

A STUDY INVESTIGATING TEACHERS' COMPETITIVENESS-MICHAEL PORTER'S FIVE FORCES MODEL AS THEORETICAL BASIS

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ABSTRACT

Within a competitive society, an institution with no competitiveness is easy to be knocked out. Especially in a low-birthrate society, private preschools struggle to survive by improving their competitiveness. Teachers are important human resource assets in schools, and schools' competitiveness is subject to teachers' competitiveness. Therefore, school teachers that possess advantageous competitiveness are so important to a preschool. However, how is teachers' degree of competitiveness measured? What competitiveness abilities are the most important? Because there is a lack of relevant studies, this study intends to investigate this theme. This study used Porter's five forces model as the framework to develop teachers' competitiveness, integrated relevant studies to develop the components of teachers' competitiveness, and used teachers' efficacy as the criterion variable. After OLS and SEM statistical analysis of the data of 1,454 preschool teachers, the results of this study are as follows: (1) teachers' competitiveness can be analyzed to five dimensions and thirteen sub-dimensions. The five dimensions include ability to fight against incumbent competitors, ability to fight against future competitors, irreplaceable ability, preschool principal's satisfaction with teacher, and parents' satisfaction with teacher, and they can significantly predict teachers' efficacy; (2) to improve teachers' efficacy, six of the thirteen competitiveness sub-dimensions are important: traits of good teachers, course arrangement and teaching ability, impression management ability, transcendence and leadership abilities, special expertise, and parents' satisfaction with teachers. It is necessary to pay particular attention to cultivate such six abilities to be a teacher with competitiveness and efficacy in the modern society.

Keywords: Teachers' Competitiveness, Teachers' Efficacy, Porter's Five Forces Model.

INTRODUCTION

Human resources are the most important asset of organizations. Among the values created by enterprises, 80% are from the invisible assets of enterprise talents (Becker et al., 2001). Scott et al. (2006) indicated that, the future 10 years will be a talent-based era of competitive advantages, and organizations' possession of outstanding talents is important to their survival and development. Similarly, schools' most important human resource is teachers, meaning teachers' personal advantageous degree of competitiveness is important to school development (Huang et al., 2008; Mayer et al., 2001; Oplatka, 2006). In other words, one of the determinants of schools' competitiveness is whether school teachers possess advantageous competitiveness. In a modern society, especially low-birthrate one, private preschools usually have to struggle to survive by improving their competitiveness. Therefore, preschool teachers' competitiveness is an important issue to study.

Schools' competitiveness refers to the ability to satisfy customers (parents/students) with their quality and performance, as well as the ability to surpass other schools and stay ahead (Chen, 2009). According to the definition of schools' competitiveness, teachers' competitiveness can be defined as teachers' ability to pursue excellence in work, make their educational quality and performance better, and stay ahead of other teachers. In recent years, there have been increasing studies on schools' competitiveness or competitive advantages (Chen, 2015; Chen, 2016; Hsieh & Urquial, 2002; Krskova & Baumann, 2017; Quinn, 2003). However, in terms of teachers, teachers' competitiveness in particular, there remains a lack of relevant studies.

Based on the above, this study used Porter's five forces model as the framework for developing teachers' competitiveness indices, and integrated relevant research results to investigate the components of preschool teachers' degree of competitiveness. Previous studies indicated that, individuals' self-efficacy is significantly correlated with working competitiveness (Yan, 2008). Therefore, this study used teachers' efficacy as the criterion variable, and applied data analysis of a questionnaire survey to understand the important advantageous competitiveness of preschool teachers, as well as what competitiveness is most beneficial to the improvement of teachers' efficacy. It is intended that the research results can be provided as reference for preschool organization operators in the practical field to make up for the deficiency of academia in this research topic.

LITERATURE REVIEW

Competitiveness is a concept of the pursuit of excellence, which improves the quality of products, increases profits or improves the services provided Man et al. (2002), in order to better satisfy consumers (customers) (Momaya, 2004). Its ultimate objective is to become more outstanding than other competitors (Esterhuizen et al., 2008). If an individual can develop competitiveness to make himself/herself better than competitors, he/she possesses competitive advantages. As educational competitiveness is not assessed based on profit, but on educational quality and performance (Wu, 2002). Teachers' advantageous competitiveness can be defined as their ability to pursue excellence in work, create better educational quality and performance, and surpass other teachers to make themselves competitive. In recent years, industries have attached importance to the enhancement of competitiveness, and academic circles have aggressively appealed for competitiveness. Teachers' individual competitiveness is the essential factor determining schools' competitiveness (Huang et al., 2008; Mayer et al., 2001), thus, analysis of teachers' advantageous competitiveness is important to the improvement of schools' competitiveness and educational quality.

The theory of competitiveness, as proposed by Porter (1980), is the theoretical basis for many studies on competitiveness. His five forces analysis framework has been applied to the analysis of industrial competitiveness by many industries. This study analyzed preschool teachers' competitiveness, and corresponded Porter's five forces competitiveness to the conceptual definitions of preschool teachers' competitiveness one by one. This study further developed the dimensions of preschool teachers' individual competitive advantages and the questionnaire of competitive advantages, as follows:

Dimension 1 of Competitiveness: Intensity of Rivalry among Existing Competitors

Intensity of rivalry among existing competitors refers to the mutual competitions and rivalries among existing suppliers in the industry (Porter, 1980) meaning preschool teachers have

to compete against incumbent teachers in abilities. Teachers cannot gain competitive advantages unless they display excellent performance in the abilities required by the existing posts of teachers. Therefore, such abilities were named as “*abilities to compete against incumbent competitors*”.

What are the abilities required by incumbent teachers? Many studies suggest that teachers must develop specialized subject knowledge, as well as the abilities to organize courses (Alnoor & Xiang, 2007; Bahous, 2006; Bennett et al., 2009; Murphy et al., 2004; Ogienko & Rolyak, 2009) and effectively implement teaching, including course preparation, teaching skills, and adjustment of teaching according to students’ responses (Alnoor & Xiang, 2007; Bahous, 2006; Zabar et al., 2004). Therefore, “*course arrangement and teaching ability*” are important competitive abilities. Bahous (2006) suggested that the development and operation of class routines are beneficial to students’ learning, and are the professional abilities required by preschool, elementary, and junior high school teachers. Lin & Yang (2005) proposed the same argument. The investigational study by Ogienko & Rolyak (2009) in the Ukraine, the study by Cheng & Cheung (2004) in Hong Kong and the study by Lee et al., (2008) in South Korea all showed that, teachers’ ability to collaborate with colleagues is their basic professional ability. Therefore, “*class operation ability*” and “*teamwork ability*” are both important competitive abilities. Moreover, many studies indicated that, the ability to communicate with parents and guardians regarding children’s learning status is an important professional ability of teachers (Alnoor & Xiang, 2007; Cheng & Cheung, 2004; Ogienko & Rolyak, 2009). Therefore, “*ability to communicate with parents*” is an important competitive ability.

Dimension 2 of Competitiveness: Potential Threat of Entry

Potential threat of entry refers to the new capacity or substantial resources to be created by suppliers of new entry or possible entry, which is likely to capture existing market and pose threats to existing suppliers (Porter, 1980). Preschool teachers’ competitors include those who are going to enter the teaching workplace (i.e. potential competitors), and may possess new abilities or characteristics that better conform to future development. If incumbent teachers can possess such new abilities or characteristics, they are less likely to be threatened, and their individual competitiveness will be higher. Therefore, such abilities were named as “*abilities to compete against future competitors*”.

Firstly, Cherniss (2001) indicated that, with the rapid changes in society, various organizations in the future will face the huge challenge of coping with a large number of rapid changes. Employees must constantly make advancements to respond to such transformations, and they must develop more creativity to reform their work. The studies by Bennett et al. (2009) also suggested that, teachers should continue making advancements and engaging in further studies to improve their professional abilities. The study by Pink (2004) even indicated that, future schools should employ teachers who dare to make changes and possess innovative ability. Based on the above, “*ability of constant learning and innovation*” is an advantageous competitive ability for teachers to respond to future challenges.

Secondly, Baron-Polanczyk (2008) and Cherniss (2001) both suggested that, the future world will be a society of rapid changes and prosperous information development, where everyone must learn to manage a large amount of information. Therefore, strong computer and information abilities are required. Future teachers must also be able to teach students how to absorb information and use more information tools. For example, accessing the internet on a computer can be used to acquire information. Therefore, teachers’ possession of “*specialized*

information technology ability” is an advantageous competitive ability to respond to future challenges.

Thirdly, the development of future society is inclined to increasing globalization; therefore, employees’ foreign language skills are very important for competitive ability (Cherniss, 2001; Grin & Faniko, 2012; Grosse, 2004). Starting from the 21st century, inclusiveness, diversity, democratic value, and respect for different ethnic groups and cultures are important abilities required by preschool teachers (Bennett et al., 2009). Therefore, “*multicultural and foreign language skills*” are critical abilities for the teachers of the future (Dejaeghere & Zhang, 2008; Ogienko & Rolyak, 2009; Pink, 2004; Zeichner, 2010). As students in class may be from different places, and even foreign immigrant families (Colombo, 2007).

Fourthly, Cherniss (2001) indicated that, because society is rapidly changing and progressing, future organizations must identify and employ outstanding talents. Organizations cannot develop competitiveness until they are able to identify employees with leadership skills, and cultivate them to act as leaders. Therefore, future employees must possess more outstanding abilities and leadership skills that are beyond the basic work requirements. Katzenmeyer & Moller (2009) also pointed out that helping teachers develop as leaders is important to schools. Based on the above, in order to respond to future competitive challenges, teachers must possess “*transcendence and leadership abilities*”.

Fifthly, many studies suggested that, employees must develop strong motivation and commitment to work, and have high work involvement, in order to respond to workplaces of rapid changes, and possess individual competitive abilities to respond to future changes (Cherniss, 2001). In fact, teachers’ work attitude has always been valued in workplaces (Chen & Cheng, 2009; Cheng & Cheung, 2004). Therefore, “*work attitude of high involvement*” is teachers’ advantageous competitive ability to face future challenges.

Sixthly, because the future market is fiercely competitive, organizations should be devoted to the explanation of new markets. Therefore, future employees and teachers should be able to expand such new markets (Cherniss, 2001). In order to respond to the operational competition of a low birth rate, some preschools attempt diversified operations, feature operational strategies (Chen, 2015), and constantly update and adjust their teaching models, which test teachers’ ability to grasp teaching models. Therefore, the “*ability to master various teaching models*” is an advantageous competitive ability for teachers to face future challenges.

Seventhly, some studies found that impression management ability, meaning to dress appropriately and talk politely, has become increasingly important to teachers (Chen, 2006; Liao, 2009). Especially novices just entering, or intending to enter the workplace. They are younger, their appearance is more advantageous, and their verbal expressions are cleverer, which all become “*potential threats of entry*”. To improve competitiveness, teachers must pay attention to improving their own “*impression management ability*”.

Dimension 3 of Competitiveness: Pressure from Substitute Products

Pressure from substitute products refers to the threat level posed by products with substitute function or nature in the industry to existing products in the industry (Porter, 1980). The competitiveness of products that are less likely to be replaced is higher. For the application to preschool teachers, it can be named as “*irreplaceable abilities*”. According to previous literature, if teachers possess special work talent or personal traits, they are less likely to be replaced, thus, their competitiveness is higher. Irreplaceable abilities include two abilities: special expertise (Ogienko & Rolyak, 2009), and personal traits of good teachers, (Bahous,

2006), such as care, patience, fun, and politeness (Murphy et al., 2004).

Dimension 4 of Competitiveness: The Bargaining Power of Suppliers

The bargaining power of suppliers refers to suppliers' use of increased prices or reduction of product or service qualities to negotiate with companies. If a supplier is an important source of a company selling merchandise, the company will find it very difficult to request the supplier reduce their prices (Porter, 1980). In terms of preschool teachers, if a preschool teacher is able to satisfy a preschool principal and make the principal discover his/her importance, there is a large space for him/her to negotiate with the principal. The individual competitiveness of such teachers is higher. Therefore, this dimension was named as "*principal's satisfaction with teacher*". Regarding this definition, previous studies found that, the "*ability to get along harmoniously with supervisor (principal)*" is an important index for measuring teachers' abilities (Cheng & Cheung, 2004).

Dimension 5 of Competitiveness: Bargaining Power of Buyers

Bargaining power of buyers refers to buyers' ability to force companies to decrease the prices and improve product or service quality, in order to negotiate prices with companies. When product quality or service is not very important to buyers, their bargaining power will be very strong (Porter, 1980). In other words, if buyers' brand loyalty to a company is not high, or they are not very satisfied with a company, the company will find it very difficult to increase product price. If buyers' satisfaction with a company is higher, they are more willing to pay a high price to a company. Thus, if parents are satisfied with teachers, teachers are more likely to attract parents to send their children to study in preschools, and teachers' competitiveness is higher. Therefore, this dimension was named as "*parents' satisfaction with teachers*".

As there is a lack of investigation of teachers' competitiveness in previous studies, the empirical data of this study are required to analyze and investigate how to measure teachers' competitiveness, and which abilities can best help teachers develop competitive advantages. As Porter's five forces model is mainly used to analyze industrial competitiveness, this study developed 5 competitiveness dimensions of preschool teachers according to the framework, and developed the components of competitiveness: course arrangement and teaching abilities, class operation ability, teamwork ability, and ability to communicate with parents (these aforementioned 4 abilities belonged to dimension 1); ability of constant learning and innovation, specialized information technology ability, multicultural and foreign language skills, transcendence and leadership abilities, work attitude of high involvement, ability to master various teaching models, and impression management ability (the aforementioned 7 abilities belonged to dimension 2); special expertise and personal traits of good teachers (the aforementioned 2 abilities belonged to dimension 3); preschool principal's satisfaction with teachers and parents' satisfaction with teachers, for a total of 15 competitive components, according to the results of relevant studies. These components were expected to be used to measure preschool teachers' competitiveness. Therefore, this study proposed

H1: The reliability and validity of 5 dimensions and measurement components of preschool teachers' competitiveness are acceptable.

Previous studies showed that, self-efficacy is a good index for predicting individual performance (Harrison et al., 1997; Hewitt, 2015; Leslie & Hayward, 2018). Moreover, it is

significantly positively correlated with individual competitiveness (Yan, 2008). Therefore, it is predictable that the sense of self-efficacy of teachers with advantageous competitiveness is higher. Thus, this study proposed

H2: 15 components of advantageous competitiveness of preschool teachers can effectively predict teachers' sense of self-efficacy.

By inspecting which components of teachers' competitiveness are highly correlated with their efficacy, this study could better understand the components that are more important competitive abilities of teachers.

RESEARCH METHOD

The research methods included literature analysis, expert interviews, and questionnaire survey. This study used Michael Porter's competitiveness theory-the five forces analysis model, as the basis to develop a scale for preschools' individual competitiveness. Therefore, this study first summarized relevant studies in order to develop teachers' individual degree of competitiveness and measure a total of 5 competitiveness dimensions and 15 competitiveness components, as well as develop the questionnaire items. Afterwards, this study performed on-site interviews with a total of 8 early childhood education experts (preschool principals and teachers) to make up for the deficiencies of questionnaire items, as developed according to literature analysis, as well as to develop the expert content validity of the questionnaire to complete the formal questionnaire. Finally, this study used stratified random sampling to conduct a questionnaire survey on preschool teachers in Taiwan. The total population was 10,966 preschool teachers (Department of Statistics of the Ministry of Education, 2010). Stratified random sampling was adopted to classify Taiwan into four geographic areas: south Taiwan, central Taiwan, north Taiwan, and east Taiwan. Proportional sampling was adopted depending on the total number of preschool teachers in each area. A total of 2,100 preschool teachers were chosen to participate in this study, and 1,472 questionnaires were returned, for a return rate of 70.0%. This study excluded invalid questionnaires with incomplete answers, high number of missing answers, or high inconsistency, and obtained 1,454 valid questionnaires.

In terms of the research tools, the measurement questionnaire mainly included 3 parts: part 1-basic information of respondents; part 2-teachers' competitiveness, including 5 measurement dimensions, as developed according to Porter's five forces analysis model. According to relevant studies (Alnoor & Xiang, 2007; Bahous, 2006; Bennett et al., 2009; Colombo, 2007; Cherniss, 2001; Cheng & Chennng, 2004; Dejaeghere & Zhang, 2008; Kolter, 2002; Lee et al., 2008; Murphy et al., 2004; Ogienko & Rolyak, 2009; Pink, 2006; Zabar et al., 2004; Zeichner, 2010; Lin & Yang, 2005; Chen, 2006). This study is developed a total of 15 competitiveness components of various dimensions, and 62 measurement items. Part 3 is teachers' efficacy. This study referred to the measurement items of the "*scale on preschool teachers' self-efficacy*" as developed by Li & Chen (2007) to modify the items, for a total of 10 items. Teachers' competitiveness and teachers' efficacy were both measured using a 5-point Likert scale, where the options were scored 5-1 points, ranging from "*strongly agree*" to "*strongly disagree*". The higher the score, the higher the competitiveness or efficacy. The results of factor analysis showed that, the construct validity, as measured from teachers' competitiveness, was 0.83~0.89, and reliability of Cronbach's Alpha was 0.78. The construct validity measurement of teachers' efficacy was 0.73~0.86 and the reliability of Cronbach's

Alpha was .95. Therefore, the reliability and validity of the research tools of this study were acceptable.

This study used SPSS and LISREL software as data analysis methods to perform factor analysis, OLS regression analysis, and structural equation modeling (SEM). SEM used the goodness-of-fit index (GFI) to test the goodness of fit of the structural model, including χ^2 value, GFI, AGFI, RMSEA, CFI, and NFI. When GFI>0.90, the tested model was more reasonable.

RESEARCH RESULTS

Results of Factor Analysis on Private Preschool Teachers' Individual Competitiveness

The main purpose of this study is to develop the dimensions of preschool teachers' individual competitiveness, as well as the components of the various sub-dimensions, as the basis for preschool teachers to assess their own competitiveness or for preschools to assess teachers' competitiveness. This study developed a total of 5 dimensions of teachers' competitiveness according to Porter's five forces model. The results of factor analysis are consistent with those of the original design concept Table 1. Therefore, this study named 5 dimensions as: ability to compete against incumbent competitors, ability to compete against future competitors, irreplaceable ability, preschool principal's satisfaction with teachers, and parents' satisfaction with teachers.

Factor name	Teachers' individual competitiveness	Community
Ability to compete against incumbent competitors	0.890	0.792
Irreplaceable ability	0.889	0.790
Ability to compete against future competitors	0.861	0.741
Parents' satisfaction with teachers	0.834	0.696
Preschool principal's satisfaction with teachers	0.833	0.694
Eigen value	3.713	--
Explained variation %	74.267	--
α reliability coefficient	0.78	--

In order to further investigate the construct validity of the various sub-dimensions of teachers' individual competitiveness, as well as the items, this study continued performing factor analysis on various sub-dimensions. The results of statistical factor analysis showed that, two factors (abilities) were irreplaceable, and were named as: traits of good teachers and special expertise Table 2. A total of 4 factors were the abilities to compete against incumbent competitors, and were named as: course arrangement and teaching abilities, teamwork ability, ability to communicate with parents, and class operation ability Table 2. There were 7 factors of abilities to compete against future competitors, and were named as: impression management ability, work attitude of high involvement, ability of constant learning and innovation, information ability, ability to master various teaching models, transcendence and leadership abilities, and multicultural abilities Table 3. Two other dimensions were parents' satisfaction with teachers and preschool principal's satisfaction with teachers Table 3. The results showed that the factor loading of each item and various factor loading was >0.40. Therefore, the

construct validity was acceptable.

Table 2
SUMMARY OF FACTOR ANALYSIS ON TWO DIMENSIONS OF TEACHERS' INDIVIDUAL COMPETITIVENESS

Factor name Item	Dimension 3: Irreplaceable ability		Communality	Factor name Item	Dimension 1: Ability to compete against incumbent competitors				Communality
	Traits of good teachers	Special expertise			Course arrangement and teaching ability	Teamwork ability	Ability to communicate with parents	Class operation ability	
I often take care of young children.	0.896	-0.153	0.718	I can design curriculums according to children's development.	0.857	0.032	-0.070	-0.004	0.698
I often bring positive effects to young children.	0.893	-.013	0.788	I can use teaching strategies to improve learning outcomes	0.823	0.051	-0.038	-0.061	0.755
I am persistent in teaching work.	0.786	0.113	0.701	I can respond to children's problems.	0.810	0.076	-0.040	-0.020	0.697
I am energetic when I work in preschool.	0.780	0.148	0.721	I have good teaching skills.	0.805	-0.025	0.043	-0.043	0.726
My work is special in preschool.	-0.127	0.924	0.778	I can adjust teaching according to children's reactions.	0.768	0.192	-0.092	-0.057	0.731
I am an indispensable person in preschool.	0.005	0.901	0.815	I have enough knowledge to care for the health of young children.	0.741	0.099	-0.071	-0.096	0.671
I have a special ability in preschool.	0.072	0.857	0.788	I have rich professional knowledge.	0.740	-0.012	0.032	-0.008	0.577
My expertise is very helpful for preschool.	0.229	0.356	0.245	Children love my teaching very much.	0.734	0.067	-0.033	-0.118	0.698
Eigen value	3.958	1.595	--	I often design different assessment methods.	0.696	-0.081	0.300	0.069	0.677
Explained variation %	49.475	19.936	--	I can monitor the progress of each child's learning.	0.609	-0.064	0.315	0.000	0.646
α reliability coefficient	0.87	0.76	--	I can learn a lot from other teachers.	0.029	0.745	0.049	-0.144	0.751
				I often work with my colleagues.	0.092	0.713	0.118	-0.123	0.789
				I often work with colleagues to complete important tasks.	0.203	0.676	0.150	0.028	0.693
				My colleagues and I often support each other at work.	0.185	0.666	0.091	-0.077	0.728
				Children's parents often work with me.	-0.076	0.152	0.761	-0.137	0.745
				I invite parents to participate in the learning of children.	0.120	0.069	0.704	0.040	0.609
				I have a good communication with parents.	0.006	0.262	0.578	-0.172	0.690
				I often contact children's parents.	-0.007	0.334	0.563	-0.161	0.721
				I can diagnose the learning difficulties of young children.	0.244	-0.143	0.402	-0.314	0.585
				I can use the results of	0.349	-0.115	0.398	-0.222	

				the assessment to help young children develop.						0.617
				The relationship between children and me is very good.	-0.046	0.091	-0.102	-0.912		0.780
				I often interact with young children with a positive and supportive attitude.	-0.057	0.125	-0.015	-0.839		0.749
				Young children like to be with me.	-0.011	0.111	-0.053	-0.817		0.718
				I can use some strategies to create a good class atmosphere.	0.068	-0.118	0.087	-0.806		0.721
				I can guide children to have regular routines.	0.046	0.022	0.043	-0.752		0.676
				I can guide the children to be polite.	0.089	-0.049	0.046	-0.748		0.665
				I often design methods to keep children in good order.	0.161	-0.146	0.105	-0.678		0.636
				I have no communication problems with young children.	0.050	0.127	0.083	-0.606		0.590
				Eigen value	15.329	1.805	1.181	1.023		--
				Explained variation %	54.747	6.445	4.218	3.652		--
				α reliability coefficient	0.95	0.90	0.88	0.93		--

Table 3
SUMMARY OF FACTOR ANALYSIS ON THREE DIMENSIONS OF TEACHERS' INDIVIDUAL COMPETITIVENESS

Factor name Item	Dimension 2: Ability to compete against future competitors								Communality	Dimension 5: Parents' satisfaction with	Dimension 4: Preschool principal's satisfaction with	Communality
	Impression management ability	Work attitude of high involvement	Ability of constant learning and	Information ability	Ability to master	Transcendence and leadership	Multicultural abilities	Teachers'				
My appearance is elegant.	0.924	0.077	0.023	-0.055	-0.004	-0.056	0.024	0.792	--	--	--	
My talking style is elegant.	0.869	0.011	-0.001	0.006	0.065	-0.017	-0.001	0.754	--	--	--	
I am well-behaved.	0.859	0.002	0.053	-0.046	-0.003	-0.005	0.063	0.759	--	--	--	
I have good eloquence and manner.	0.720	-0.070	0.055	0.053	-0.020	0.072	-0.085	0.685	--	--	--	
I am willing to do my best for the development of preschool.	-0.005	-0.893	0.036	-0.034	0.080	0.015	0.037	0.834	--	--	--	
I fully cooperate with the work required by the preschool.	-0.002	-0.845	0.031	-0.035	0.051	0.034	0.002	0.765	--	--	--	
I Strive to pursue school progress.	-0.002	-0.844	0.080	-0.003	0.056	0.010	0.030	0.772	--	--	--	
I fully committed to the current work.	0.018	-0.739	0.094	-0.020	-0.058	-0.002	-0.007	0.643	--	--	--	
I absorb new knowledge of preschool education any time.	.026	-0.119	0.782	0.095	-0.025	-0.048	0.007	0.648	--	--	--	
I regularly learn new technologies.	0.040	-0.026	0.778	0.025	0.011	-0.018	0.058	0.606	--	--	--	
I usually pay attention	0.054	-0.030	0.766	0.038	0.020	0.008	0.010	0.624	--	--	--	

to the development of preschool education												
I read preschool education journals regularly.	0.081	0.055	0.710	0.002	0.018	0.046	0.003	0.546	--	--	--	
I can develop new teaching methods.	-0.029	-0.058	0.669	-0.088	0.080	-0.007	-0.039	0.553	--	--	--	
I usually adopt new educational technology.	-0.041	0.010	0.655	-0.222	0.011	0.009	-0.048	0.594	--	--	--	
I can design courses to develop children's potential.	0.005	-0.044	0.562	-0.211	-0.084	0.011	-0.086	0.536	--	--	--	
I can design new teaching materials.	0.007	-0.024	0.537	0.048	-0.042	0.038	-0.066	0.320	--	--	--	
I can apply IT equipment to teaching.	0.046	0.025	0.059	-0.881	-0.017	-0.003	0.018	0.824	--	--	--	
I have excellent computer information skills.	-0.011	-0.012	-0.041	-0.876	-0.048	0.008	-0.009	0.736	--	--	--	
I can enrich children's learning content with computer information technology.	0.041	-0.006	0.082	-0.834	-0.030	-0.025	0.035	0.743	--	--	--	
I have Homepage design ability.	-0.002	-0.057	-0.064	-0.703	0.044	0.052	-0.070	0.565	--	--	--	
I have the ability to teach English.	0.046	0.014	-0.003	-0.041	0.643	-0.059	-0.463	0.771	--	--	--	
I have the ability to take on different teaching jobs.	0.135	-0.310	0.032	-0.006	0.600	0.004	-0.023	0.565	--	--	--	
I have the ability to work as a talented teacher.	0.157	-0.168	-0.052	-0.044	0.527	0.153	-0.147	0.564	--	--	--	
I have master's degree or above.	0.013	0.247	0.063	-0.016	0.480	0.368	-0.015	0.490	--	--	--	
I earned many awards related to preschool education.	-0.054	0.073	0.128	-0.113	0.254	0.657	0.030	0.638	--	--	--	
Besides teacher certificate, I have many more licenses.	0.028	0.020	0.162	-0.099	0.151	0.639	0.094	0.589	--	--	--	
I have the administrative ability.	0.083	-0.165	-0.034	-0.100	-0.103	0.599	-0.117	0.587	--	--	--	
I have the ability to lead teachers.	0.223	-0.157	-0.008	-0.015	-0.220	0.564	-0.176	0.676	--	--	--	
I have the professional autonomy to deal with school affairs.	0.145	-0.163	-0.007	0.020	-0.255	0.517	-0.318	0.654	--	--	--	
I am a versatile teacher.	0.277	-0.115	-0.064	-0.096	0.110	0.390	-0.065	0.484	--	--	--	
I have the ability to communicate with foreigners in English.	-0.019	0.065	-0.043	-0.067	0.279	0.041	-0.717	0.707	--	--	--	
I have good Chinese and English skills.	0.111	-0.004	0.027	-0.123	0.131	-0.140	-0.716	0.683	--	--	--	
I understand the culture of different countries.	0.073	-0.020	0.152	-0.023	-0.074	0.133	-0.622	0.617		--	--	
I know the current trends of global education development.	0.007	-0.021	0.235	-0.052	-0.150	0.129	-0.588	0.595		--	--	
Parents are very satisfied with the service I provide.	--	--	--	--	--	--	--	--	0.921	--	0.848	
Parents are very satisfied with my help to the children.	--	--	--	--	--	--	--	--	0.921	--	0.848	
Parents are very satisfied with my teaching.	--	--	--	--	--	--	--	--	0.881	--	0.777	

Parents like me very much.	--	--	--	--	--	--	--	--	0.800	--	0.640
Parents often praise me as a good teacher.	--	--	--	--	--	--	--	--	0.592	--	0.351
The principal thinks that my work performance is very good.	--	--	--	--	--	--	--	--	--	0.938	0.880
The principal often praised me as an excellent teacher.	--	--	--	--	--	--	--	--	--	0.934	0.872
The principal is very satisfied with my teaching.	--	--	--	--	--	--	--	--	--	0.904	0.818
The principal values me very much.	--	--	--	--	--	--	--	--	--	0.901	0.811
Eigen value	11.617	3.086	2.140	1.472	1.378	1.180	1.050	--	3.465	3.382	--
Explained variation %	34.166	9.075	6.295	4.331	4.052	3.471	3.087	--	69.296	84.541	--
α reliability coefficient	0.89	0.90	0.87	0.86	0.72	0.83	0.79	--	0.83	0.94	--

Predictive Effect of Various Sub-dimensions of Private Preschool Teachers’ Individual Competitiveness and Criterion Variable/Teachers’ Efficacy

The purpose of this study is to develop private preschool teachers’ competitive dimensions, test whether the various dimensions are appropriate, and use teachers’ efficacy as the criterion variable to test the goodness-of-fit of this competitiveness scale. Firstly, this study used 5 sub-dimensions as the predictors and teachers’ efficacy as the criterion variable. The results of regression analysis showed that: sub-dimensions, such as abilities to compete against incumbent competitors, ability to compete against future competitors, irreplaceable abilities, preschool principal’s satisfaction with teachers, and parents’ satisfaction with teachers all had predictive effect on teachers’ efficacy ($p < .05$, Table 4 and Figure 1).

Teachers’ individual competitiveness	b	beta
Preschool principal’s satisfaction with teachers	0.157*	0.094
Irreplaceable ability	0.145*	0.157
Parents’ satisfaction with teachers	0.244*	0.186
Ability to compete against incumbent competitors	0.129*	0.398
Ability to compete against future competitors	0.029*	0.110
Constant	-0.950	--
Sample size	1454	--
Explanatory power R ²	0.69	--
F value	653.27*	--

* $p < 0.05$ criterion variable: Teachers’ efficacy

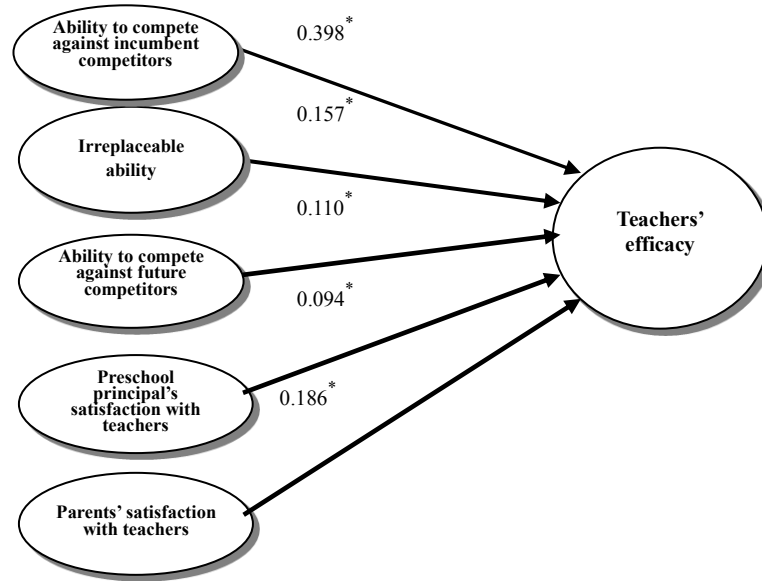


FIGURE 1
RELATIONSHIP BETWEEN THE FIVE DIMENSIONS OF TEACHERS' INDIVIDUAL COMPETITIVENESS AND TEACHERS' EFFICACY

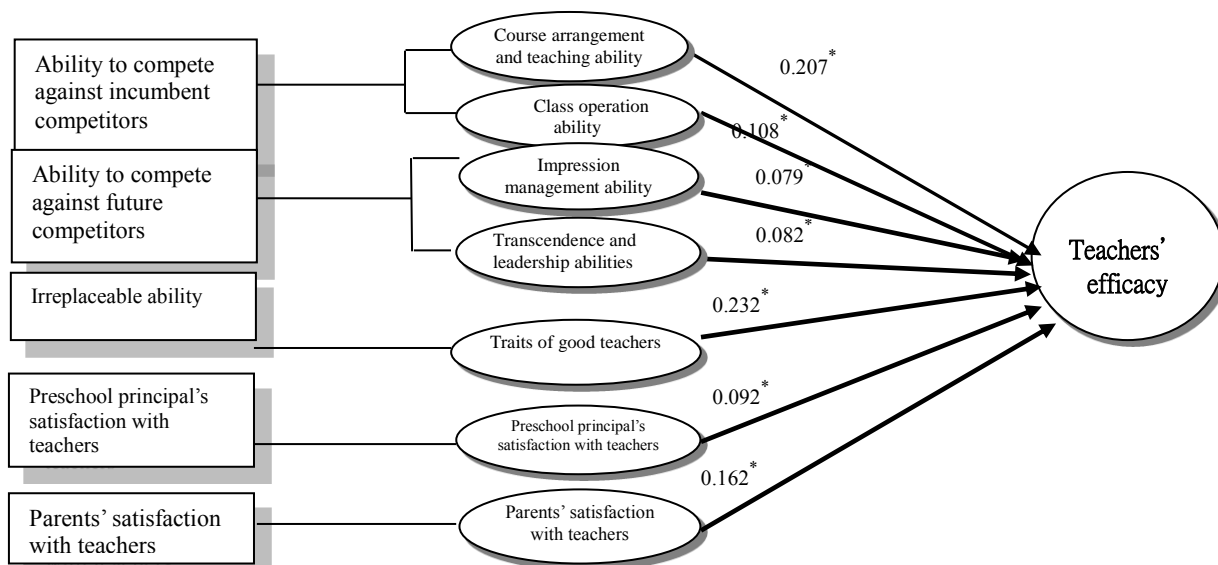
Note 1) * $p < 0.05$ the coefficient in the figure is Beta coefficient. 2) Ability to compete against incumbent competitors: Course arrangement and teaching ability, teamwork ability, ability to communicate with parents, class operation ability. 3) Irreplaceable ability: Traits of good teachers, special expertise. 4) Ability to compete against future competitors: Impression management ability, work attitude of high involvement, ability of constant learning and innovation, transcendence and leadership abilities

Afterwards, this study continued performing regression analysis on the sub-dimensions of preschool teachers' individual competitiveness. The results showed that, 7 sub-dimensions of teachers' competitiveness could significantly predict teachers' efficacy, including traits of good teachers, course arrangement and teaching ability, class operation ability, impression management ability, transcendence and leadership abilities, preschool principal's satisfaction with teachers, and parents' satisfaction with teachers. Moreover, the relationship coefficient between special expertise and teachers' efficacy (p value=0.058) was above the threshold value (p value 0.05). The standardized regression coefficient of traits of good teachers, course arrangement and teaching ability, and parents' satisfaction with teachers was higher Table 5 and Figure 2.

Table 5
SUMMARY OF REGRESSION ANALYSIS ON 15 COMPONENTS OF TEACHERS' INDIVIDUAL COMPETITIVENESS FOR TEACHERS' EFFICACY

	b value	Beta value	Significance (p)
Impression management ability	0.125*	0.079	0.000
Work attitude of high involvement	0.023	0.014	0.483
Ability of constant learning and innovation	0.038	0.039	0.054
Information ability	-0.040	-0.026	0.150
Ability to master various teaching models	0.006	0.004	0.827
Transcendence and leadership abilities	0.091*	0.082	0.000
Multicultural abilities	-0.049	-0.028	0.167
Course arrangement and teaching ability	0.155*	0.207	0.000
Teamwork ability	0.002	0.001	0.961
Ability to communicate with parents	0.013	0.007	0.746
Class operation ability	0.108*	0.108	0.000
Traits of good teachers	0.407*	0.232	0.000
Special expertise	0.053	0.038	0.058
Preschool principal's satisfaction with teachers	0.153*	0.092	0.000
Parents' satisfaction with teachers	0.212*	0.162	0.000
Constant (F value)	-0.080 (236.292*)		0.000
N (R ²)	1454 (0.711)		

* $p < 0.05$ criterion variable: Teachers' efficacy



Note: * $p < 0.05$. The coefficient in the figure is Beta coefficient

FIGURE 2
RELATIONSHIP BETWEEN THE SUB-DIMENSIONS OF TEACHERS' INDIVIDUAL COMPETITIVENESS AND TEACHERS' EFFICACY

Results of SEM Analysis of Various Sub-dimensions of Private Preschool Teachers' Individual Competitiveness and Criterion Variable/Teachers' Efficacy

According to the results of regression analysis, this study drew a figure of the model of the relationship between teachers' individual competitiveness and teachers' efficacy Figure 3. In

order to further analyze the goodness-of-fit of this relationship model figure, this study used Lisrel software to perform SEM analysis. The research results are as shown in Figure 3 and Table 6. The analysis results showed that, the goodness-of-fit indices of the relationship model were: NFI=0.99, NNFI=0.99, CFI=0.99, IFI=0.99, RFI=0.99, GFI=0.97, AGFI=0.96 and RMSEA=0.038. The values of the various goodness-of-fit indices were higher than 0.90, and RMSEA was lower than 0.08. According to the research results of preschool teachers' individual competitiveness, where teachers' efficacy was used as the criterion variable, this study found that preschool teachers' main competitiveness included 6 items: traits of good teachers, course arrangement and teaching ability, special expertise, impression management ability, leadership ability, and parents' satisfaction with teachers. Therefore, in short, the research results showed that: the competitiveness possessed by incumbent teachers is mainly course arrangement and teaching ability. Potential competitiveness possessed by them is mainly impression management ability and leadership ability. Teachers' irreplaceable competitiveness is mainly traits of good teachers and special expertise. Finally, the competitiveness possessed by preschool teachers is parents' satisfaction with teachers.

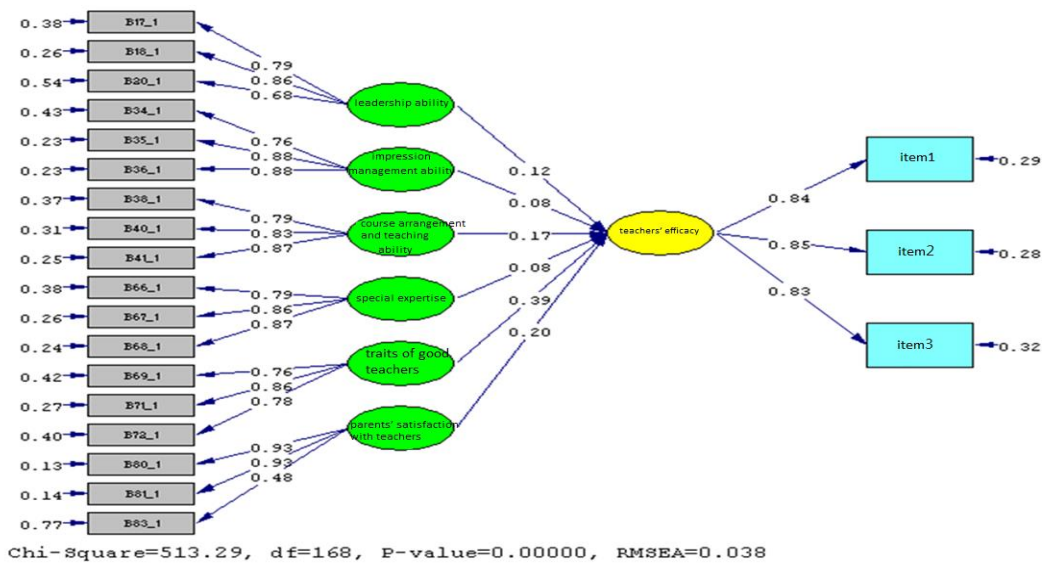


FIGURE 3
FINAL MODEL OF PRIVATE PRESCHOOL TEACHERS' INDIVIDUAL
COMPETITIVENESS

Table 6 SUMMARY OF VARIOUS GOODNESS OF FIT INDICES FOR PRESCHOOLS TEACHERS' INDIVIDUAL COMPETITIVENESS		
Name of index	Research Results Goodness-of-fit value	Decision Criterion
Chi square values	513.29 (p =0.00)	p>0.05
GFI (goodness-of-fit index)	0.97	>0.90
IFI (incremental fit index)	0.99	>0.90
NFI (normal fit index)	0.99	>0.90
NNFI (non- normal fit index)	0.99	>0.90
CFI (comparative fit index)	0.99	>0.90
RMSEA(root means quare error of approximation)	0.038	≤0.08

DISCUSSION

Human resources are the most important assets of v`modern organizations. The most important human resources of school organization are teachers, and a school's competitiveness is subject to its teacher's competitiveness. However, most previous studies regarding school competitiveness focused on the dimensions of school competitiveness, and overlooked the investigation of teacher competitiveness. Therefore, this study used a research framework based on the competitiveness theory and performed rigorous analysis on empirical data in order to develop the components of preschool teachers' competitiveness, and provided the research results for school organizations to further understand and improve teacher competitiveness.

This study adopted Porter's five forces model as the theoretical basis to develop the teacher competitiveness framework, combined relevant studies to develop the components of teacher competitiveness, and used teacher efficacy as the criterion variable. Regarding data collection, this study selected nationwide samples in Taiwan, and analyzed dimensions of teacher competitiveness according to the sampling data. The research results indicated that the construct validity of the five dimensions of teacher competitiveness, as based on Porter's five forces model, was acceptable. The five teacher competitiveness dimensions were the ability to compete against incumbent competitors, the ability to compete against future competitors, irreplaceable abilities, the principal's satisfaction with the teacher, and parents' satisfaction with the teacher. Moreover, this study found that these five teacher competitiveness dimensions all had significant criterion-related validity for teacher efficacy. These five dimensions of teacher competitiveness all had a significant regression effect on teacher efficacy.

The SEM analysis in this study indicated that the best predictability of the five dimensions of teacher competitiveness was as follows: 1) course arrangement and teaching ability (the ability to compete against incumbent competitors); 2) impression management ability, transcendence, and leadership abilities (the ability to compete against future competitors); and 3) traits of good teachers and special expertise (irreplaceable abilities). This study further investigated and analyzed the various sub-dimensions of teacher competitiveness, and found that, in terms of the criterion-related coefficient of the competitiveness components, traits of good teachers were most important, followed by parents' satisfaction with the teacher. Therefore, possession of the traits of good teachers was the most important competitive ability of teachers. Such traits include care; patience, fun, and politeness (p3 of this study). Specifically, teachers' persistence in teaching works, vitality, and passion for class tend to have positive and aggressive influence on students and allow them to actively show concern for students (p3 of this study).

The six most important competitiveness components mentioned above, namely course arrangement and teaching ability, impression management ability, transcendence and leadership ability, leadership qualities, traits of good teachers, special expertise, and parents' satisfaction with the teacher, represent the most important competitiveness for preschool teachers. Teachers must work hard in these fields to enhance their competitiveness. At the same time, it also means that if preschools want to enhance their competitiveness, their teachers should possess such competitiveness. Therefore, continuing/life-long education is very important to teachers. By taking continuing/life-long education, teachers can develop their competitiveness above, such as continually improving their abilities of curriculum design and teaching skills (technology knowledge acquaintance and updating), learning the skills of impression management, the strategies of incentive and leadership, and constructing their special expertise. In addition to these, teachers can improve their professions through continuing / life-long education to

transcend other teachers' level to be a teacher with competitiveness.

In the past, few studies discussed the talent selection tactics of hiring teachers in preschools. According to the results of the study, the first five most important conditions for the selection of teachers by the preschool principal included teacher's experience, teaching ability, conversation style and coping ability, degree of work cooperation, and education background (Chen & Cheng, 2009).

Another study pointed out that the teacher's education background, experience, professional certification, as well as appearance and conversation style, are the key factors influencing whether a teacher can obtain a position in preschool education with a higher salary (Chen & Cheng, 2010). Compared with the results of this study, it could be found that the three conditions of employment indicated by Chen & Cheng (2010), namely education background, experience and professional certification, could be reflected in the course arrangement and teaching ability of this study.

As for the study of Chen & Cheng (2009), it was found that appearance, conversation style and coping ability are conditions conducive to being chosen as a teacher, and they were also in line with the impression management ability of this study. In addition, another favorable condition is the degree of work cooperation, which shows the attitude of work involvement, and which could be reflected in the traits of good teachers of this study. After the comparison, the researchers found that during the process of hiring teachers, a teacher with such competitiveness would indeed be more likely to obtain a good job. However, two teacher competitiveness components, namely special expertise and transcendence and leadership ability, have not been covered in past studies. In the future, related research can be performed to see whether teachers with these two competitive components will have an advantage in job-seeking competitions.

CONCLUSIONS AND FUTURE ORIENTATIONS

This study confirmed the six most important components of teachers' competitiveness which were course arrangement and teaching ability, impression management ability, transcendence and leadership ability, leadership qualities, traits of good teachers, special expertise, and parents' satisfaction with the teacher. It will benefit effectively teachers' efficacy by improving their six abilities.

This study confirmed the competitiveness indices, clarified the key indices, and verified the applicability of Porter's competitiveness analysis model in the field of preschool education, all of which had not been attempted in the past and these were the contributions of this study. Adapting Porter's theory to develop the questionnaire, some important abilities which may improve teachers' competitiveness will not be involved and it sets the limitation in this study. As for the future orientations, we suggest that other competitiveness theoretical models or combined measurement models composed of multiple theoretical models be used, or different research approaches can be adapted, such as interviewing the preschools' teachers and principals to realize their viewpoint of teachers' competitiveness to enrich the theoretical verification, application and research results in this field. Besides, how to strengthen the connectivity which applies teachers' competitiveness to real classroom environments is also a research direction in the future.

REFERENCES

- Alnoor, A.G., & Xiang, G.Y. (2007). *The necessary teaching competences for mathematics teachers in middle schools*. Retrieved from ERIC database. (ED 495314)
- Bahous, J. (2006). *Teacher competence: In-service va. pre-service teachers*. Retrieved from ERIC database.(ED 491484).
- Baron-Polanczyk, E. (2008). Factors differentiating the information and communication technology competences and teachers activities concerning the design and application of multimedia teaching materials-research report. *The New Educational Review*, 16. Retrieved from <http://www.educationalrev.us.edu.pl/e16/a2.pdf>
- Becker, B.E., Huselid, M.A., & Ulrich, D. (2001). *The HR scorecard: Linking people, strategy and performance*. Boston: *Harvard Business School Press*.
- Bennett, J., Bredekamp, S., Goffin, S., Kagan, S.L., Klaus, S., Kuelen, A., Laevers, A., Olmore, S., Oudenhoven, N. A., Pascal, C., Peter, J., Pianta, R., Saifer, S., Siraj-Blatchford, I., Uhlmann, R., Urban, M., & Zafeirakou, A. (2009). *Competent teachers of the 21st century: ISSA's definition of quality pedagogy*. International Step by Step Association. Retrieved from http://www.issa.nl/docs_pdfs/Pedagogical-Standards-final-WEB.pdf
- Chen, Q.R. (2006). *A Study on the Construction of School Competitiveness Indicators and Weights System for Private High Schools ~ Perspective from Benchmarking*. Unpublished, Doctoral Dissertation, Graduate Institute of Education, National Kaohsiung Normal University, Kaohsiung City.
- Chen, Y.C. (2006). Preliminary Exploration and Analysis of Recruitment Characteristics of Kindergartens. In: Department of Early Childhood Caring and Education, Chung Hwa University of Medical Technology (ed.), *Professional Development of Early Childhood Caring and Education: Theory and Practice*, 129-162, Taipei: Fartern Culture.
- Chen, Y.C. (2009). The Methods and Conditions about Selecting Preschool Teachers: The Effect of Teachers' Human Capital, Culture Capital and Social Capital to Preschool Principals. *Journal of National Pingtung University of Education: Education*, 33, 127-164.
- Chen, Y.G. & Cheng, J.N. (2010). Manpower or relationships : An empirical study on early childhood teachers' job seeking. *WSEAS: Transactions on Information Science and Applications*, 7(12), 1383-1392.
- Chen, Y.G. (2015). The Relationship between Competitive strategies of kindergartens with different characteristics and parent satisfaction. *The Journal of Global Business Management*, 11(2), 76-87.
- Chen, Y.G. (2016). Competitive advantages of preschools in different urbanized locations: The application of RBV and CBV. *Journal of International Management Studies*, 11(1), 7-20.
- Cheng, M.H. & Cheung, W.M. (2004). Comparing perceptions: The competence of novice teachers and the expectations of school principals. *Asia Pacific Education Review*, 5(1), 188-199.
- Cherniss, C. (2001). Emotional intelligence and organization effectiveness. In C. Cherniss & D. Goleman (Eds.). *The Emotionally Intelligence Workplace*, 3-26. San Francisco: Jossey-Bass.
- Colombo, M.W. (2007). Developing cultural competence, mainstream teachers and professional development. *Multicultural Perspectives*, 9(2), 10-16
- Dejaeghere, J.G. & Zhang, Y. (2008). Development of intercultural competence among US American teachers: Professional development factors that enhance competence. *Intercultural Education*, 19(3), 255-268.
- Department of Statistics of the Ministry of Education. (2010). *General situation of preschools in academic year of 2009 (2009-2010), School locations*. Accessed at http://www.edu.tw/files/site_content/b0013/k.xls
- Esterhuizen, D., van Rooyen, J., & D'Haese, L. (2008). An evaluation of competitiveness of the agribusiness sector in South Africa. *Advances in Competitiveness Research*, 16, 31-46.
- Grin, F., & Faniko, K. (2012). Foreign language skills and intercultural abilities: Operationalization with a large population. *Management & Avenir*, 5, 168-184.
- Grosse, C.U. (2004). The competitive advantage of foreign languages and cultural knowledge. *The Modern Language Journal*, 88, 351-373.
- Harrison, A.W., Rainer, R.K., Hochwarter, W.A., & Thompson, K.R. (1997). Testing the self-efficacy-performance linkage of social cognitive theory. *The Journal of Social Psychology*, 137(1), 79-87.
- Hewitt, M.P. (2015). Self-efficacy, self-evaluation, and music performance of secondary-level band students. *Journal of Research in Music Education*, 63(3), 298. Retrieved from <https://erms.lib.nttu.edu.tw:3064/docview/1729859970?accountid=12699>
- Hsieh, C.T., & Urquioal, M. (2002). *When schools compete, how do they compete? An assessment of Chile's nationwide school voucher program*. New York: National Center for the Study of Privatization in Education.
- Huang, C., Yuan, Y., & Huang, C. (2008). Differences between public and private institutions of Taiwan's HTVE

- system in determinants of competitiveness. *US-China Education Review*, 5(7), 1-12.
- Katzenmeyer, M., & Moller, G. (2009). *Awakening the sleeping giant: Helping teachers develop as leaders*. New York: Corwin Press.
- Kolter, P. (2002). *Marketing moves: A new approach to profits, growth, and renewal*. MA: Harvard Business School Press.
- Krskova, H., & Baumann, C. (2017). School discipline, investment, competitiveness and mediating educational performance. *The International Journal of Educational Management*, 31(3), 293-319.
- Lee, H.G., Kim, J.H., & Kang, J.G. (2008). The assessment of professional standard competence of teachers of students with visual impairments. *International Journal of Special Education*, 23(2), 33-46.
- Leslie, R.S., & Hayward, S.L. (2018). An examination of college students' Problem-Solving Self-Efficacy, academic Self-Efficacy, motivation, test performance, and expected grade in Introductory-Level economics courses. *Decision Sciences Journal of Innovative Education*, 16(3), 217-240.
- Li, H.M. & Chen, M.T. (2007). The Influence of Practical Intelligence, Goal Orientation, Self-Efficacy on Job Performance of the Preschool Teachers. *Educational Review*, 28, 63-99.
- Liao, H.L. (2009). *A Study on Competitiveness of Reserved Teachers in Elementary Schools by Analytic Hierarchy Process (AHP)*. Unpublished, Master's Thesis, on the job further study program in education cause innovation and operation. National Taipei University of Education, Taipei City.
- Lin, C.M & Yang, S.C. (2005). Study on the Early Childhood Teachers' Professional Competency and Knowledge. *The Journal of Study in Child and Education*, 1, 55-84.
- Man, T.W.Y., Lau, T., & Chan, K.F. (2002). The competitiveness of small and medium enterprises: A conceptualization with focus on entrepreneurial competencies. *Journal of Business Venturing*, 17, 123-142.
- Mayer, D.P., Mullens, J.E., & Moore, M.T. (2001). Monitoring school quality: An indicators report. *Education Statistics Quarterly*, 3(1), 38-44.
- Momaya, K. (2004). Competitiveness of firms: Reviews of theory frameworks and models. *Singapore Management Review*, 26(1), 45-61.
- Murphy, P.K., Delli, L.A.M., & Edwards, M.N. (2004). The good teacher and good teaching: Comparing beliefs of second-grade students, preservice teachers, and inservice teachers. *The Journal of Experimental Education*, 72(2), 69-92.
- Ogienko, O. & Rolyak, A. (2009). *Competent approach in teachers professional training in context of integration to the European educational environment*. Retrieved from http://www.eera-ecer.eu/fileadmin/user_upload/Publication_FULL_TEXTS/ECER2009_513_Rolyak.pdf
- Oplatka, I. (2006). Teacher' perceptions of their role in educational marketing: Insights from the case of Edmonton, Alberta. *Canadian Journal of Educational Administration and Policy*, 51, 1-23.
- Pink, W.T. (2004). Going backstage: Enhancing communicative competence for pre-service teachers. *Educational Foundations*, 18(3-4), 45-58.
- Porter, M. E. (1980). *Competitive strategy*. New York : The Free Press.
- Quinn, D.M. (2003). Legal issues in education technology: Implication for school leaders. *Educational Administration Quarterly*, 38(2), 187-207.
- Scott, C.B, Bradford, C.J, & James, M.M. (2006). Competitive advantage from better interactions. *Mckinsey Quarterly*, 2, 52-63.
- Wu, C.S. (2002). Theories and Strategies for Improving Schools' Competitiveness. *Taiwan Education Review*, 613, 2-10.
- Yan, C.Y. (2008). *Research on the Relationship among Work Value, Self-efficiency, Experiential Learning and Work Competitiveness of Universities' Administrative Staffs*. Unpublished, Doctoral Dissertation, Graduate Institute of Adult Education, National Kaohsiung Normal University, Kaohsiung City.
- Zabar, S., Hanley, K., Stevens, D.L., Kalet, A., Schwartz, M.D., Pearlman, E., Brenner, J., Kachur, E.K., & Lipkin, M. (2004). Measuring the Competence of Residents as Teachers. *Journal of General Internal Medicine*, 19(2), 530-533.
- Zeichner, K. (2010). *Preparing globally competent teachers: A U.S. perspective*. 2010 colloquium on the internationalization of teacher education (NAFSA: Association of International Educators). Retrieved from http://www.nafsa.org/_/File/_/zeichner_colloquium_paper.pdf