

Investigating Soft Skills for Success in the Workforce: Perceptions of Elementary School Teachers

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Abstract

Teachers are facing multi-dimensional changes in their roles constantly especially in a competitive society in Taiwan. Effective teachers should possess not only hard skills but soft skills. Compared with higher education focusing on knowledge delivery, elementary school education focuses not only knowledge but life education. How do teachers perceive their roles as teachers with respect with soft skills in the workforce? The purpose of this study is to explore teachers' perceptions of soft skills and participants were elementary school teachers in central Taiwan while Factor analysis, ANOVA, and t-test were used for data analysis. Six soft skills factors were identified as: positive attitudes, open-mindedness, interpersonal relationships, teamwork, communication skills, and creativity. In addition, teachers with different teaching experiences or educational levels hold different opinions with regard to interpersonal relationships and communication skills, respectively.

Keywords: Soft Skills, In-service Training, Teacher Education.

1. Introduction

Taiwan Ministry of Education has been very supportive of educational reforms over the past decade. Technology-immersed teaching and other new pedagogies have drawn much attention in recent years, but few researchers have addressed the issue of soft skills. Many incidents occur between teachers and students or even with parents.

According to a 1996 survey, nearly half (46%) of U.S. chief information officers (CIOs) ranked soft skills as very important employable factors; this number increased to more than two thirds (68%) in 1998 (Hasbullah & Sulaiman, 2002). The Secretary's Commission on Achieving Necessary Skills (SCANS) in 1991 reported that people to succeed in the field of work need not only to develop solid fundamental skills but also to acquire abilities to communicate, collaborate with others, apply information or technology and manage resources effectively, in other words, soft skills.

The issue of soft skill has drawing much attention in the field of business education. Dodd, Brown, and Benham (2002) recognized the important of soft skill and conducted a curriculum revision by incorporating applied soft skills to prepare business school students in not only in operational or tactical level but in the strategic level. Mitchell, Skinner and White (2010) examined Alabama business educators' about their perspective of soft skills and their result indicated that majority business educators support the integration of soft skills into business education curriculum and written communication and time management were rated as more important than business etiquette, diversity and problem solving and communication skill and leadership. However, few articles regarding soft skills apply in teacher preparation. In this sense, this study is to explore the required workplace competencies or soft skills for elementary school teachers and to examine practicing teachers' opinions regarding soft skills.

2. Literature Review

2.1 Soft Skills

According to the Secretary of Labor's Commission on Achieving Necessary Skills Report (1991), five fundamental workplace competencies included: manage resources, work with others, organize information, and systems and technology adeptness. Soft skills are identified as oral or verbal communication skill, problem-solving ability, openness to change, showing respect and collaboration (Block, 2003). Soft skills are generally described as abilities that how people interact with others, such as communication skills, negotiation, change adeptness, flexibility, team work, relationship building and listening skills (Chaudhry, Khoo, Wu, & Chang, 2008). Recently, soft skills are also named as practical intelligence and measured by four different aspects: managing tasks, managing career, managing self and managing others (Joseph, Ang, Chang & Slaughter, 2010).

2.2 Positive Teaching Environment

Quay and Quaglia (2004) maintained that it is the teacher's responsibility to create a positive culture for learning that will encourage students' learning achievement. They also provided ways to formulate a positive classroom culture, such as generating friendly relationships, appreciating students' achievements, creating interesting learning experiences, and developing leadership and a sense of duty among students.

Teachers with compassion present their concern, care and love for students posses open-minded characteristics. Calfapietra (2002) indicated that teachers must view their students as individuals and recognize them through their personal strengths and weakness in learning. When students misbehave or lack of energy, teachers should find out the reasons for this and provide necessary help (ibid). Compassionate teachers are aware of students' disappointment, unhappiness and struggles with learning. Such teachers are considerate of students' levels rather than mocking students' low learning results. Since students can become frustrated when teachers are

indifferent to their difficulties or mock their low accomplishments, teachers should make sure their students learn what should be learned and are concerned with student “dignity and self-respect” (Banner & Cannon, 1997).

Teachers should emphasize fairness and respect through daily interactions as role models (Stronge, 2007). Teachers should apply an interactive learning environment with mutual “respect, trust, and learning” Four advantages to teach fairness include: every student is treated equally and students learn from others, students can discuss and debate different opinions, different students come up with different unique ideas, and the learning is from the dialogue and argument, not directly from teachers (Soong, 2004).

2.3 Teamwork and Communication

Schmoker (1999) noted that teachers who work alone have limited communication with their colleagues, which prevents them from developing consensus. Berry, Johnson, and Montgomery (2005) believed that teachers can work together to improve their teaching and school in general by sharing information and learning from one another. In the preliminary stage, teachers must trust one another then gradually create a collaborative culture (*ibid*). Teamwork requires teachers to respect one another, communicate sincerely, and make group decisions (Lunenburg & Ornstein, 2004).

Schmoker (1999) further recommended that effective team teamwork requires that team member should do research, listen to each other’s ideas, do not jump to conclusion, and evaluate project effectiveness. Teamwork not only help teachers share information but also help new teachers in mentoring program with teaching skills, methods and lesson plans (Millinger, 2004). Therefore, in their study, Joseph, Ang, Chang and Slaughter (2010) concluded that mechanisms such as mentoring system can improve and cultivate information technology (IT) professionals’ soft skills.

3. Method

Traditional factor analysis is used when there is no presumption regarding factor numbers, factor contents or variables categorization about the observed phenomena. This type of statistical research method is called exploratory factor analysis (Gorsuch, 1983). As mentioned earlier, soft skills include many dimensions. Research has not been consistent regarding the definition of soft skills. For this reason, this study employed exploratory factor analysis to explore how teachers perceive soft skills in their work environment. Human Subject Committee’s approval was obtained from Idaho State University before the research began. The use of a coding system by separating participants’ names and their responses was to maintain the confidentiality.

3.1 Participants and Sampling

A good sample size for factor analysis should over 100 and five times greater than the number of survey questions (Gorsuch, 1983). Thus, with 43 survey questions, a minimum of 215 participants was necessary. The final 466 surveys returned from practicing teachers and administrators at 18 different schools in central Taiwan more than met this requirement. Eighteen participating schools were selected by researchers without random sampling, thus convenience sample was used in this study.

3.2 Instrument

Prior to the construction of the survey questions, interviews were conducted with various elementary school teachers and administrators at Pocatello, Idaho, in the United States. Topics from the literature review were also included to form the initial 43 survey questions into five sections: (a) communication skills, (b) working as a member of an educational team, (c) learning environment factors, (d) creative support in learning and (e) possessing an attitude supportive of learning. Open-ended question space was provided for other opinions.

4. Results

The final survey was administered to 494 participants; 466 completed and returned the survey, creating a response rate of 94.33 percent. Based on descriptive analysis, female made up the majority at 78 percent of participants; male, 22 percent. Most participants were between the age of 22 to 48, and their years teaching experiences were widely distributed. In addition, nearly all participants hold university degrees (96 percent). Teachers made up the majority at 76 percent while administrators made up at 24 percent (see Table 1).

Table 1 Demographic Statistics by Sample

Variable	Group	Sample Size	Percentage
Gender	Male	102	22%
	Female	364	78%
Age	22-30	108	23%
	31-39	163	35%
	40-48	152	33%
	49-57	39	8%
	58-65	4	9%
	Teaching Experience	0-5	122
	6-11	95	20%
	12-17	111	24%
	18-23	80	17%
	24 and above	58	12%
Educational Level	College	20	4%
	University	371	80%
	Mater	75	16%
Academic Position	Administrator	113	24%
	Teacher	353	76%

4.1 Exploratory Factor Analysis

According to Kaiser (1974), the value of Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) should be at least 0.5 in order to meet factor analysis criterion for acceptable data. In this study, the KMO value was 0.97. Factor loadings determine the association between a survey question and its factor. The factor loading for statistical significance is 0.30 when sample size is 350 or larger (Hair, Black, Babin & Anderson, 2009). To increase correlation, factor loading applied in this study was 0.5. There were 43 questions in the original survey; after this extraction, 38 remained to form six new constructs (see Table 2):

- (a) Positive attitudes
- (b) Open-mindedness

- (c) Interpersonal relationships
- (d) Teamwork
- (e) Communication skills
- (f) Creativity

Table 2 Construct Information

Factor Construct	Question Number	Name of Construct
I	E1, E3, E4, E5, E6, E7, E8, E9, E10, E11, E14, E15	Positive attitudes
II	C1, C2, C3, C4, C5, C6, D4	Open-mindedness
III	A6, A7, A8, A9, B3, B4	Interpersonal relationships
IV	B1, B2, B5, B6, B7, B8	Teamwork
V	A1, A2, A3, A4, A5	Communication skills
VI	D1, E12	Creativity

4.1.1 Validity

Validity refers to how well the instrument measures the concept it intends to measure. "Factor analysis is a powerful and indispensable method of construct validation" (Kerlinger, 1986, p 427). A factor analysis was conducted to confirm data validation. Survey questions were categorized into six distinct factors when their factor loadings greater than 0.50 (See Table 3).

Table 3 Rotated Loadings with Six Factors

	I	II	III	IV	V	VI
Positive Attitudes						
E9. Being empathetic towards others	0.701					
E8. Exhibiting enthusiasm for my work	0.676					
E6. Being able to adapt to various situations	0.668	0.322				
E15. Building rapport with learners	0.652	0.386				
E4. Managing stressful classroom situations	0.641					
E14. Being respectful of learners	0.636					
E1. Possessing a positive attitude	0.611	0.307				
E7. Taking personal initiative in various situations	0.590					0.382
E5. Accepting personal responsibility	0.565	0.348				
E11. Exhibiting compassion for others	0.563					
E3. Being a life long learner	0.562					
E10. Possessing decision making skills	0.547					0.435
Open-mindedness						
C2. Understand different student personalities		0.772				
C3. Understand multiple intelligence among students		0.745				
C1. Understand different student learning		0.716				

styles					
C4. Being empathetic towards student situations	0.400	0.636			
C5. Understanding the value of multiple perspectives	0.392	0.557	0.303		
C6. The ability to problem solve	0.433	0.547			0.356
D4. Seeing multiple possibilities as solutions	0.364	0.520			
Interpersonal Relationships					
A8. Public relations			0.691		
A9. Building rapport	0.409		0.687		
B3. Understanding conflict resolution		0.354	0.597		0.308
A6. Tactfulness, diplomacy			0.557	0.409	0.302
A7. Conflict resolution			0.545		0.403
B4. Building rapport with other teachers/administrators			0.514	0.455	
Teamwork					
B7. Team problem solving skills	0.309	0.305		0.633	
B8. Sharing ideas with other team members	0.321	0.312		0.615	
B6. Recognizing multiple perspectives		0.337		0.609	
B5. Making decisions as a team	0.310			0.608	
B1. Possessing collaboration skills			0.473	0.576	
B2. Ability to work with colleagues			0.434	0.569	
Communication Skills					
A4. Listening skills					0.717
A2. Non-academic communication with students					0.712
A1. Communicating with parents					0.676
A5. Defusing tense situations		0.330			0.541
A3. Communicating with adults other than parents				0.336	0.525
Creativity					
E12. Being able to work on more than one task at a time					0.726
D1. Solving problems in a creative manner		0.402			0.627

Note. List numbers with factor loading above

4.1.2 Reliability

Reliability refers to the consistency or stability of an instrument when tested again (Kerlinger, 1986). To measure the consistency of this survey, Cronbach's alpha was used. A value of 0.5 or higher is regarded as a good reliable coefficient (Nunnally, 1978). Table 4 listed the construct and overall coefficient values.

Table 4 Cronbach's Coefficient Alpha by Factors

Name of Construct	Question Number	Cronbach's α	Overall
Positive Attitudes	E1, E3, E4, E5, E6,	0.94	0.97
	E7, E8, E9, E10, E11, E14, E15		
Open-mindedness	C1, C2, C3, C4, C5, C6, D4	0.91	
Interpersonal Relationships	A6, A7, A8, A9, B3, B4	0.90	
Teamwork	B1, B2, B5, B6, B7, B8	0.91	
Communication Skills	A1, A2, A3, A4, A5	0.81	
Creativity	D1, E12	0.57	

ANOVA with the Bonferroni post hoc comparison test was used to evaluate age, teaching experience, and educational level; the t-test was used to evaluate gender and academic position. The results indicated that statistically significant differences existed for two variables: teaching experience and educational level (see Tables 5 and 6).

Table 5 P-value for Each Variable under Six Factors

Factor	Gender	Age	Teaching Experience	Educational Level	Academic Position
Positive Attitudes	0.69	0.60	0.51	0.96	0.15
Open-mindedness	0.07	0.09	0.00	0.17	0.06
Interpersonal Relationships	0.54	0.10	0.08	0.39	0.66
Teamwork	0.63	0.25	0.24	0.13	1.00
Communication Skills	0.15	0.50	0.43	0.31	0.63
Creativity	0.58	0.50	0.75	0.00	0.80

Table 6 Results of ANOVA and t-test

Name of Construct	Independent Variable	Result
Positive attitudes	NA	No significant difference
Open-mindedness	NA	No significant difference
Interpersonal relationships	Teaching experience	Significant difference
Teamwork	NA	No significant difference
Communication skills	NA	No significant difference
Creativity	Educational level	Significant difference

4.2 Discussion and Analysis

4.2.1 Gender

Male and female do not possess different opinions regarding soft skills required in elementary schools. However, if the value of alpha were 0.10, male and female may have different opinions regarding to open-mindedness.

4.2.2 Age

There is no statistically significant difference among participants' age groups. However, if the alpha value were set as 0.10, practicing teachers aged from 40 to 48 may think open-mindedness as an important factor than those aged from 22 to 33. In addition, practicing teachers aged from 49 to 57 may think interpersonal relationship as an important soft skill factor than those aged from 31 to 39.

4.2.3 Teaching Experience

Results of this study indicate a statistically significant difference between practicing teachers with various levels of experience. Teachers with 18 to 23 years of experience believe that open-mindedness is important; teachers with 6 to 11 years of experience did not feel that this is as important.

It is assumed that teachers with more experience may also have their own teaching rules. They are challenged by new students, policies, administrators, and parents. Therefore, they may think being open-minded is required soft skill factor in their workplace. However, teachers with 6 to 11 years of teaching experience are around age 30. They are assumed to be young teachers close the age of their students and have less generation gap with students; therefore, do not regard open-mindedness as a main issue than those experience teachers.

4.2.4 Educational Level

Based on ANOVA results, teachers of different educational backgrounds consider creativity as a vital element. Teachers who have received more education learn to work efficiently and creatively than those who received college degrees. Learn to manage their time, to work efficiently and to think out side of the box can be a good soft skill to accomplish their daily job in a successful way.

4.2.5 Academic Position

There was no statistically significant difference among practicing teachers with administrative jobs. However, if the alpha value was enlarged to 0.10, classroom teachers or administrative teachers may possess different opinions about teamwork. In other words, administrative teachers may regard teamwork as one of the essential soft skills than classroom teachers since the nature of administration require lots of teamwork and collaborations.

5. Conclusion

Soft skills are becoming important in every field. Teachers in Taiwan no longer are granted for jobs as before. Teachers must equip themselves with these skills in order to increase their employability. Educators can develop these skills through role-playing, expert speaking, and role modeling (Block, 2003). Soft skills are better learned while working (Hasbullah & Sulaiman, 2002). This study makes several contributions to the literature. First, competition in teaching positions; prospective teachers should prepare themselves with soft skills to become more desirable candidates. Second, educators should consider including soft skills in teacher preparation programs. Third, school leaders, such as principals or administrators, should include soft skills in service teacher training programs.

Several limitations of this study are stated as follows: (a) no random sampling, (b) results of this study only apply to elementary school teachers and (c) result of this study only apply Taichung in Taiwan. For the follow-up studies in the future, we recommend an extension of this study to middle or high school as well as a full sample in Taiwan area, an extension of the sample to different groups' perceptions of soft skills such as teacher educators, parents, or education students, and a qualitative study is also suggested for future research.

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