Ability	5	5
	E2 Admeasurements, Survey and Analysis of Customers' Satisfaction	4	4
	E3 Design of Information System for customers' Satisfaction	4	4
	E4 Manage of Customers' Satisfaction	4	4
	E5 Providing Design of whole Education Product	4	4
	E6 Design of Educating System for Customers' Satisfaction	4	4
	E7 Design of Customers' Reactions systems	4	4
F. Management ability	F1 Concepts of Business Management	2	2
	F2 Use Communications Technologies/System	3	2
	F3 Human Resource Planning Ability	3	2
	F4 Product Innovation Ability	3	2
	F5 human resource training and developing ability	3	2
	F6 Costs/Benefits Analysis Ability	3	2
	F7 Understanding basic concepts of strategic management.	3	2

4.2. The core entrepreneurship abilities of education service industry

In order to meet the requirements of the education system, we conclude that the essential abilities of entrepreneurs in tertiary schools and basic entrepreneurs should be cultivated (Fig. 1).

- A. The abilities of education service industry entrepreneurs in high importance and high frequency have a 13-ability index. It consists of 4 entrepreneurial skills, 3 education ability abilities, 1 marketing ability, and 5 service abilities. The core abilities of education service industry entrepreneurs have assess risks, describe entrepreneurial opportunity, solutions problems, and service innovation ability.
- B. The abilities of education service industry entrepreneurs in above moderate importance and moderate frequency have a 17-ability index. It consists of 2 entrepreneurial skills, 4 Education ability abilities, 6 marketing ability abilities, and 5 Computer ability abilities.
- C. The abilities of education service industry entrepreneurs in high importance and low frequency have an entrepreneurial opportunities ability index.
- D. The abilities of education service industry entrepreneurs in blow moderate importance and moderate frequency have a 7-ability index. It consists of 2 computer ability and 5 Management abilities.

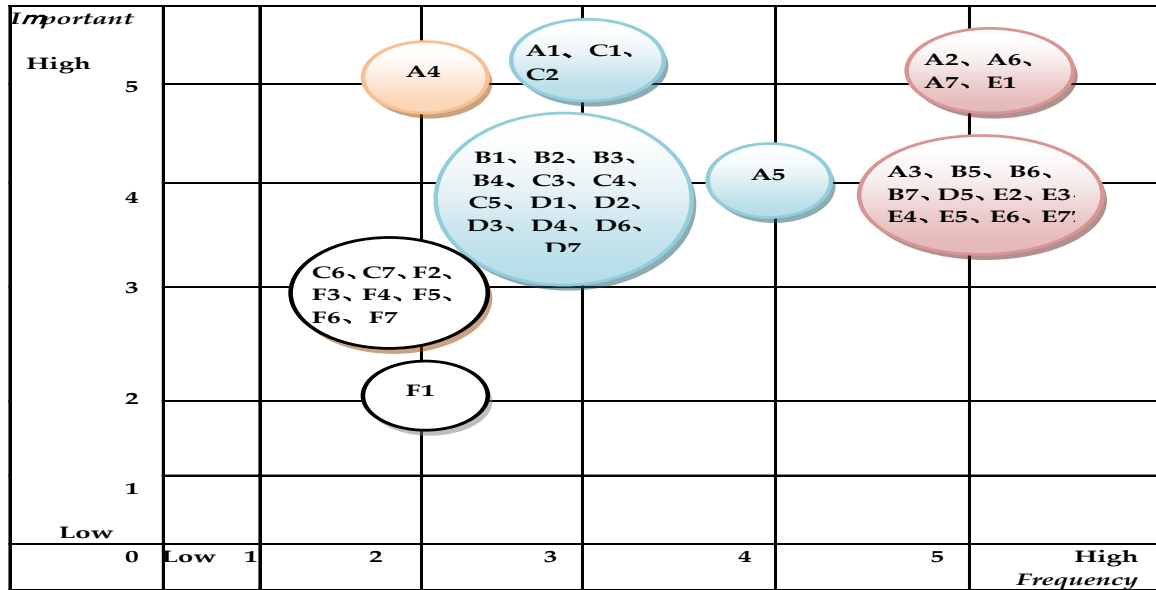


Fig. 1. Tertiary students' entrepreneurial ability of entrepreneurship-embedded internship program

5. Discussion and Conclusions

First, this study found tertiary students' entrepreneurial abilities included a total of 6 major competences, which are entrepreneurial skills, education ability, marketing ability, computer ability, service ability, and management ability. They can be provided as a reference to the planning and revision of core courses for Tertiary education. Under future studies, task analyses to establish the expertise and relevant knowledge and assignments required for each competence as references to the development of teaching materials, may be conducted. Students go to the relevant public and private education industry educational learning activities actually real contact with staff and customers in the workplace, vocational and practical work experience job through entrepreneurship-embedded internship program (Chisholm, Harris, Northwood, & Johrendt, 2009). Carsrud, Brannback, Nordberg and Renko's (2009) study's results also show that the perceptions of the critical success factors significantly differ between the groups. Hence even experience will yield quite different cognitive maps. Students through internship activities, learning career-related internships entrepreneurial skills and experience, contacts with entrepreneurs and operators, such as different people experience the entrepreneurial process and the education industry operating practices, stimulate entrepreneurial ideas and action, and understanding of the entrepreneurial orientation educational knowledge internship programs, technical and entrepreneurial skills necessary to live, to train and to become the education industry entrepreneur or person in charge (Lee, Liu, & Lee, 2011).

Second, this study found entrepreneurial abilities indicators for tertiary students include a total of 35 ability index, and the results of this study can serve as a basis for teachers to integrate entrepreneurial education with teaching activities in order to develop the students' entrepreneurial abilities. Entrepreneurship is a system of causally interrelated components of entrepreneurship discloses not only the causal links among its components but as well the mechanism of their functioning together as a whole. A crucial role belongs to the component of "Behaviour" (Oganisjana & Koke, 2012). The productivity and results category of 21st century skills is organized around the concepts of drivers of productivity and the autonomy necessary to act. These are the development of initiative and self-direction, accountability and responsibility, and flexibility and

adaptability. Key skills sets include planning skills, the ability to monitor progress, and adapt/alter plans. This category reflects the need for independent motivation, action and decision-making required of both entrepreneurs and effective employees in today's economy (Bellotti, et al., 2012; Boyles, 2012).

Three, this study found the core abilities of education service industry entrepreneurs included a total of 4 major abilities, which are assess risks, describe entrepreneurial opportunity, solutions problems, and service innovation ability. Creativity and innovation are at the core of the inventive thinking category of 21st century KSAs, and by definition involve the act of bringing something new and original into existence. Inventive thinking also requires sound higher order thinking skills, allowing the application of analysis, comparison, inference and interpretation, evaluation, and synthesis to develop new solutions to complex problems. It is this combination of intelligence and creativity that leads to the ability of entrepreneurs to evaluate multiple ideas to determine the true opportunities (Boyles, 2012; Lahm & Heriot, 2013).

Last, this study found abilities of education service industry entrepreneurs in high importance and high frequency included a total of 13-ability index, which are 4 education ability was analysis of teaching effectiveness, teaching innovation ability, personnel communication ability, and technology innovation ability. The 6 service ability was admeasurements, survey and analysis of customers' satisfaction, design of information system for customers' satisfaction, management of customers' satisfaction, providing design of whole education product, design of educating system for customers' satisfaction, and design of customers' reactions system. This results raise a question about the reconsideration of the capacity of competence-oriented higher education for promoting students ' entrepreneurship and as a result for increasing their competitiveness Competence-oriented higher education, in the way competence is comprehended today, does not have the fullest capacity for developing students' entrepreneurship. It cannot either be considered as quality higher education since it does not imply certain behaviours in study process which could bring to novelty and cause transformative effects and changes which make the basis for business sophistication and innovation. Therefore, competence oriented higher education is not sufficient for raising students' competitiveness. It speaks of the necessity to reconsider the goals and philosophy of higher education (Oganisjana & Koke, 2012; Płaziak & Rachwał, 2014).

In the entrepreneurial ability of learning-oriented: 1. start entrepreneurial experience: technological innovation education industry, the core technology innovation, operational modalities and create new value; 2. management experience: the education industry in product innovation, product works, the education industry service innovation and create new value; 3. industry-specific experience: the education industry customer orientation, perceived their parents to meet the demand of customer needs and practices. Therefore, entrepreneurial orientation training curriculum development education, the first students should have entrepreneurial basic core curriculum for entrepreneurship content-based knowledge; secondly, through the off-campus internship programs introduce students to the education industry internships for students actual contact with the entrepreneurs or managers, off-campus internship through personal interaction and implement operation, thereby to enable students to deeply understand the entrepreneurial process may face problems, therefore, designed to train students with entrepreneurial intentions school internship program is one of the important issues. Hence, tertiary student of education service industry entrepreneurs trained from tertiary schools must meet the needs of industrial development. In conclusion, the preoccupation is to set an entrepreneurs ability index for education service industry in tertiary schools and education service industry training as a reference for course development and evaluation of abilities of entrepreneurs.

6. Acknowledgement

This paper was written while the authors were supported by a grant from the National Science Council, R.O.C. (NSC 102-2511-S-224-001-MY3; NSC 102-2511-S-265-001)

References

- Abebe, M.A. (2012). Social and institutional predictors of entrepreneurial career intention: Evidence from Hispanic adults in the U.S. *Journal of Enterprising Culture*, 20(1), 1–23, doi:10.1142/S021849581250001X
- Barth, M., Godemann, J., Rieckman, M., & Stoltenberg, U. (2007). Developing key competences for sustainable development in higher education. *International Journal of Sustainability in Higher Education*, 8, 416-430.
- Bellotti, F., Berta, R., De Gloria, A., Lavagnino, E., Dagnino, F., Ott, M., Romero, M., Usart, M., & Mayer, I.S. (2012). Designing a Course for Stimulating Entrepreneurship in Higher Education through Serious Games. *Procedia Computer Science*, 15, 174 – 186.
- Camuffo, A., Gerli, F., & Gubitta, P., (2012). Competencies matter: modeling effective entrepreneurship in northeast of Italy small firms. *Cross Cultural Management*, 19, 48-66, doi:10.1108/13527601211195628
- Chou, C. M. Shen, C. H., Hsiao, H. C., & Chen, S. C. (2010). A study on constructing entrepreneurial competence indicators for business department students of vocational and technical colleges in Taiwan. *World Transactions on Engineering and Technology Education*, 8(3), 316-320.
- Directorate General of Budget Accounting and Statistics Executive Yuan (2014). Latest indicators. <http://eng.dgbas.gov.tw/mp.asp?mp=2>
- Gundry, L. K., Ofstein, L. F., & Kickul, J. R. (2014). Seeing around corners: How creativity skills in entrepreneurship education influence innovation in business. *The International Journal of Management Education*, (2014), 1-10, doi:10.1016/j.ijme.2014.03.002
- Hung, S. W., Lin, M. H., & Wang, A. P. (2008). A study of the operation performance for the global e-retailing companies. *Journal of E-business*, 10(2), 359-378.
- Ismail, V.Y. (2014). The comparison of entrepreneurial competency in woman Micro-, small-, and medium-scale entrepreneurs. *Procedia - Social and Behavioral Sciences*, 115, 175 – 187.
- Konradt, U., Lückel, L., & Ellwart, T. (2012). The role of usability in business-to-business business service systems: Predictors and its impact on user's strain and commercial transactions. *Advances in Human-Computer Interaction*, doi:10.1155/2012/948693
- Landeta, J. (2006). Current validity of the Delphi method in social sciences. *Technological Forecasting & Social Change*, 73, 467 – 482, doi:10.1016/j.techfore.2005.09.002
- Lans, T., Blok, V., & Wesselingk, R. (2014). Learning apart and together: towards an integrated competence framework for sustainable entrepreneurship in higher education. *Journal of Cleaner Production*, 62, 37-47, doi:10.1016/j.jclepro.2013.03.036
- Liao, W.C. & Lee, P.S. (2011). The functions of technology industry high-level managers of SMEs in Taiwan. *Quarterly of SMEs Development*, 20, 1-22.
- Ma'atoofi, A.R., & Tajeddini, K. (2010). The effect of entrepreneurship orientation on learning orientation and innovation: A study of small-sized business firms in Iran. *International Journal of Trade, Economics and Finance*, 1(3), 254-260.
- Madhoushi, M., Sadati, A., Delavari, H., Mehdivand, M., & Mihandost, R., (2011). Entrepreneurial orientation and innovation performance: The mediating role of knowledge management. *Asian Journal of Business Management*, 3(4), 310-316.
- Martin, C. & Iucu, R.B. (2014). Teaching entrepreneurship to educational sciences students. *Procedia - Social and Behavioral Sciences*, 116, 4397 – 4400.
- Matlay, H. (2008). The impact of entrepreneurship education on entrepreneurial outcomes. *Journal of Small Business and Enterprise Development*, 15, 382–396, doi:10.1108/14626000810871745
- Memili E., Eddleston K.A., Kellermanns, F.W., Zellweger, T.M., & Barnett, T. (2010) The critical path to family firm success through entrepreneurial risk taking and image. *Journal of Family Business Strategy*, 1, 200-209, doi:10.1016/j.jfbs.2010.10.005
- Morgan, M., & Gorman, P. (2012). *Enhancing the employability skills of undergraduate engineering students*. Retrieved from http://www.ineer.org/Selections-from-ineer-books/2011_Innovations_v7_RLA_Final_Chap-18_Morgan-and-O'Gorman.pdf

- Nejad, B.A., & Abbaszadeh, M.M.S. (2012). Study of the entrepreneurship in universities as learning organization based on senge model. *International Education Studies*, 5(1), 67-77.
- Obschonk, M., Silbereisen, R.K., & Schmitt-Rodermund, E. (2010). Entrepreneurial intention as developmental outcome. *Journal of Vocational Behavior*, 77, 63-72, doi:10.1016/j.jvb.2010.02.008
- Pihie, Z. A. L. (2009). Entrepreneurship as a career choice: An analysis of entrepreneurial self-efficacy and intention of university students. *European Journal of Social Sciences*, 9(2), 338-349.
- Płaziak, M. & Rachwał, T. (2014). Entrepreneurship courses in spatial management studies in Polish Universities. *Procedia - Social and Behavioral Sciences*, 110, 710 – 718.
- Shen, C.H., Chou, C.M., Hsiao, H.C. & Lee, Y.J., (2013). Analyais of core competency required for the managerial work force of small and medium enterprises in Taiwan. *Journal of Software engineering and Application*, 6, 111-113, doi:10.4236/jsea.2013.63B024
- Small and Medium Enterprise (SMEs) of Ministry of Economic Affairs (2013a). *Statistical Abstract of National Income in Taiwan Area*. Retrieved from <http://www.moeasmea.gov.tw/ct.asp?xItem=11046&ctNode=724&mp=1>
- Small and Medium Enterprise (SMEs) of Ministry of Economic Affairs (2013b). *2012 White Paper on SMEs*. Retrieved from <http://www.e-volunteer.org.tw/upload/news/1954.pdf>
- The Quality Assurance Agency for Higher Education (2012). *Enterprise and entrepreneurship education: Guidance for UK higher education providers*. Retrieved from <http://www.qaa.ac.uk/Publications/InformationAndGuidance/Documents/enterprise-guidance.pdf>
- Today Taiwan (2014). *Taiwan's 2013 services exports rise 5.2 percent*. <http://taiwantoday.tw/ct.asp?xItem=217132&ctNode=421>
- Van Dam, K., Schipper, M., & Runhaar, P. (2010). Developing a competency-based framework for teachers' entrepreneurial behavior. *Teaching and Teacher Education*, 26, 955-971, doi:10.1016/j.tate.2009.10.038
- Vajargah, K. F. & Jahani, S. (2010). Application of ICTS in teaching and learning at university level: The case of Shahid Beheshti University. *The Turkish Online Journal of Educational Technology*, 9(2), 33-39.
- Won, C.H. (2008). The status and analysis of teacher education in population structure. *Taitung University Education*, 19, 143-82.
- Xu, W.S. (2009). The status and coping strategies of primary and secondary teacher education in Taiwan. *Ming Chuan education electronic journal* , 1, 102-113.