

Feng Chia University Outstanding Academic Paper by Students

Enhance Undergraduates' Occupational Competitiveness in Workplace through Experiential Learning in a Teaching Excellence Awarded University in Taiwan

Author(s): Melinda FAN ` Chun Hsing YU ` Yang Sheng CHEN ` Ruey-Fa LIN

Class: Department of Foreign Language & Literature \, Department of Statistics \,

Department of Communication Engineering

Student ID: D01252320 \cdot D0063818 \cdot D0143619 \cdot T89103

Course: International Business Culture

Instructor: Dr. Ruey-Fa LIN

Department: Department of Cooperative Economics

Academic Year: Semester 2, 2014-2015



Abstract

Envisaged with the global economy knowledge era, creating, disseminating and implementing knowledge as core competency are of great importance for human best future incessantly. Through life-long learning processes, we may have these complicated economic and social problems addressed elaborately. By way of higher education methods and materials, we learn any plausibly needed competencies in the so-called service learning and soft skills as an experiential education in universities. Traditionally, we employed competency-based training (CBT) as the fundamental idea to educate and train students to gain the necessary competency set in the workplace since 1970s. While recently, the evidence-based training (EBT), learning by practice (LBP). Problem-based training(PBL, including case-teaching), project-based learning(PJBL) and other experiential education are surged as an alternative learning way to success in achieving the credit for the different and interdisciplinary best practice.

Career-oriented and occupation-led (COOL) job-based training plays an important key role to strengthen the professional capability. Cultivating good employees, reducing costs and improving productivity efficiency are helpful to enhance organizational competitiveness. Using life-long learning for career development courses can improve the quality of labors and promote prosperity. This empirical study using a Teaching Excellence awarded university to prove the real effects for this amazing result.

Keyword: Competency-based training(CBT), Evidence-based training (EBT), Problem-based training (PBL)

Table of Content

Introduction	2
Conclusion	10
Bibliography:	11
Appendix	13



Introduction

Creating, disseminating and implementing knowledge is regarded as one of the core competencies of great importance for human capital and the best population bonus for the envisaged challenge. Accompanied with professional and customized skills and such business ethics as well as attitudes such as corporate social responsibility. Throughout the further education and life-long learning processes, we may adequately solve those complicated social and economic problems simultaneously. By way of the teaching methods and materials within higher education, we do need some supplementary competencies so-called service learning and soft skills as experiential learning around the inevitable idea like "learning by doing" strategy in universities. Conventionally, we always employed competency-based training (CBT) as the fundamental conceptual framework like department to educate and train students to gain the necessary competency set in the workplace since the 1970s. Nonetheless, by the end of last millennium, the newly invented evidence-based training (EBT), learning by practice (LBP). problem-based training(PBL, including case-teaching), project-based learning(PjBL) and other experiential learning ways are surged as an alternative learning way to success in achieving the credits and necessities for the integrated and interdisciplinary best practice to serve the full occupational scopes as a whole. Accordingly, program and division are being used instead of traditional

Experiential learning has been widely recognized and composed of several alternative training methods and materials such as soft skills, service learning and other best practice ideological from teaching-oriented and competency-based to evidence-based, problem-based, and project-based as well as learning by practice programs recently. This study aimed to explore the relationship between incubation and outcome-based measurement within the most frequently awarded as Teaching Excellence Magna Cum Laude laureate university, FengChia in the middle Taiwan area, for the past decade by the Ministry of Education. This university is characterized by and known as the best soft skills complementary with hard abilities from teaching to learning style.

departments.

The Nature and Types of Experiential Learning

Career-oriented and occupation-led (COOL) job-based training plays an advanced key role in strengthening the professional capability. Cultivating better employees, reducing costs and improving productivity efficiency are helpful to enhance another blue strategy to promote organizational competitiveness. Using life-long learning for career development courses can improve the quality of labors, promote productivity,

and progress prosperity. This empirical study used the most often awarded Teaching Excellence university as the sample to prove the real effects for this amazing result from soft skills and services learning as experiential learning to improve the employability. And furthermore, the mediative content effects by self-efficacy (Bandura, 2002) and employability readiness (Pool & Sewell, 2007) as well as the contextual moderation with cultural and emotional intelligence.

Experiential learning has been resurged as a flipper classroom management since the beginning of this century. Soft skills and service learning are employed to spread the ideology from "learning by doing" (Dewey, 1938). Experiential learning is now being utilized to enhance the occupational competitiveness at the workplace. It is the most favorite turn from evidence-based, project-based and problem-based case teaching within higher education as a complementary and seamless course from learning to earning. Those intervention effects are generated from the mediation by the self-efficacy (Bandura, 1977, 1997, 2001; Schwarzer & Jerusalem, 1995), employability readiness (Pool & Sewell, 2007; Rothwell & Arnold, 2007) and moderation with individual emotional (Boyatzis, Goleman, & Rhee, 1999; Goleman, Boyatzis & McKee, 2002; Salovey et al., 2000) and organizational cultural intelligence (Ang & Van Dyne, 2008; Ang et al., 2007; Earley & Ang, 2003; Earley, & Mosakowski, 2004).

Leading Soft Skills from Learning to Earning

Soft skills training can strengthen, enhance, and supplement the acquired hard skills from each diversified professions in schools and universities. Upon being developed from the intelligence theories such as general and specific, constructed, and multiple intelligence as well as positive intelligence to emotional intelligence (EI), and social quotient (SQ) (Bradberry & Greaves, 2009; Goleman, 2006), it is characterized by social and interpersonal relationship rather than the core competency required various occupational occasions and career development (Sternberg, 1985, 1996; Smith, 1994).

Contrary to hard skills, soft skills are also recognized as soft factors (Cupin, Knopfel, Morris, Motzel, & Pannenbacker, 1999; Wohlin & Ahlren, 2005), interpersonal skills (Gillard, 2009), people skills (Flanners, 2004), personal skills (Murch, 2001), social skills (Alam, Gale, Brown & Khan, 2010), critical skills (Lee, Trauth & Farwell, 1995), human skills (Pant & Baroudi, 2008), key skills (Simpson, 2006), generic skills, essential skills, key competencies, transferable skills, general capabilities and so on relevant to employability for acquiring, retaining, and promoting the position as a career development for human capital investment.

Integrating Service Learning by the Best Interdisciplinary Practice

Service learning is significant as essentials to preparation, services/action, reflection, celebrity, and evaluation stages for the best practice to improve the competency set by knowledge, skill/experience, and attitudes/ethics as well as other characteristics and qualifications. Some case-teaching supervisions have been provided to those internship, externship, practicum, apprenticeship, and probations amongst intra-, trans-, and interdisciplinary practical learning by doing. As to the types of service learning can be divided into seven categories such as extracurricular activities, practicum, daily activities, voluntary services, formal service learning curriculum including civility, part-time job, and involved life experiences.

Providing flexible courses and curriculums is useful to acquire their knowledge and skills bridging and leading learning in higher education to earning at the workforce market for graduates (Gardner, 2011a, 2011b). Those life-long contextualized career-oriented models are named as: clinical internship, legal externship, career & technical education (CTE), Science-technical-engineering and mathematical (STEM) programs, capstone courses, and professional science master modules and so on. In order to start a promising future at the beginning in their career development, undergraduates must be taught and actively learn to survive since their early livelihood.

Being compared with soft skills, service learning at the freshmen stage may only yield in half of the increasing employability after their graduated ages (Lin, 2013, 2015a, 2015b). This study has further been to reveal the main effects from soft skills and service learning, mediated effects from self-efficacy and employability readiness, and moderated by organizational cultural and individual emotional quotients into the original model for experiential learning into a more comprehensive framework integrated with direct, content, and contextual research construct as a whole so as to grasp more understanding and planning to a desirable success in personal career.

The direct, mediative and contextualized experiential learning to earing programs are composed of four pillar elements: (1) academic core competence capability, (2) lessons learned as experiential learning, (3) promoting and bridging successive ways to career development, and (4) strategic effective placement. Reflection thus has been acknowledged as a critical thinking process in an active, persistent and careful consideration of belief and knowledge further to success in career (Dewey, 1933, 1938) and individual exposing and creating uncertainties of beliefs or knowing the perplexing and parading from experiencing critically resulted thinking from reflective thinking. However, this difference between employability is based on the framework on mediation-moderation (Baron & Kenny, 1986).

Measurement, Methodology, and Results

Seven hundred and sixty two students were drawn from the total students of almost 18,000 participated with a highly popular course named Love Psychology in this study owing to the systematic sampling representativeness for replicating the internal validity for this empirical study. The measurement instruments consisted of soft skills (K), service learning (L), self-efficacy (F), employability readiness (R) for main and mediative effects testified and organizational cultural quotients (C) as well as individual emotional quotients (E) were borrowed as moderators. Of these scales, all reached at the minimal internal consistency coefficients (a) more than .8 and construct validity almost above .5, satisfied with the ideal level of well-developed instruments. Former to HLM, the WABA analysis was classified at the individual perception rather than group phenomenon (Dansereau, 1984; James & Jones, 1974). All these capabilities were weighted by the importance with proficiency of each single questionnaire item.

Direct Main Effects upon Employability

The 36-item *soft skills* scale was modified from Simpson (2006) symbolized with an adequacy for factor (principal component) analysis (KMO=.977, χ^2 =19182.5, p=.000) and formed 4 subscales: *Communication & problem-solving* (α =.96; loadings above .51 & h²>.46), *Impression management* (α =.88; loadings above .50 & h²>.61), *Team spirit* (α =.90; loadings above .57 & h²>.59), and *Liberty & civility* (also alias LLN, Language, Literacy, and Numeracy; α =.74; loadings above .49 & h²>.53) and accounted for 62.60% total variance and total α =.97. See table 1 for the detailed data. As to service learning, seven *service learning* capabilities were namely as SL01 *student unions & association*, SL02 *leadership*, SL03 *service learning*, SL04 *general education*, SL05 *part-time job*, SL06 *voluntary services*, and SL07 *practicum* and with internal consistency at α =.94.

The self-developed 13-item *employability scale* was adequate to factor (principal component) analysis (KMO=.964, χ^2 =11602.9, p=.000) and grouped into two subscales: *foundation* (8 items; α =.97; loadings above .70 & h^2 >.77) and *generic* (5 items; α =.97; loadings above .66 & h^2 >.55) scale as well as accounted for 82.30% total variance and total α =.97. See table 2 for the detailed data.

Measurement Instruments for the Mediation Effects

For such mediative scales as *employability readiness* and *self-efficacy*, the 10 item <u>self-efficacy</u> scale (table 3) was adequate to factor (principal component) analysis (KMO=.954, χ^2 =6702.6, p=.000) and one-component scale (10 items; α =.95; loadings

above .78 & h^2 >.60; accounted variance 67.75%). The 16-item employability readiness (table 4) was also adequate to factor (principal component) analysis (KMO=.96, χ^2 =12621.9, p=.000) and two subscales: <u>occupation-orientation</u> (11 items; α =.97; loadings above .58 & h^2 >.64) and <u>career-led</u> (5 items; α =.91; loadings above .69 & h^2 >.76) scales as well as accounted for 65.71% total variance and total α =.97.

Measurement Instruments for the Moderation Mechanisms

For those *cultural* and *emotional* intelligence as internalized mechanism within organizations and individuals are the moderation effects would happen to the extent to employability as paying way to personal career development. *Cultural intelligence* is a 20-item scale (table 5) composed of two subscales after exploratory principal component analysis (KMO=.97, χ^2 =12686.6, p=.000): *Awareness & Socializing* (14 items; α =.96; loadings above .56 & h^2 >.57) and *Norm* (6 items; α =.93; loadings above .67 & h^2 >.67). The total internal consistency α =.97 and accounted variance at 67.52%.

As to the 18-item *emotional intelligence* consisting of 18 items (table 6) is divided into two subscales after the principal component analysis (KMO=.96, χ^2 =8815.8, p=.000): <u>Adaptability</u> (9 items; α =.91; loadings above .55 & h²>.39) and <u>Empathy</u> (9 items; α =.91; loadings above .53 & h²>.53). The accounted variance at 60.73% and internal consistency α =.95.

The Direct Main Impacts upon Employability from Soft Skills and Service Learning

In line with the multiple hierarchical regression models utilized to formulate the prototypical relationships on implementing and generating employability respectively. Table 7 shows the Pearson product-moment correlation matrix. Accordingly, table 8 illustrates the whole hierarchical multiple regression for the whole employability model integrated with the main, mediative, and moderative effects upon the foundation and generic employabilities.

As a result, the *foundation employability* can be initiated by soft skills (communication & problem-solving) and service learning (including SL02 leadership, SL03 service learning, SL04 general education, SL05 part-time job, and SL06 voluntary services) by 77.0% (F=243.37, p<.000) descending with the impacts from SL02-leadership (β =.39), SL05-part-time job (β =.22), SKX1-communication & problem-solving (β =.19), SL03-service learning (β =.15), SL04-general education (β =.11), and SL06-voluntary service (β =.08) from the main direct influence at step 1 of hierarchical multiple regression. Exposure in real practice spots may enforce,

improve and innovate lessons learned from the best practice via the initial service learning and soft skills. It simply says that the evidence-based related active learning by vision may promote the learning to earning as a way to succeed in acquiring the opportunity to be employed.

As to the fundamental and long-lasting generic employability, soft skills and service learning may yield 78.7% total explained variance with all soft skills and service learning by descending effects from SL05-part-time job (β =.22), SL02-leadership (β =.18), SKX2-impression management (β =.15), SL04-general education (β =.15), SKX4-LLN (β =.12), SL07-practicum (β =.09), and SL06-voluntary (β =.08). Experiential learning by doing as the best practice is also a way of life-long career development process in achieving desirable credits in personal self-actualization in the long range. Soft skills play a more important role in generic rather than foundation employability from the impression management and LLN (language, literacy, and numeracy), while the fieldwork in service learning such as part-time job, leadership, and general education ideologies are useful to improve the long-lasting competitiveness for future investment instead of instant and temporary formal service learning course. It is apparently that the career-orientation occupation-led (COOL) learning model is more important than realistic profession-oriented occupation-led (POOL, Lin, 2013) model in retaining the job vacancies for a longer tenure.

The Chained Mediation from Self-efficacy and Employability Readiness

The changed mediation increased amidst soft skills as well as services learning and foundation employability with self-efficacy and employability readiness is significant (R^2_c =.02, F_c =16.36; R^2 =.79, F=202.88). The mediated effects occurred within the significant descended different service learning types: SL02-leadership (β =.39 \rightarrow .34), SL05-part-time job (β =.22 \rightarrow .16), SL03-service learning curriculum (β =.15 \rightarrow .13), SL04-general education (β =.11 \rightarrow .104), and SL06-vuluntary service (β =.08 \rightarrow .08) by career readiness (β =.17) and self-efficacy (β =-.08).

Nevertheless, the communication & problem-solving suddenly increased (β =.19 \rightarrow .23), it is obviously that some extra effects may exist within the dynamic interaction to be clarified. However, the leadership firstly and communication & problem-solving accordingly are still playing the leading roles in foundation employability. The mediating effects are taken by career readiness and self-efficacy thereafter on the opposite direction. These significant service learning predictors were adjusted lesser in the mediation model.

Concerning with the generic employability mediated by self-efficacy and employability readiness, the increasing rate and mediative effects are significant

 $(R^2_c=.06, F_c=34.46; R^2=.61, F=86.42)$ and descending as SL04-general education $(\beta=.15\rightarrow.13)$, SKX2-impression management $(\beta=.15\rightarrow.12)$, SL05-part-time job $(\beta=.22\rightarrow.08)$, SKX4-LLN $(\beta=.12\rightarrow.08)$, SL06-voluntary service $(\beta=.08\rightarrow.07)$, and SL02-leadership $(\beta=.18)$ & SL07-practicum $(\beta=.09)$ completely and meditatively replaced by career $(\beta=.27)$ and occupational $(\beta=.17)$ employability readiness.

Amazingly, SL02-leadership and SL07-practicum became non-significantly and mediated into career and occupational employability. In this step, it is the turn for career and occupation to play the crucial roles in determining the main parts of impact upon generic employability during this mediation process. In particular, the career development takes the primary pivotal responsibility for long-term effects via the life-long learning through transforming and/or upgrading competence set accumulated from evidence and practice-based learning.

The Complicated Contextual Moderation within Emotional and Cultural Mechanisms

There are only two emotional intelligence predictor can moderate the interaction by marginally increasing significantly (R^2_c =.00, F_c =2.09; R^2 =.79, F=15.98) and only the EI01-adaptability with SL02-leadership (β =.23) and EI02-empathy with self-efficacy (β =.18). Unfortunately, no any further moderator can be added into this model. It simply says that the core competency set can be contextually influenced by internalizing the adjusted leadership and empathized with individualized differential self-efficacy respectively.

As to the minor increasing in SKX1-communication & problem-solving (β =.23 \rightarrow .24) and career readiness (β =.17 \rightarrow .18) can be regarded as the same. Simply to say, only the emotional intelligence can adapt leadership and empathize self-efficacy with internalized mechanism contextually. From the occupational perspective, acquiring job by internalizing adaptability with communication & problem-solving skills and empathize with the career planning may be just only a short-term competitiveness strategy for obtaining success in the workplace employment.

From the viewpoint from long-range contextual generic employability, some more extra increases are added to the organizational contextual moderation settings (R^2_c =.04, F_c =4.95; R^2 =.64, F=47.36). Whole mediative effects are happened to SKX2-impression management and even some service learning items become no more significant such as SL04-general education (β =.13), SL05-part-time job (β =.08), and SL07-practicum (β =.23) as well as the mediated readiness predictors eliminated like career (β =.27) and occupation (β =.16). Instead, the complicated moderation interaction occurring between EQX1-adaptability x SEXX-self-efficacy (β =-.76), CQX1-awareness x SKX1-communication & problem-solving (β =-.71),

CQX1-awareness x ERX1-career (β =-.58), EIX1-adaptability x SKX3-team-spirit (β =.51), CQX2-norm x ERX1-career (β =.42), and CQX2-norm x SL06-voluntary service (β =.37). Additionally, three significant predictors added and two magnificent variables enhanced from this moderation model for generic employability as well: SL03-service learning course (β =.62) SKX1-communication & problem-solving (β =.29), and self-efficacy (β =-.09) as well as accelerating variables: SL07-practicum (β =-.08 \rightarrow -.20) and SKX4-LLN (β =.12 \rightarrow .38).

As a result, the generic employability on moderation model after the main and mediation is a very complicated mechanism to be explained. The contextual moderation is so determinant to dominate the effects from the two-way interactions, and furthermore, only the suddenly significant restored predictors can still keep their influence upon the long-term generic career development rather than the temporarily instant occupation-oriented employment.

Conclusion

The profession-oriented and occupation-led (POOL) experiential learning and training is strongly related to future employability in real workplace as the best practice from practicum to probation. Nonetheless, the so-called career-oriented occupation-led (COOL) model is more likely to be accepted to a generic rather than purely foundation employability. From the perspective of employability, acquiring the job vacancies is rather important to the graduates. And the foundation employability is deeply influenced by the soft skills and service training in the outcome-based measurement education methods. Unfortunately, these fortunate training can be only benefited from individual emotional intelligence. And the mediation internalized in an individual's personal characteristics and qualification is crucial.

As to those necessary skills stressed by the Australian government like LLN (language, Literacy, and Numeracy) is of essence to the generic employability dimensions. And furthermore, the communication and problem-solving soft skills have stronger impacts upon their investment for the students' future. In addition, the so-called coaching soft skills are not recognized as a necessary skill as well. The variety of service learning ways of life is also playing the key role to open the gate for acquiring and retaining a job at the beginning of applying for an occupation. Nonetheless, the long-term employability needs life-long learning for being transforming and upgrading the core technology and cost down as a new blue strategy for organizational development and human career.

The university and department reputation and credit as well as the social capital play an important role in acquiring, retaining, and promoting the job and position in the future. It is acknowledged that the school reputation can still play a long-lasting effect upon their recruitment privilege and following employability advantage in the long range. While something could be changed with a longitudinally accumulated credits and achievement as reputation for every university striving for superiority (e.g., academic accreditation, competition medals, and marketability-oriented divisional course design, and so on).

Amongst those interactive moderators, both communication and coaching soft skills can be moderated by different cultural quotient in an opposite direction, the positive influence can be produced by communication with positive cultural quotient, while coaching in positive cultural quotients upon the expected employability with negative effects. This is also true for the impact from formal service learning course with communicating and impressing soft skills upon the future employability. However, this study is sampled from a purely frequently awarded teaching excellence university rather than a research excellence university, therefore, the external validity is rather limited to the private higher education agencies. So as the undergraduates are no more the primary stream of man power policy, thus, future studies are strongly suggested to extend the scope and range of the subjects.

Bibliography:

Alam, M., Gale, A., Brown, M., & Khan, A. I. (2010). The Importance of Human Skills in Project Management Professional Development, International Journal of Management Projects in Business, 3, 495-516.

Ang, S., & Van Dyne, L. (2008). Handbook on Cultural Intelligence: Theory, Measurement and Applications, NY: Sharpe.

Ang, S., Vand Dyne, L., Kok, C. K. S., Ng, K. Y., Templer, K. J., Tay, C., & Chandrasekar, N. A. (2007). Cultural Intelligence: Its Measurement and Effects on Cultural Judgement and Decision Making, Cultural Adaptaion, and Task Performance, Management & Organizational Review, 3, 335-371.

Bandura, A. (1977). Self-efficacy: Toward a Unifying Theory of Behavioral Change, Psychological Review, 84, 191-215.

Bandura, A. (1997). Self-efficacy: The Exercise of Control. NY: Freeman.

Bandura, A. (2001). Social Cognitive Theory: An Agentic Perspective, Annual Review of Psychology, 52, 1-26.

Baron, M., & Kenny, D. A. (1986). The Moderator-Mediator Variable Distinction in Social Psychological Research, Journal of Personality and Social Psychology, 51, 6, 1173-1182.

Boyatzis, R. E., Goleman, D., & Rhee, K. S. (1999). Clustering Competence in Emotional Intelligence: Insight from the Emotional Competence Inventory (ECI). Working Paper 99-6. Cleveland: Case Western Reserve University.

Bradberry, T., & Greaves, J. (2009). Emotional Intelligence 2.0. CA: TalentSmart.

Cupin, G, Knopfel, H., Morris, P., Motzel, E., & Pannenbacker, O. (1999). ICB, IPMA Competecy Baseline Version 2.0. Bremen: Eigenverlag.

Dansereau, F. & Yammarino, E. J. (1984). Is More Discussion about "Level of Analysis" Really Necessary? Leadership Quarterly, 17, 537-552.

Dewey, J. (1933). How We Think. Boston: Heath.

Dewey, J. (1938). Experience and Education. NY: Collier.

Earley, P. C., & Ang, S. (2003). Cultural Intelligence: Individual Interactions across Cultures. CA: Stanford University Press.

Earley, P. C., & Mosakowski, E. (2004). Cultural Intelligence, Harvard Business Review, 82, 10,

Enhance Undergraduates' Occupational Competitiveness in Workplace through Experiential Learning in a Teaching Excellence Awarded University in Taiwan

- 139-140.
- Flanners, S. (2004). Effective People Skills for the Project Manager, paper presented at the proceeding of the 29th Annual Conference, Canada: Montreal, May 9th 12th 2004.
- Gardner, H. (2011a). Frames of Mind: The Theory of Multiple Intelligence. NY: Basic.
- Gardner, H. (2011b). Truth, Beauty, and Goodness Reframed: Educating for the Virtues in the 21st Century. NY: Basic.
- Gillard, S. (2009). Soft Skills and Teaching Expertise of Effective Project Managers, Information Science and Information Technology, 6, 723-730.
- Goleman, D. (2006). Social Intelligence: The New Science of Human Relationships. CA: Random House.
- Goleman, D., Boyatzis, R., & McKee, A. (2002). Primal Leadership: Realizing the Power of Emotional Intelligence. Boston: The Harvard Business Review Press.
- James, L. A., & Jones, A. P. (1974). Organizational Climatre: A Review of Theory and Research, Psychological Bulletin, 81, 1096-1112.
- Lee, D., Trauth, E., & Farwell, D. (1995). Critical Skills and Knowledge Requirements of IS Professionals, MIS Quarterly, 19, 313-340.
- LIN, R-F. (2013). Implementing Service Learning and Soft Skills to Occupational Employability in Human Resource Recruitment from Higher Education [Best Paper Award]," Conference for Diagloguing between Occupational Health and Psychological Counselling [Best Paper Award], 171-199. Sep 27th 2014. Taichung: Taichung University of Education.
- LIN, R-F. (2015). Employing the Best Practice for Teaching Excellence through Service Learning and Soft Skills, The 5th Asia-Pacific Regional Conference on Service-Learning: Love Journey-Community Engagement through Service Learning, May 25th 29th 2015, New Taipei: FuJen Catholic University.
- Murch, R. (2001). Basic Skills for Project Management: Best Practices for IT Professionals, Chapter 2. NJ: Prentice-Hall.
- Pant, L., & Baroudi, B. (2008). Project Management Education: The Human Skills Imperatives, International Journal of Project Management, 26, 124-128.
- Pool, L. D., & Sewell, P. (2007). The Key to Employability: Developing a Practical Model of Graduate Employability, Education & Training, 49, 4, 277-289.
- Rothwell, A., & Arnold, J. (2007). Self-perceived Employability: Development and Validation of a scale, Personnel Review, 36, 1, 23-41.
- Salovey, P., Bedell, B. T., Detweiler, J. B., & Mayer, J. D. (2000). Current Directions in Emotional Intelligence Research, in Lewis, M. & Haviland-Jones, J. M. (eds) Handbook of Emotions, pp.504-520. NY: Gulford.
- Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-efficacy Scale, in Weinmanm, J., Wright, S., & Johnson, M. (eds) Measures in Psychology: A User's Portfolio, Cause and Control Beliefs, pp.35-37. Windsor: NFER-NELSON.
- Simpson, S. (2006). The Measurement and Recognition of Soft Factors, Developing a Common Standard. UK: University of Surrey.
- Smith, M. W. (1994). Community Service Learning: Striking the Chord of Citizenship, Michigan Journal of Community Service Learning, 1, 1, 37-43.
- Sternberg, R. (1985). Beyond IQ: A Triarchic Theory of Human Intelligence. NY: Cambridge University Press.
- Sternberg, R. (1996). Successful Intelligence. NY: Simon & Schuster.
- Wohlin, C., & Ahlren, M. (2005). Soft Factors and Their Impact on Time and Market, Software Quality Journal, 4, 189-205.

Appendix:

Table 1 Construct Validity of Soft Skills Capabilities

KMO=.977;	Loadings	communality				
Barlett-Spherity test χ^2 =19182.472, p=.000						
Communication & Prob	olem-solvii	ng				
$(\alpha = .962; eigen value = 9.024; variance explained = 25.066%)$						
SK05 TM=Time Management	.714	.665				
SK04CT=Confidence & Trust	.712	.654				
SK01 CM=Communication	.700	.651				
SK08 TW=Teamwork Membership	.691	.672				
SK06 SM=Self-management	.689	.672				
SK03 IPR=Interpersonal	.682	.655				
SK14 PS=Problem-solving	.652	.667				
SK09 OP=Organizing & planning	.652	.650				
SK10 NE=Negotiation	.638	.639				
SK07 AC=Anger control	.593	.543				
SK19 IPRM=IPR management	.588	.633				
SK16 SM=Stress management	.584	.613				
SK18 RT=Rational thinking	.557	.624				
SK11 GS=Goal-setting	.548	.604				
SK12 RP=Responsibility	.532	.605				
SK13 RS=Responsiveness	.530	.641				
SK17 SA=Self-assertiveness	.525	.618				
SK22 CRM=Customer Relationship Mgmt	.515	.488				
SK02 NV=Nonverbal	.512	. <u>459</u>				
SK15 SG=Self-growth	.508	.616				
Impression Manag	gement					
(α = .876; eigen value = 5.143; variand	e explained =	14.285%)				
SK23 PH=Personal hygiene	.712	.672				
SK26 SR=self-other respect	.674	.683				
SK25 HL=Health & fitness	.585	.629				
SK24 AB=Absorption	.580	.630				
SK21 CM=Case management	.503	<u>.613</u>				
SK20 IM=Image management	.502	<u>.613</u>				
Teamwork						
$(\alpha = .903; eigen value = 5.140; variand$	e explained =	14.277%)				
SK34 TS=Teamwork	.678	.658				
SK33 TC=Teaching/coaching	.655	.693				
SK31 LD=Leadership	.650	.678				
SK35 LG=Language	.646	.629				
SK36 LE=Learning Efficiency	.629	.657				
SK32 MO=Motivating others	.619	.629				
SK30 PU=Punctuality	.565	.586				
Liberty/Civili						
(α = .743; eigen value = 3.228; varian						
SK27 LA=Literacy & Art	.764	.643				
SK28 NM=Numeracy	.642	.621				
SK29 CD=Cultural diversity	.491	<u>.529</u>				
Total (α = .973) 62.595% vari	ance expla	ined totally				

Table 2 Construct Validity of Employability

Tuble 2 competed to tallarly of Em	1 - 3	J .					
KMO=.964;	Loadings	communality					
Barlett-Spherity test χ ² =11602.932, p=.000							
Foundation							
(α = .971; eigen value = 6.124; variance explained = 47.110%)							
(E02) Understanding	.905	.918					
(E06) Decision-making	.888	.904					
(E01) Honest & Integrity	.857	.831					
(E03) Personal characteristics	.840	.865					
(E07) Information Technology	.811	.853					
(E12) Qualification	.754	.824					
(E05) Numeracy	.717	<u>.773</u>					
(E04) Literacy & Art	.703	.798					
Generic							
(α = .927; eigen value = 4.575; variance	explained = 3	35.190%)					
(E13) University Reputation	.845	.801					
(E08) Education	.834	.823					
(E11) Culture	.828	.791					
(E10) Department Majored	.747	.765					
(E09) Reputation/Credit	.662	<u>.753</u>					
Total (α = .970) 82.300% variance explained totally							

Table 3 Construct Validity of Self-Efficacy Capabilities

Table 5 Construct valuatly of Sci	ii-Efficacy	Capabilities
KMO=.954;	Loadings	communality
Barlett-Spherity test χ^2 =5702.551, p=.000		W.
Self-Efficacy	y	7/
(α = .947; eigen value = 6.755; variand	e explained =	67.753%)
SE10 solve problems	.799	.638
SE03 opposition	.825	.681
SE06 goal-achievement	.816	.666
SE02 unexpected events	. <u>775</u>	<u>.601</u>
SE05 unforseen situations	.830	.689
SE07 necessary effort	.828	.685
SE01 remaining calm	.836	.698
SE08 finding solutions	.848	.720
SE09 trouble solution	.835	.697
SE04 comes my way	.837	.700
Total (α = .947) 67.753% vari	iance expla	ined totally

Table 4 Construct Validity of Employability Readiness

1/1/0 050		1					
KMO=.959;	Loadings	communality					
Barlett-Spherity test χ ² =12621.881, p=.000							
Career-orientation							
(α = .965; eigen value = 7.033; variance explained = 43.959%)							
ES6B job vacancies	.852	.811					
ES6A strong demand	.844	.822					
ES7A opportunities	.843	.818					
ES7B skills & abilities	.833	.841					
ES5B career desirable	.787	.811					
ES8A job recruitment	.779	.752					
ES8B skills & experience	.775	.778					
ES4A degree	.667	.714					
ES5A high demand	.600	.660					
ES3A subject area(s)	.597	.687					
ES4B rank(s) highly	.584	<u>.643</u>					
Occupation-led							
(α = .914; eigen value = 5.064; variance	e explained = 3	31.649%)					
ES1B academic top	.852	.793					
ES1A high grades	.821	.734					
ES2B significant asset	.717	.747					
ES2A university	.712	<u>.727</u>					
ES3B outstanding reputation	.693	.760					
Total (α = .970) 75.608% variance explained totally							

Table 5 Construct Validity of Cultural Intelligence Capabilities

KMO=.970;	Loadings	communality						
Barlett-Spherity test χ ² =12686.629, p=.000								
Awareness & Socializing								
(α = .956; eigen value = 7.544; variance explained = 37.722%)								
CQ13 adjusting stress	.822	.747						
CQ14 enjoy living	.813	.725						
CQ18 speaking rate	.755	.636						
CQ12 socialising	.753	.718						
CQ11 enjoy interacting	.740	.683						
CQ19 nonverbal behavior	.727	.700						
CQ15 shopping condition	.685	.642						
CQ02 adjusting	.663	.592						
CQ01 interacting	.662	.616						
CQ20 facial expression	.657	.588						
CQ16 verbal behavior	.616	.601						
CQ04 accuracy	.596	.624						
CQ03 cross-cultural	.590	.648						
CQ17 pause & silence	.564	<u>.569</u>						
Norm								
(α = .930; eigen value = 5.960; variance	e explained =	29.798%)						
CQ08 marriage	.843	.803						
CQ05 legal & economic	.813	.759						
CQ06 rules	.795	.725						
CQ09 arts & crafts	.772	.739						
CQ07 values & beliefs	.741	.718						
CQ10 nonverbal	.671	<u>.671</u>						
Total (α = .966) 67.520% variance explained totally								

Table 6 Construct Validity of Emotional Intelligence Capabilities

KMO=.961;	Loadings	communality					
Barlett-Spherity test χ ² =8815.824, p=.000							
Adaptability							
$(\alpha = .910; eigen value = 5.936; variance explained = 32.976%)$							
EQ02 accurate self-assessment	.771	.711					
EQ18 team & coordination	.771	.623					
EQ01 emotional self-awareness	.720	.608					
EQ17 influence	.709	.615					
EQ04 adaptability	.702	.610					
EQ03 self-confidence	.693	.665					
EQ07 achievement-orientation	.632	.557					
EQ14 developing others	.558	.604					
EQ11 service orientation	.548	<u>.388</u>					
Empathy							
(α = .914; eigen value = 4.966; variance	e explained =	27.753%)					
EQ05 emotional self-control	.819	.677					
EQ13 inspirational leadership	.737	.695					
EQ15 change catalyst	.723	.691					
EQ09 optimism	.665	.614					
EQ16 conflict management	.634	.601					
EQ10 empathy	.582	.575					
EQ12 organizational awareness	.560	.608					
EQ08 trustworthiness	.541	.562					
EQ06 initiative	.533	<u>.530</u>					
Total (α = .950) 60.730% variance explained totally							

Table 7 Pearson Product-moment Correlation Matrix

	KKX1	KKX2	KKX3	KKX4	EQX1	EQX2	CQX1	CQX2	SEXX	EPX1	EPX2	ESX1	ESX2	SLXX
KKX1	1													
KKX2	.839	1												
KKX3	.805	.740	1											
KKX4	.584	.589	.639	1										
EQX1	.585	.572	.581	.442	1									
EQX2	.550	.540	.541	.517	.843	1								
CQX1	.548	.535	.559	.469	.669	.699	1							
CQX2	.426	.415	.446	.461	.550	.658	.808	1						
SEXX	.563	.510	.556	.450	.605	.646	.726	.649	1					
EPX1	.551	.431	.461	.251	.295	.326	.330	.304	.274	1				
EPX2	.418	.390	.378	.284	.297	.371	.327	.343	.270	.806	1			
ESX1	.357	.310	.316	.225	.284	.353	.379	.379	.332	.677	.680	1		
ESX2	.376	.326	.326	.229	.236	.305	.331	.316	.288	.731	.711	.831	1	
SLXX	.461	.369	.397	.201	.279	.335	.331	.320	.273	.829	.718	.733	.757	1

• All significant levels at .001 and number of cases is 762.

Table 8 Hierarchical Multiple Regression for Predicting Employability Capability

	Foundation (Employability) (β, significant only)					mployability) ficant only)	
Variables (significant only)	Step1	Step2	Step3	Step1	Step2	Step3	
SKX1 comm. & P-S	***.194	*** <mark>.232</mark>	***.236	-		* <u>288</u>	
SKX2 impression management				*.154	*.115	*.091	
SKX4 LLN				*.121	*.076	**.382	
SL02 leadership	***.394	***.338	***.163	***.176		*.113	
SL03 service learning	***.152	***.132	***.125			**. <u>623</u>	
SL04 general education	***.112	***.099	***.093	***.146	**.127		
SL05 part-time job	***.216	***.155	***.151	***.220	*.080		
SL06 voluntary services	***083	.080	***082	*.083	*.066		
SL07 practicum			-	*.093		** <u>491</u>	
EPS1 occupational					***.156		
EPS2 career		*** <u>.167</u>	*** <u>.176</u>		***.270		
SEXX self-efficacy		***075	-			**095	
E1*S2 (Adaptability*leadership)			*****.230				
E2*SE (Empathy*Self-Efficacy)			***183				
E1*S3 (Adaptability*Team-Spirit)		180				**760	
C1*K1 (Awareness*Comm.&P-S)		100				*.514	
C1*K3 (Awareness*Team-Spirit)			(**714	
C1*S6 (Awareness*VolunS.)		V	1			*.366	
C1*R1 (Awareness*Career)		TOA.				*579	
C2*R1 (Norm*Career)		1 0				*.416	
F	***243.37	***202.88	***165.98	***89.60	***86.42	*** ^{47.36}	
R ²	.770	.785	.787	.553	.609	.644	
Fc	***243.37	***16.36	2.09	***89.60	***34.46	***4.95	
R ² c	.770	.015	.002	.553	.056	.035	