Competency Assessment of Stakeholders with the Introduction of Foreign Experts in Chinese Universities

Ting Miao[a], Worawit Janchai[b*], Anurak Panyanuwat[c], Danaitun Pongpatcharatorntep[d], [a]College of Arts, Media and Technology, Chiang Mai University, Thailand & North Minzu University, China, [b,d]College of Arts, Media and Technology, Chiang Mai University, Thailand, [c]International College and Digital Innovation, Chiang Mai University, Thailand, Email: [b*]worawit.jc@gmail.com

This research aims to analyse the gap between lecturers current and expected competencies, meanwhile analysing whether the important competencies have contributed to the effective outcomes for the project. Descriptive statistics, correlation and regression analysis are used as the analysis tools. The results declare that gaps are present between lecturers' current and expected competencies throughout academic and routine job implementations. Besides, the correlation shows a significant positive relationship which occurs between competencies and the outcomes of the introduction of the project from the foreign high-level experts. The constructed regression analysis supported that the competencies that could predict the outcomes of the project are: teamwork competency, planning and administration competency, academic competency and coordination techniques as well as language competencies. The findings from this empirical study will be of benefit to universities to improve the competencies of their lecturers.

Keywords: *Competency, Gap, Communication, Planning and Administration, Teamwork, Academic.*

Introduction

Since the beginning of 21st century, Chinese universities have been implementing a development strategy of "Strengthening Universities with Talents", which focuses on introducing foreign high-level experts by utilising foreign high-quality intellectual resources to the fullest. The introduction of foreign experts to universities means introducing foreign talent, technology and management experience based on the demands of the academic teaching, scientific research and collaborations. Introducing foreign high-level experts in making a contribution to universities has played a positive role in reducing the gap between education, science and technology and culture with developed countries. Meanwhile, the implementation has been beneficial as the university's own teaching staff and teaching quality have been steadily consolidated and strengthened, thus improving, discipline construction, and even the overall education level. Currently, most Chinese universities have realised the significance of cultivating talents coupled with the assistance of foreign experts. The commitment has reaped world-renowned fruits, like improved academic competence, teaching ability and management skills of stakeholders with foreign high-level experts. Thereby, the demand has arisen that all the relevant personnel, such as lecturers, researchers, and managers, should have certain competencies such as English communication ability and scientific research ability. Otherwise, it is difficult for them to obtain the advanced knowledge from the foreign senior and high-level experts. That is to say, it is a basis prerequisite that lecturers or researchers working with foreign experts should be equipped with some competencies in their specialty. On this prerequisite, it is worthwhile to focus on competency assessment of stakeholders with foreign high-level experts in Chinese universities.

McClelland published the article "Measuring competence rather than intelligence" in 1973, which put forward the concept of competence for the first time. McClelland believed that competence, which is a potential deep feature an individual is endowed with, can be expressed through any motivation, feature, self-image, attitude or value, domain knowledge, and even cognitive or behavioural skills. Distinguished from general individual characteristics, competence volume can be reliably measured or calculated as a vastly tangle scale, dramatically enhancing the quality of excellent performance. Hereafter, competency models are widely applied throughout multiple fields, measuring the competency of managers, technicians and researchers in organisations.

Competency model has become a prevalently applied strategy for teacher development and training. University teacher competency, which harbors a complex series of explicit or implicit abilities in connotation with innovative research ideas, can have research results applied to the classroom and the society so that it can produce excellent performance. Additionally, Hay McBer (2000) set up a competency model for lecturers in university. Song (2008) also constructed a competency model and employed it to deliver exploration on the relationship

between lecturers' competency and work performance. Petrova et al. (2013) conducted research on the competencies of the students from Vidzeme University of Applied Sciences (Latvia) in their self-evaluation by assessing the developed competencies and the role which competencies development and the assessment exert in Vidzeme University. Rocha (2017) conducted investigation on the influential factors of the employees' perception of social gain within an establishment that had taken on the competency management model in a Brazilian public university. More and more researchers begin to focus their eyes on talent management from various angles.

Table 1: Models of talent management

Angles	Author	Model	Year
Focus on Macro View	Shaista E. Khilji, Ibraiz Tarique, Randall S. Schuler	Macro global talent management (MGTM)	2015
	Randall S. Schuler, Susan E. Jackson, Ibraiz Tarique	Framework for global talent challenges and global talent management initiatives	2011
	Randall S. Schuler	The 5-C model of managing talent: choices in considerations, challenges, context/contingencies, consequences	2015
	Elaine Farndale, Hugh Scullion, Paul Sparrow	Corporate HR roles in global talent management	2010
Focus on Processing	William A. Schiemann	Talent lifecycle	2014
	Erin E. Makarius, Mahesh Srinivasan	The collaborative planning for talent supply chain management (CP-TSCM) model	2017
Focus on Competency	Lena Siikaniemi	Elements of the information pathways for the foresight mechanism of an expert organization	2011
	Nornazira Suhairom, Aede Hatib Musta'amal, Nor Fadila Mohd Amin and Noor Khairul Anuar Johari	Conceptual framework of competency model	2014
Focus on Mediating	Roberto Luna-Arocas, Michael J. Morley	H4 Mediating Model	2015

In addition, a vast range of literature has concentrated on talent management regarding the assessment of foreign high-level experts for universities. As a result, most of the studies have separately been imposed on talent management and competency assessment, which has made a distinct gap separating competency assessment of stakeholders from foreign high-level experts, especially in China. To fill this gap, this study aims at building a competency

assessment framework for the stakeholders with foreign high-level experts in Chinese universities and applying it to a university in China. On the whole, two questions are set for the empirical study as follows: (1) What current and expected competencies should the lectures apply to academic and routine job implementations? (2) Is there a significant positive relationship between the current competencies and outcomes of the foreign high-level experts' introduction project? Going forward, the paper is set with the following structure: Section 2 mainly interprets the competency model for Chinese universities. The data source and data descriptive are illustrated in Section 3. In Section 4, all empirical results and their implications are interpreted, and the conclusion is made in the last section.

The Competency Model

A competence or a skill lies at the centre of any successful activity. In particular, the term has been evolved to be crucially fundamental in this competitive world while striving for business competition. Over the last three decades, large quantities of thinking strategies have been published, particularly regarding the must-be competencies of a business in order for a soundly powerful completion in a specific environment. Of them, top management, which has acknowledged corporate core competencies, has been striving to establish them throughout the organisation. Amidst this backdrop, in this research, the authors direct competencies into three categories, which are listed in Table 2.

1. Managerial competency is defined as the teamwork competency. It contributes to accomplishing job tasks through small groups of people collectively responsible in interdependently cooperative mode.
2. Core competency refers to the planning and administration competency in comprehending the organisation, performing strategic actions and the coordination techniques in communicating with the stakeholders.
3. Functional competency is the language and academic competency associated with functional expertise required to perform the "OEIP".

Table 2: Categories of competency

Categories	Main Issues	Definition
Managerial competency	Teamwork competency	Competency in organizing activities and providing a good working environment for foreign experts; Perform well-coordinated communication with foreign experts in accomplishing the intended tasks and creating a well-disciplined team work to support the experts, including teacher, students, FAO, and teaching and learning content implementation.
Core competency	Planning and administration competency	The competency in understanding the project regulation and planning project steps, including defining the objectives, feeding back timely, budgeting and executing scientifically project structures. Besides, well-orderly arrange working schedules; comprehending laws and regulations of government and universities, as well as the corresponding policies and operational measures to effectively communicate with foreign experts.
	Coordination techniques	The competency in exchanging ideas with the relevant staffs, lectures and students regarding the interior university projects; the competency to deliver various resource integration based on effective invitation and communication with the proper foreign experts.
Functional competency	Language competency	The competency to communicate with foreign experts in such practical operations as listening, talking, reading, writing, interpreting, publishing journal in English. English competency and academic language interpretation relating to some specific subjects are also included.
	Academic competency	The competency in specific academic issues relevant to the experts' assignments and the capability of keeping the trend and knowledge of professional development as well as the communication skills with experts in academic.

According to the three categories of competency, a competency framework is illustrated in Figure 1. Each competency stands for one variable, and all of them might exert some influence on the outcome of talent introduction projects. The project outcome is measured with 5 questions. Each competency may affect the outcome of talent introduction projects. Figure 2 shows the components of each variable or each competency. On this basis, some hypotheses are concluded as follows:

Hypothesis 1: There are gaps between the current and expected competencies of lecturers in academic and routine job implementations.

Hypothesis 2: Is there a significant positive relationship in competencies and outcomes of the foreign high-level experts' introduction project?

Hypothesis 3: The outcome of the foreign high-level experts' introduction project is affected by the current competencies of the stakeholders.

Figure 1. Competency framework
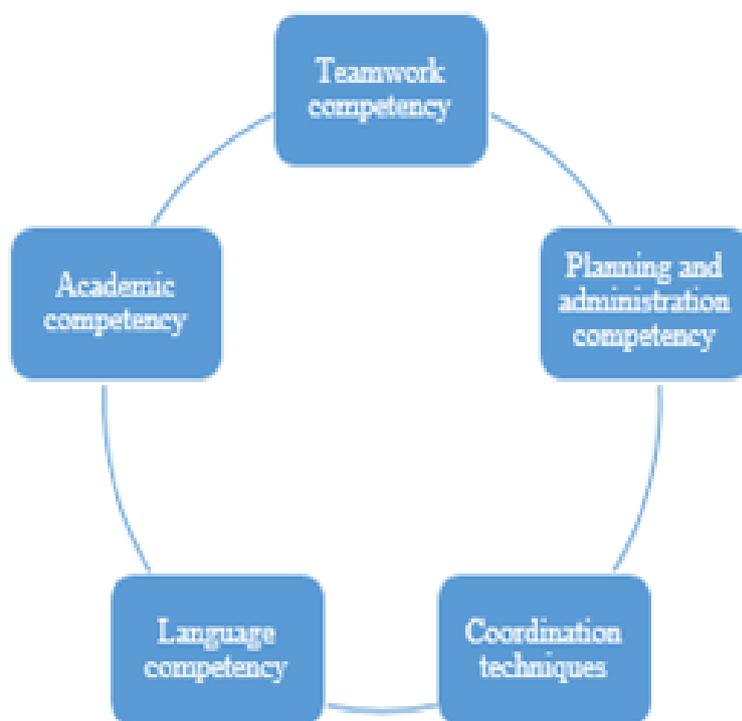
Research Data

The data was collected from a university in west China, which has carried through foreign talent introduction projects for many years. It is an average university that reflects the characteristics and reality of most of universities in China. The funding for foreign experts' introduction projects has increased from more than 2 million RMB in 2013 to over 3 million RMB in 2019. The last 6 years have witnessed the dramatic growing amount of foreign-invested funds by 72%. To sum up, this university is presented as a representative of some Chinese universities for foreign talent introduction project.

Population and Samples

This research is involved in 3 groups in regard to foreign high-level experts' introduction projects. The first group is the faculty or school lecturers of the university. They are equipped with the required ability to invite experts or visiting professors. Moreover, in some cases, they have to perform the duty of the co-researchers, working with the invited experts to conduct a research project under the university's foreign affairs officers' cooperation. The second group is those who are working in foreign affairs offices and responsible for the foreign high-level experts' project at the university. The third group are the common lecturers from 20 faculties.

Data Collection Instruments

This research employed a questionnaire as the research instrument. Competency assessment is a process to gain evidence and judgment on competency levels in performing tasks among individuals based on the identified standards. (Greenstein, 2012). The designed questionnaires were made up of the following items:

1) General information: age, sex, occupation, experience, educational qualification, etc.
2) Needs assessment section. Current and expected situations are investigated through the following competencies: X1: Language competencies; X2: Coordination techniques; X3: Planning and administration competency; X4: Teamwork competency; X5: Academic competency. The values above are all the variables obtained with mark method, and there are 5 scores or ranks. One stands for the worst competency, and five means the best competency.

Figure 2: Competencies dimensions
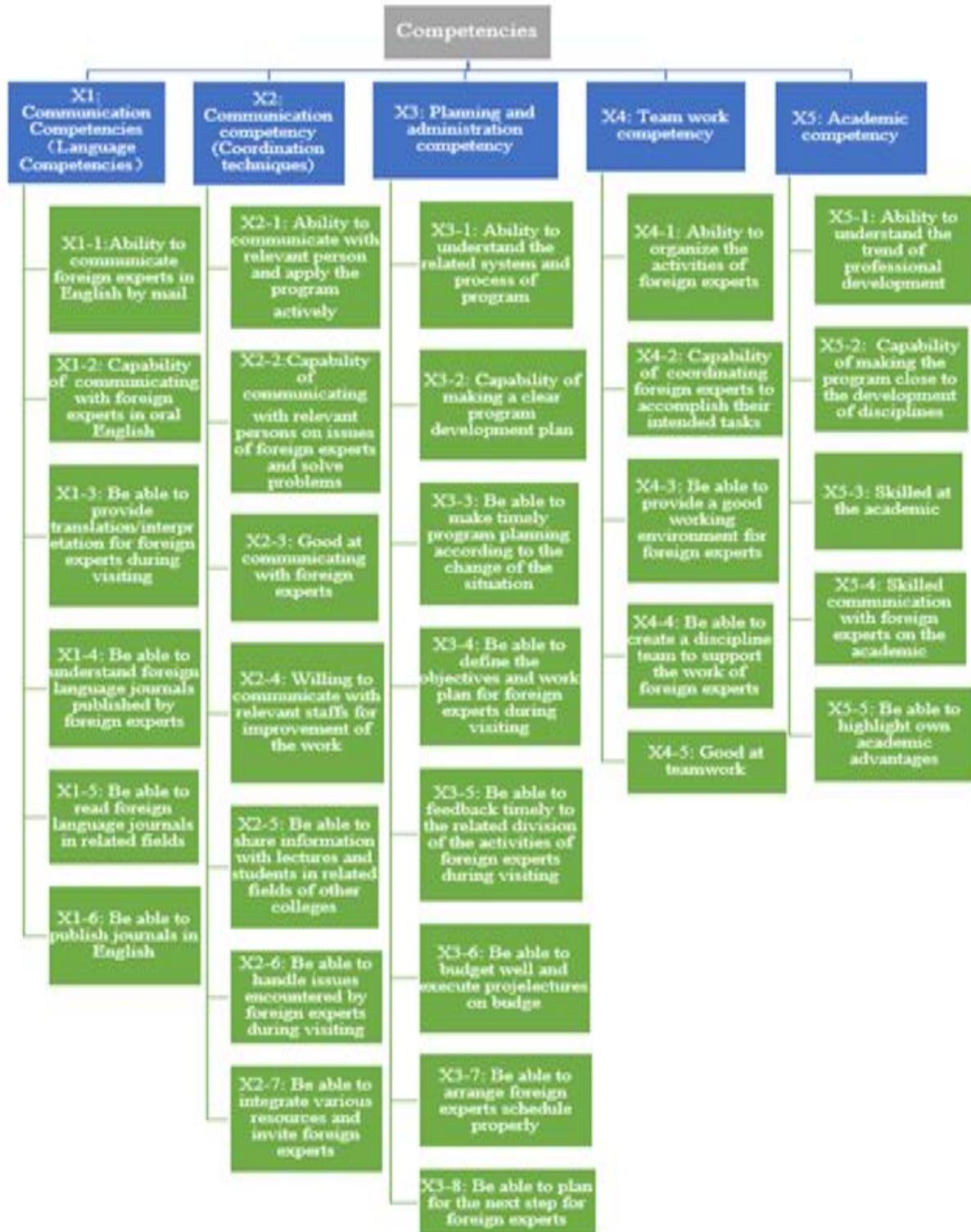
Empirical Analysis

For the analysis, data description is composed of mean, standard deviation, t statistics and p-value which were used to assess each competency gap between lecturers' current and expected competencies to address hypothesis 1. Correlation analysis was employed to test the correspondence of the current competencies and the outcomes of the project, which aims to deal with the hypothesis 2. Regression analysis targets, judges and measures the impact of the current competencies on the outcomes of the project, which is regarded as testing hypothesis 3.

Table 3: General information

Characteristics		Total (273)	Percentage
Gender	Male	117	42.86%
	Female	156	57.14%
Age (years)	20-30	18	6.59%
	31-40	152	55.68%
	41- 50	79	28.94%
	>50	24	8.79%
Education	Below Bachelor	1	0.37%
	Bachelor	25	9.16%
	Master	142	52.01%
	PHD	99	36.26%
	Postdoctoral	6	2.20%
Title	Professor	45	16.48%
	Associate professor	85	31.14%
	Lecturer	99	36.26%
	Teaching assistant	37	13.55%
	None	7	2.57%
Position	President	0	0%
	Director/vice director	13	4.76%
	Dean/vice dean	37	13.56%
	Sector chief/deputy sector chief	10	3.66%
	Department head	43	15.75%
	None	170	62.27%
Working Periods	<5	68	24.91%
	5-10	64	23.44%
	10-20	122	44.69%
	20- 30	18	6.59%
	>30	1	0.37%
Project engaged periods	<2	29	10.62%
	2-5	40	14.65%
	5-10	20	7.33%
	>10	5	1.83%
	None	179	65.57%
	Foreign Affairs Officers	6	2.20%

Role	Lectures have joined the project	88	32.23%
	Lectures have never joined the	179	65.57%

Gap Analysis

Tables 4 to 8 portray the results of the gap analysis. The obvious difference was found in all the gaps between the current and expected competencies of the lecturers in academic and routine job implementations. The current communication competencies (language competencies) of lecturers were at a mean level of 2.93 (SD=1.28) and the expected competencies were at a mean level of 4.20 (SD=1.028). The comparison of the 2 different scores tells a significant difference (p-value=0.000). The current communication competency (coordination techniques) of lecturers was kept at a mean level of 3.05 (SD=1.24) and the expected competencies 4.28 (SD=0.96). The current planning and administration competencies of lecturers were at a mean level of 3.07 (SD=1.29) and the expected competencies 4.24 (SD=1.01). The current teamwork competencies of lecturers were at a mean level of 3.07 (SD=1.22) and the expected competencies 4.29 (SD=0.96). The current academic competencies of lecturers were at a mean level of 3.21(SD=1.21) and the expected competencies were 4.42(SD=0.91). The comparison of the 2 different scores of X1 to X5 showed a dramatic difference (p-value=0.000). Therefore, the lecturers can be regarded an expected target. This point is just demonstrating that this project can obtain more results in the future as expected. Additionally, there are the gaps between the current and expected situations of the lecturers in academic and routine job implementations. Hypothesis H1 was largely supported as current situations were found to fail in meeting the expectations in communication competency (language competencies), communication competency (coordination techniques), planning and administration competency and teamwork competency as well as academic competency. It was found that the expected competencies requirements was not suited.

Table 4: Survey results of language competencies

X1	Current competencies		Expected competencies		T Stat	P-value (2-tailed)
	Mean	S.D	Mean	S.D		
X1-1	3.17	1.27	4.26	1.05	-14.607	0.000
X1-2	2.81	1.25	4.16	1.05	-17.017	0.000
X1-3	2.70	1.28	4.09	1.14	-16.100	0.000
X1-4	3.04	1.29	4.20	1.08	-14.484	0.000
X1-5	3.19	1.29	4.35	1.02	-15.139	0.000
X1-6	2.69	1.31	4.16	1.15	-17.538	0.000
X1	2.93	1.28	4.20	1.08	-15.814	0.000

Table 5: Survey result of coordination techniques

X2	Current competencies		Expected competencies		T Stat	P-value (2-tailed)
	Mean	Std. Deviation	Mean	Std. Deviation		
X2-1	3.08	1.25	4.23	1.02	-15.575	0.000
X2-2	3.11	1.25	4.31	0.96	-16.372	0.000
X2-3	2.82	1.23	4.21	1.00	-18.227	0.000
X2-4	3.22	1.19	4.33	0.94	-15.067	0.000
X2-5	3.06	1.24	4.28	0.94	-15.869	0.000
X2-6	3.14	1.26	4.28	0.97	-15.316	0.000
X2-7	2.90	1.27	4.33	0.91	-17.913	0.000
X2	3.05	1.24	4.28	0.96	-16.334	0.000

Table 6: Survey result of planning and administration competency

X3	Current competencies		Expected competencies		T Stat	P-value (2-tailed)
	Mean	Std. Deviation	Mean	Std. Deviation		
X3-1	2.99	1.30	4.20	1.01	-15.377	0.000
X3-2	2.81	1.33	4.16	1.06	-16.403	0.000
X3-3	2.90	1.27	4.15	1.09	-15.659	0.000
X3-4	3.10	1.27	4.21	1.04	-14.183	0.000
X3-5	3.18	1.29	4.26	0.99	-14.433	0.000
X3-6	3.21	1.29	4.27	0.95	-14.126	0.000
X3-7	3.31	1.28	4.34	0.95	-13.960	0.000
X3-8	3.11	1.29	4.29	0.97	-14.814	0.000
X3	3.07	1.29	4.24	1.01	-14.869	0.000

Table 7: Survey result of teamwork competency

X4	Current competencies		Expected competencies		T Stat	P-value (2-tailed)
	Mean	Std. Deviation	Mean	Std. Deviation		
X4-1	3.05	1.25	4.20	1.01	-14.807	0.000
X4-2	3.10	1.30	4.23	1.01	-14.215	0.000
X4-3	3.18	1.19	4.30	0.97	-15.150	0.000
X4-4	2.76	1.21	4.26	1.01	-18.644	0.000
X4-5	3.26	1.17	4.47	0.87	-17.026	0.000
X4	3.07	1.22	4.29	0.96	-15.968	0.000

Table 8: Survey result of academic competency

X5	Current competencies		Expected competencies		T Stat	P-value (2-tailed)
	Mean	Std. Deviation	Mean	Std. Deviation		
X5-1	3.35	1.18	4.47	0.88	-15.592	0.000
X5-2	3.18	1.26	4.36	0.97	-14.922	0.000
X5-3	3.36	1.17	4.50	0.86	-16.605	0.000
X5-4	3.07	1.24	4.38	0.93	-16.872	0.000
X5-5	3.09	1.19	4.39	0.92	-17.938	0.000
X5	3.21	1.21	4.42	0.91	-16.386	0.000

Relationship Analysis

The relationship between competencies and the outcomes of the foreign high-level experts' introduction project was calculated on the basis of the correlation coefficient. The results are shown in Table 9.

According to Table 9, the correlation coefficient of communication competencies (language competencies) and project outcomes is 0.706 (p-value=0.000). The correlation coefficient of communication competency (coordination techniques) and project outcomes is 0.872 (p-value=0.000). The correlation coefficient of planning and administration competency and project outcomes is 0.879 (p-value=0.000). The correlation coefficient of teamwork competency and project outcomes is 0.889 (p-value=0.000). The correlation coefficient of academic competency and project outcomes is 0.876 (p-value=0.000). All the strong correlations demonstrate that every competency of the stakeholders and the outcomes of the project are of close relation. It further proves that hypothesis H2 is reasonable and correct.

Table 9: Correlation on competencies and outcomes of project

Competencies	X1	X2	X3	X4	X5
Correlation coefficient between competencies and outcomes	0.706	0.872	0.879	0.889	*0.876*
P-value (2-tailed)	0.000	0.000	0.000	0.000	*0.000*

Outcomes: 1. The stakeholders raise the academic level by relying on foreign experts. 2. The stakeholders have their papers published with the help of foreign experts. 3. The stakeholders apply for all-leveled research projects with the help of foreign experts. 4. The stakeholders complete the research projects with the help of foreign experts.

Regression Analysis

Regression analysis was conducted to establish the variance volume in the average level of the outcomes (dependent variable) which could be explained by different current competencies of the lecturers (independent variables). Besides, Stepwise regression (Liu, et al.,2018) was carried out to test the study hypothesis (H3).

Table 10 reports the estimated results of talent introduction regressing on competencies. First, Model 3, the outcome of talent introduction regressing on all competencies variables is the best as the value of adjust R^2 is the maximum and meanwhile the values of AIC and BIC are minimum. Second, if we omit any important explanatory variable, such as teamwork and academic competency (Model 1), the parameter estimator should be biased as expected. It is implied that the competency model we constructed is composed of 5 categories, all of which are appropriate and rational. Thirdly, that all coefficients in the model 3 are of statistical significance at the 1% level, which powerfully suggests that all competencies can exert positive effects on the outcome of talent introduction. In addition, the number of variable academics is proved to be the largest influential factors on the outcome of talent introduction and comparatively, the variable teamwork is the smallest one. As a large proportion of the foreign talents introduced by Chinese universities boasts the intellectuals with a high academic level, that might account for the fact that the academic competence of relevant personnel can greatly improve the achievements of talent introduction project.

Table 10: Estimated Results of the Regression Analysis

	Model 1		*Model 2*		*Model 3*	
Variables	coef.	s.e	coef.	s.e	coef.	s.e
Intercept	0.1712***	0.0251	0.1057***	0.0196	0.0163***	0.0053
Language	0.1877***	0.0121	0.2044***	0.0093	0.1948***	0.0024
Coordination	0.3178***	0.0246	0.2461***	0.0194	0.2063***	0.0050
Planning and Administrative	0.4487***	0.0198	0.2427***	0.0209	0.2008***	0.0054
Teamwork	---		0.2815***	0.0199	0.1725***	0.0054
Academic	---		---		0.2189***	0.0036
R2	0.9829		0.9902		0.9994	
Adj.R2	0.9827		0.9901		0.9993	
AIC	-1.1075		-1.6565		-4.3656	
BIC	-1.0546		-1.5904		-4.2863	

*** represents statistical significance at the 1% level.

Conclusion and Discussion

In the last several decades, most Chinese universities have set up professional talent introduction office for foreign experts and have introduced quite number of elite foreign talents. At present, universities around the world are marching into internationalised education systems. Coupled with the advantageous situation, the management of foreign high-level experts in universities form an important part of the internationalisation of universities. The introduced foreign top experts are doing excellently in teaching development, discipline construction and lecturers' development and so on. To its credit, the project has harvested fruitful achievement in broadening lecturers' international vision and students' internationalisation competency. From the perspective of Chinese universities, the commitment has been a big helper which is fostering Chinese staff with the profession excellence from foreign experts.

Based on investigation of the competency gaps between the current and expected situations of the stakeholders in academic and routine job implementations, this study put forward and portrayed a competency model of people in HR roles in universities. The stakeholders with foreign expert's introduction have had expectations imposed on their work with the required high competency capability to contribute coordination in academic, diplomatic, and administration areas with foreign expert recruitment, faculties, teaching and administrative staff and students. The current and the expected competencies of lecturers are reflected in the results for implementing foreign high-level experts' introduction projects. This paper is of benefit and value to universities that intend to understand the gap between the current and expected competencies of lectures so that they can make preparations to improve their competencies. That is, a university must be armed with a high-quality lecture team so as to achieve the internationalisation of the whole university and keep in line with the international and world class standard. Furthermore, it is also a constructively suggested approach to promote the lecturers' teaching quality and to improve the students' international competencies.

REFERENCES

Alex Gray. (2018-02-07) *These are the best countries and cities for attracting and developing talent.* World Economic Forum, Formative Content(N).

Alom, S., Patwary, A. K., Khan, M. M. H. (2019). Factors Affecting the Turnover Intention of Bangladeshi Migrants in the United Arab Emirates: An Empirical Study on the Hotel Industry. International Journal of Innovation, Creativity and Change. 8 (3), 344-360.

Annie Brooking. (1996) *Intellectual Capital*, Thomson Business Press London.

Beechler, S. and Woodward, I. C. (2009) Gl*obal talent management. Journal of International Management*, 15: pp273–285.

Bruno Lanvin and Paul Evans, (Eds), (2016) *The Global Talent Competitiveness Index*. 2015-16 Talent Attraction and International Mobility.

Bruno Lanvin and Paul Evans, Editors. (2018) *The Global Talent Competitiveness Index*, 2018 Diversity for Competitiveness.

Collings, D. and Mellahi, K. (2009) *Strategic talent management: a review and a research agenda*, Human Resource Management Review, Vol. 19, pp.304–313.

Elaine Farndale et al., (2010) *The role of the corporate HR function in global talent management,* Journal of World Business 45, pp. 161–168.

Erin E. Makarius and Mahesh Srinivasan. (2017) N*ew perspectives on human resource management in a global context*. Journal of World Business 51, pp. 142–152.

Farah Naqvi. (2009) *Competency Mapping and Managing Talent*, The IUP Journal of Management Research, Vol. VIII, No. 1, pp86-94.

Francoise Delamare Le Deist and Jonathan Winterton. (2005) *What Is Competence?* Human Resource Development International, Vol. 8, No. 1, pp27 – 46, March.

Greens, L. (2012) *Assessing 21 century skills: A guide to evaluating mastery and authentic learning*. SAGE.

Guthridge, M. and Komm, A. B. (2008) *Why multinationals struggle to manage talent*. The McKinsey Quarterly, May: pp1–5.

In P. Sparrow, H. Scullion, & I. Tarique (Eds.) (2014) *Strategic Talent Management: Contemporary Issues in International Context*. Cambridge University Press.

Jianxu Liu, et al., (2018) *Analysis of Household Consumption Behavior and Indebted Self-selection Effects: Case Study of Thailand*. Mathematical problems in Engineering. https://doi.org/10.1155/2018/5486185.

Kerem U. Sabuncua and Gaye Karacay. (2016) *Exploring Professional Competencies for Talent Management in Hospitality and Food Sector in Turke*y, Procedia - Social and Behavioral Sciences 235, pp443 – 452.

Lena Siikaniemi. (2011) *Information pathways for the competence foresight mechanism in talent management framework*, European Journal of Training and Development, Vol. 36 Issue: 1, pp.46-65.

Li Chun& Liu Xuezhi. (2012) *A Study on the Policies of Retaining Foreign experts Since China's Reform and Opening*. China Academic Journal Electronic Publish House.

Michaels, E., Hanfield-Jones, H., and Axelford, B. (2001) *War for Talent*. Boston, MA: Harvard Business School Press.

Nicky Dries. (2013) *The psychology of talent management: A review and research agenda*, Human Resource Management Review 23, pp 272–285.

Nornazira Suhairom et al., (2014) *The development of competency model and instrument for competency measurement: The research methods*, Procedia - Social and Behavioral Sciences 152. pp 1300 – 1308.

Paul Evans and Bruno Lanvin. (2018) The *World's Most Talent Competitive Countries*. The Business School for the World(N).

Randall S. Schuler et al., (2011) *Global talent management and global talent challenges: Strategic opportunities for IHRM,* Journal of World Business 46, pp.506–516.

Randall S. Schuler. (2015) *The 5-C framework for managing talent*, Organisational Dynamics. 44, pp. 47—56.

Seema Sanghi. (2007) *The handbook of competency mapping: understanding, designing and implementing competency models in organisations*, SAGE Publications Inc, USA.

Tavakol, M. & Dennick, R. (2011). *Making sense of Cronbach's alpha*. International Journal of Medical Education, 2, pp53-55.

Vaiman, V., Haslberger and A., & Vance, C. (2015). *Recognising the important role of self-initiated expatriates in effective global talent management*. Human Resource Management Review, pp280-286.

William A. Schiemann. (2014) *From talent management to talent optimisation*, Journal of World Business 49, pp.281–288.

WIPO Economics & Statistics Series (2013). 2013 World Intellectual Property Indicators.