# Taiwanese Preschool Teacher Education Students' Attributions for Studying, Occupational Knowledge, and Initial Teaching Commitment

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Received: November 13, 2010 Accepted: December 7, 2010 doi:10.5430/wje.v1n1p15

**Abstract**

This study examines Taiwanese preschool teacher education (PTE) students' attributions for studying in PTE, occupational knowledge, and initial teaching commitment, as well as the effects of the former two variables on the latter one. The study used mixed-methods which included questionnaire surveys and in-depth interviews. The Taiwanese PTE students (N=1463) responded to questionnaires, and eight of them were selected as the interviewees. The findings indicate that PTE students tended to predominantly attribute their PTE studying to personal factors in the internal attributional style, had substantial but incomplete occupational knowledge, and demonstrated moderately strong initial teaching commitment. The PTE students' attributions for studying in PTE and occupational knowledge had significant influence on their initial teaching commitment, and PTE studying attributions to personal factors was the most powerful predictor. The PTE students with more studying attributions to personal factors and more professional knowledge about occupational competency and occupational qualifications tended to display stronger initial teaching commitment.

**Keywords**: Teaching commitment, Preschool teacher education, Attribution, Occupational knowledge

## 1. Introduction

In Taiwan, preschool teacher education (PTE) programs are mainly offered by the preschool teacher education centers of universities (Ministry of Education, 2009). However, estimates indicate that 40% of PTE students do not enter preschool teaching (Ministry of Education, 2008), and about one-quarter of beginning preschool teachers exit the profession within their first four years (Jia-yi Education University, 2008). This high attrition rate of preschool teachers has been reported not only in Taiwan, bust also in other countries in the world. For example, according to the National Commission on Teaching and America's Future (2003), the attrition rate of preschool teachers had increased faster than the supply of teachers. Australian Government Department of Education, Employment and Workplace Relations announced the preschool teacher shortages in Australia (Dowling & O'Malley, 2009). In China, similar trends have been reported (Chang & Li, 2007). There is also a high turnover rate of preschool teachers in England (Department for Education and Skills, 2008).

Some studies (cf. Hong, 2010; Rots, Aelterman, Vlerick, & Vermeulen, 2007; Ruhland, 2002) indicate that the roots of teacher education students' decisions not to enter the teaching profession or beginning teachers' decisions of leaving the profession are linked with their level of initial teaching commitment before entering the profession. These turnover rates and the dwindling professional commitment of preschool teachers are clearly costly in terms of investments in PTE and serve as an obstacle to long-term PTE and preschool education development (Hong, 2010). Given the problem, several studies have focused on explaining and/or predicting teaching commitment and turnover among teachers (e.g., Rots, et al., 2007). However, most of these studies examine the effects of the workplace environment or personal demographics on teaching commitment; they also select first-year and continuing teachers as their subjects.

These studies have provided useful information in understanding teachers' commitment, but are limited in fully explaining the situation because individuals' career decision-making is deeply intertwined with their personal attribution styles and career information (Brown, 2007). Ones' attributions for studying in PTE may impact upon their subsequent decision to enter and stay in the field (Chien, 1998). Furthermore, individuals must possess adequate occupational knowledge to assess how compatible they will be with potential occupations and use this information in their occupational decision-making processes (Gottfredson, 2002; Grotevant & Durrett, 1980; Wise, et al., 1985). Thus, the

study focuses on PTE students and explores the influence of attributions for PTE studying and occupational knowledge on the initial teaching commitment. Four specific objectives are investigated:

(1)To identify the pattern of PTE students' attributions for studying in PTE;

(2)To explore the level of PTE students' occupational knowledge required for preschool teaching;

(3)To assess the degree of initial teaching commitment among PTE students; and

(4)To examine the extent to which attributions for studying in PTE and occupational knowledge can predict initial teaching commitment.

## 2. Literature Review

### *2.1 Preschool teacher education and the preschool teaching profession in Taiwan*

In Taiwan, PTE programs are mainly offered by the 17 PTE centers of universities (Ministry of Education, 2009). To provide standardized PTE across the country, the PTE curriculum for all programs was established by the Ministry of Education (MOE). After passing the special exams held by PTE centers of universities, the undergraduates (except freshmen) and graduate students are allowed to study PTE programs. In addition to their major study, students studying in PTE must complete 26-credit courses with a six-month internship in a preschool. After completing their major study and the PTE program, PTE students should pass the national professional examination to get the certificates as qualified preschool teachers (MOE, 2006).

In Taiwan, 66% of preschool education institutions are privately founded, and private preschool teachers average 10.5 hours' work a day with heavy workload. In addition to the usual nursery and educational activities, most of private preschool teachers are obliged to work in student recruitment and retention, building maintenance, student transportation, and extra-curricular activities. On average, beginning preschool teachers with bachelor's degrees receive only NT$ 20,000 (about US$571) per month, which is close to Taiwan's least statutory monthly wage, NT$18,540 (about US$530). Poor wages and fringe benefits make preschool teaching a less economically secure occupation. Additionally, advanced positions at most preschools are so scarce that opportunities for promotion for preschool teachers are few (MOE, 2010; Wang & Shen, 2008).In the recent years, more students choose to study the PTE program while a disproportionately high number of PTE students do not begin or remain in preschool teaching. In 2004-2007, the turnover rate of preschool teachers was 37.4% as high as the rate of elementary school teachers (MOE, 2008).

### *2.2 Attributions for studying in PTE*

The term "attribution" refers to how individuals explain, justify, and excuse causes of events and behavior. Attributing a cause or set of causes to an event or behavior affects the way individuals understand and manage events in their environment (Kelly, 1992). Attributions are classified based on three underlying causal dimensions in Weiner's model: locus of causality, stability, and controllability (Weiner, 1985). Moreover, adding to the four main reasons that people like to give for their task outcomes (i.e., ability, effort, task difficulty, and luck) (Weiner, 1985), recent research cites such factors as intrinsic motivation, interest, needs, and mood (Chedzoy & Burden, 2007; Williams et al., 2004). Thus, the analysis of attributions serves the function of bringing self-relevant behavior into focus (Cortés-Suáres & Sandiford, 2008).

The study applied the locus of causality dimension (internal or external) of attribution theory as the lens through which to examine how PTE students explain the reasons why they have chosen to study in PTE and their impact on future professional commitment. Drawing on the studies (Maringe, 2006; Shanka, Quintal, & Taylor, 2005), attributions for studying in PTE were as follows: *others' suggestions*, *employment prospects of PTE graduates*, and *personal factors*. According to the locus of causality of attribution theory, the former two fall within the external dimension, while the latter falls within the internal one. Attributing the choice to external causes shows self-serving or responsibility-shirking tendencies, while doing otherwise shows the tendency to take responsibility (Cortés-Suáres & Sandiford, 2008; Zhou, 2006; Weiner, 1985).

### *2.3 Occupational knowledge*

Occupational knowledge, which is an individual's cognitive understanding of the special knowledge and skills required for a particular occupation, is one component of occupational development (Wise et al., 1976).The acquisition and possession of occupational knowledge are crucial to the occupational preparation of teachers, whose future success depends much on their developing the empirical and theoretical components of relevant occupational knowledge (Winch, 2004). Occupational knowledge can allow individuals to determine whether his/her career choices will be appropriately suited to his/her vocational interests, personality characteristics, and career development (Grotevant & Durrett, 1980). Individuals have been found to limit their occupational choices by selectively eliminating various possible occupations

based on inadequate or incorrect information, and it then becomes the reason for rejecting an occupation (Brown, 2002). In the framework of career awareness, Wise (1976) argues that increased knowledge about one specific occupation could directly affect a person's preference for that occupation, the value that he/she places on that occupation, and his/her concept of it, which are essential parts of his/her commitment to that occupation. Hence, theories of occupational choice generally view occupational knowledge as the variable significantly contributing to mature work commitments (Gottfredson, 2002; Taylor, 1985). However, the way how occupational knowledge affects individuals' professional commitments has not received much attention in teachers' career development research.

### *2.4 Teaching commitment*

Commitment is an exchange and accrual phenomenon dependent on the employee's perception of the ratio of inducements to contributions and the accumulations of side-bets in the employment system (Becker, 1960). Work commitment is of various types and therefore are conceptualized and operationalized in various ways by researchers (Chan, Lau, Nie, Lim, & Hogan, 2008). The purpose of this study was to explore PTE students' initial commitment to preschool teaching. Therefore, it focused on professional commitment, which as a form of work commitment includes the belief and acceptance of the goals and values of the profession, a willingness to invest considerable effort on behalf of the profession, and a desire to remain a member of the profession (Aranya, Pollock, & Amernic, 1981; Morrow & Goetz, 1988). Thus, in this study initial teaching commitment is defined as PTE students' degree of identification with preschool teaching, willingness to exert effort in the field, and desire to enter and remain in preschool teaching.

Teaching commitment remains a complex phenomenon. For PTE students, making the initial commitment to preschool teaching is a momentous career choice, as is choosing to study in PTE. Additionally, the practical and psychological career choices and development problems are faced by PTE students (MOE, 2009). With this in mind, in this study, it was important to explore not only the PTE students' attributions for studying in PTE, their level of occupational knowledge as required for preschool teaching, and their initial teaching commitment but also the effect of the former two variables on the latter one. This could provide additional insight into PTE students' initial teaching commitment and help us to ascertain their importance and the application of this information in PTE.

## 3. Method

For the purposes of the study, the study utilized a mixed-methods design which used both the quantitative and qualitative approaches. The researcher used the two approaches to gather a more complete picture of the research problems in a way that has complementary strengths (Creswell, 2003). According to Creswell's (2003) classification, the current study can be identified as a 'quantitative dominant concurrent triangulation strategy.' That means that the researcher implements the quantitative survey and qualitative interview in one phase of the research and with greater weight given to the quantitative approach. This study employed the mixed-methods under the two key rationales. The first rationale was 'complementary'. Mixed methods can be utilized to seek elaboration, enhancement, or clarification of the research (Greene, Caracelli, & Graham, 1989). The current research used quantitative surveys to get an overview of the participants' certain knowledge and career choices in relations to the preschool teaching. The qualitative interviews followed to illustrate and elaborate the knowledge and career choices in detail. The secondary rationale was for 'comprehensiveness'. As Creswell (2003) explained, two types of data can provide more comprehensive evidence for the research problems than either quantitative surveys or qualitative interviews alone.

### *3.1 Participants*

A stratified cluster sampling method was used for distributing the questionnaire surveys. Anonymous questionnaires were distributed to 1505 students in 12 selected PTE centers of universities, and 92% (N=1463) of the questionnaires were returned and usable. Of the respondents, nearly all (99.2%) were female. This proportion is similar to the nationwide percentage of women and men in PTE at universities in Taiwan. The ages of the participants ranged from 19 to 35. More than four-fifths (82.3%) of the participants had been short-term interns at preschools. For the in-depth interviews, eight interviewees were purposefully sampled from the questionnaire respondents, who demographically reflected the overall survey questionnaire sample.

### *3.2 Measures*

In the questionnaire survey, a questionnaire was constructed that was mostly based on existing scales and related literature. To ensure validity, all scales were examined by experts, after which a pilot study with 250 respondents was conducted. Based on that, several changes were made.

**Attributions for studying in PTE** in this context were defined as the extent to which each of three factors influenced these PTE students to study in PTE. A self-developed scale with 14 items was used ($\alpha$=0.85), and the participants responded using a 5-point Likert scale (1=strongly disagree to 5=strongly agree).Based on the theoretical and practical

classification, principal component analysis revealed three factors via Direct Oblimin rotation. The first component (four items) represented *others' suggestions* (α=0.82), assessing participants' perceptions regarding the extent to which the suggestions of others caused them to study in PTE. The second component (five items) was labelled *employment prospects of PTE graduates* (α=0.83), measuring the extent to which participants estimated their employment prospects of being preschool teachers, including factors such as income, promotion, fringe benefits, and insurance, motivated them to study in PTE. The third component (five items) was made up of *personal factors* (α=0.73), assessing the extent to which participants estimated personal factors, such as their preferences, personality characteristics, and career plans, caused them to study in PTE. According to the locus of causality concept of attribution theory, higher scores for personal factors reflect a more internal attributional style, whereas higher scores for others' suggestions or employment prospects reflect a more external one.

**Occupational knowledge** is defined as the extent to which individuals possess the correct professional knowledge required for preschool teaching. A 35-item yes-no type scale (α=.88) with five dimensions based on the theoretical and practical classification was used in this study. The five dimensions were as follows: (1) *occupational characteristics* (fourteen items) (α=.84); (2) *occupational competencies* (eight items) (α=.85); (3) *occupational qualifications* (six items) (α=.91); (4) *occupational ethics* (three items) (α=.90); and (5) *occupational fringe benefits* (four items) (α=.92). The participants were instructed to evaluate whether each statement was true or false according to their knowledge of preschool teaching. Participants' scores were determined by summing the number of correct items (1=correct; 0=incorrect).

**Initial teaching commitment** is defined as participants' degree of initial commitment to preschool teaching as their future occupation. A self-developed 25-item scale (α=.0.92) was used, and the responses were provided using a 5-point Likert scale (1=strongly disagree to 5=strongly agree). Based on the theoretical and practical classification, principal component analysis revealed three factors via Direct Oblimin rotation: (1) *job identification*: identification with the values and goals of preschool teaching (α=0.91); (2) *job involvement*: willingness to exert an effort at preschool teaching after graduating (α=0.77); and (3) *job continuance*: a desire to enter and stay in preschool teaching after graduating (α=0.94).

Additionally, in-depth, individual, semi-structured interviews were conducted. These interviews were typically lasted between 2 and 3 hours. Although the participants were encouraged to largely direct the conversation, the use of an interview protocol helped to ensure that all participants had an opportunity to discuss the same issues.

### *3.3 Analysis*

To analyze the questionnaire survey data, descriptive statistics, a one-sample t-test, and one-way ANOVAs were used. Multiple stepwise regression analysis was employed to examine the extent to which the participants' attributions for studying in PTE and their occupational knowledge explained their initial teaching commitment. After each interview with the participant, the tape recordings of the interviews were transcribed verbatim, at which point content analysis was performed. The primary data were doubled-checked. Once the coding was complete, the data were categorized, compared, and extracted to locate common patterns and emerging themes.

## 4. Results

### *4.1 Attributions for studying in PTE*

To explore the pattern of PTE students' attributions for studying in PTE, descriptive statistics and one-way ANOVA were used, the results of which are shown in Tables 1 and 2. The data indicates that these participants regarded "personal factors" (M=3.610) as the most important determinant of their studying, with "others' suggestions" (M=3.132) and "employment prospects of PTE graduates" (M=2.548) ($F$ (4385, 1463) =1262.440; $p$<.001) as the second and least important determinants, respectively.

Regarding the attributions for studying, most of these interviewed expressed that their studying in PTE stemmed primarily from personal factors, including individual preferences for working with young children and personality characteristics (which they felt made them suitable for being preschool teachers), and passion for preschool teaching. One student stated, "*During my childhood, I usually took care of kids at church, and I thought I loved kids. So I decided to be a kindergarten teacher*" (A28042009) (" A28042009" means that interviewee A was interviewed on April 29, 2009).

Interviewees viewed others' suggestions and employment prospects of PTE graduates as the causes with little influence on their studying in PTE. When choosing to study in PTE, mot of them thought that wages and fringe benefits of preschool teaching were acceptable although they were not so good. Additionally, as one student said, "*In fact, at that time, my family hoped that I would not study in PTE, but finally I chose what I wanted*" (H31042009).

The statistics and interview findings both suggest that the greatest factor causing students to study in PTE were personal factors; others' suggestions and employment prospects were the causes with less powerful effects. According to attribution theory, in the locus of causality dimension, in this study, most of PTE students seemed to attribute their studying in PTE in the direction of internality.

<Tables 1 & 2 about here>

*4.2 Occupational knowledge*

The PTE students' level of occupational knowledge was examined using descriptive statistics, a one-sample t-test and one-way ANOVA; the results are shown in Tables 3 and 4. It was found that these questionnaire survey participants had most of the occupational knowledge required for preschool teaching (M=.875; compared to 1; $t$ (1456, 1457) =-40.602, $p$(two-tailed) <.001). They possessed the greatest amount of professional knowledge about the occupational competencies (M=.978) and ethics (M=.982), but they understood fringe benefits (M=.631) the least ($F$(4667.703,1453) =1416.801; $p$<.001).

<Table 3 & 4 about here>

Based on the interviewees' expressions, it is apparent that PTE students possessed basic but not complete occupational knowledge about preschool teaching, consistent with the questionnaire survey results. Of the five dimensions of professional knowledge, occupational competencies and occupational ethics were the best understood, while occupational qualifications and occupational fringe benefits were the least understood.

Most of the interviewed expressed that knowledge about occupational competencies and ethics "*were the most essential and basic for preschool teacher education students to possess*" (C17042009). However, it was surprising that although the interviewees expressed that they had enough information about the occupational qualifications required for preschool teaching, all displayed very limited and even incorrect knowledge about the dimension. Furthermore, the interviewees offered only vague information about or admitted that they had no knowledge of occupational fringe benefits because "university teachers usually spoke of theories and seldom discussed practices with us. When we were doing our internships at preschools, the preschool teachers didn't reveal such information, either," one interviewed explained (H31042009). Additionally, these interviewed highlighted that their professional knowledge about preschool teaching came primarily from hands-on internship experiences. As one student described, "*The university curriculum isn't sufficient, and there's a significant gap between theory and practice. However, I can achieve a clear and authentic understanding of the profession through internships at preschools*" (F27042009).

The statistical and interview findings suggest that PTE students had substantial but incomplete professional knowledge of preschool teaching. Of the five dimensions, the ones that seemed to be the best understood were the knowledge of occupational competencies and ethics, while professional knowledge about occupational qualifications and fringe benefits were the most limited. The interview findings also indicated that PTE students' occupational knowledge mainly originated from internship experiences in preschools.

*4.3 Initial teaching commitment*

The degree of PTE students' initial commitment to preschool teaching was assessed using a one-sample t-test and one-way ANOVA; the results are shown in Tables 5 and 6. It was found that students generally displayed moderately positive initial teaching commitment (M=3.484, compared to 3, $t$(1461, 1462)=35.361, p(two-tailed)=.000). Of the three dimensions, as seen in Table 6, the degree of students' job involvement was higher (M=3.961) than their degree of job identification (M=3.610), and their degree of job continuance was the lowest (M=3.117) ($F$ (4325.892, 1451)=1366.021; $p$<.001). However, even though the level of job continuance was the lowest, it was still moderately positive.

<Tables 5 & 6 about here>

The interview results showed that, generally, the degree of interviewees' initial teaching commitment was moderately intense. Of the interviewees, five students possessed a stronger initial teaching commitment, whereas three expressed weaker commitment. Specifically, these interviewed expressed a higher degree of job involvement and job identification but a lower degree of job continuance in the preschool teaching.

Regarding job involvement, regardless of their degree of job continuance, all of the interviewees stated that if they were working as preschool teachers in the future, they would be willing to make an effort at preschool teaching, including attending advanced training, communicating with parents, preparing for teaching, and participating in all preschool activities. This was driven by their personal intense preferences for preschool education and strong sense of responsibility for their decisions. "*If I make up my mind to work as a preschool teacher in the future, I'll make an effort to do the job well. I must be responsible for myself and my decision*," one student expressed with certainty

(G26042009).Regarding job identification, these interviewed all expressed a great deal of pride in and strong ownership of preschool teaching because they regarded it as "*a crucial and meaningful profession both for themselves and for the society*" (C17042009). Thus, all were proud of studying in PTE. Additionally, these interviewed were grouped based on their degree of job continuance. The first group was willing to begin and persist in preschool teaching because of inherent personal factors their educational preparation and the investment that they made in PTE. "*I'll enter and stay in the field. If I don't, what I did to prepare for and what I invested in PTE will be a waste*," a student expressed (B22042009). The second group intended to be preschool teachers initially due to their personal preference for preschool teaching, but they were not sure if they would continue throughout their lives because of its poor employment prospects.

Overall, the above statistical and interview findings suggest that the PTE students demonstrated moderately strong initial commitment to preschool teaching. They had a higher level of job involvement and identification but a lower level of job continuance.

*4.4 The effects of attributions for studying in PTE and occupational knowledge on initial teaching commitment*

Multiple regression analysis was conducted to examine how well attributions for studying in PTE and occupational knowledge could predict PTE students' initial teaching commitment. A stepwise approach was selected because this study aimed to develop a comprehensive picture of the explanatory priority of the different factors in the context of PTE.

The assumptions of the regression model were checked. Because the zero-order correlations coefficients among the independent variables were all less than 0.34, the Variance Inflation Factor (VIF) values ranged between 1.157 and 1.420, and tolerance statistics ranged between 0.704 and 0.864, there was no evidence to suggest that the data suffered from multicollinearity. That is to say, there was no strong correlation between two or more predictors in the regression model. The Durbin-Watson statistic was also between 1 and 3 (1.940), implying that errors in the regression were independent (Tabachnick & Fidell, 1996). Standardized residuals were examined to detect the presence of outliers. Four cases were determined to have standardized residuals between 3.003 and 3.781. Because none of those four cases had a Cook's distance (a measure of the overall influence of a case on the model) greater than 1 and the sample size was large, none of them had undue influence on the regression model (Field, 2005). The assumptions of normality, linearity, and homoscedasticity were checked by considering standardized residual scatter plots to examine whether the residuals were normally distributed around the predicted initial teaching commitment scores. It was discovered that the residuals had a linear relationship with the predicted initial teaching commitment scores. All assumptions were therefore met (Tabachnick & Fidell, 1996).

The multiple stepwise regression analysis reported in Table 7 showed that the linear combination of the attributions for studying in PTE and the occupational knowledge was significantly related to the initial teaching commitment ($R^2$=.486; adjusted $R^2$=.484 ; $F(5,1451)=273.455$; $p<.001$). The multiple regression correlation coefficient of Model V between predictors and initial teaching commitment was 0.697. The attributions for studying in PTE and their occupational knowledge accounted for 48.6% of the total variance in initial teaching commitment. The standardized regression coefficients of Model V indicated that attributing to personal factors, others' suggestions, and employment prospects of PTE graduates, as well as professional knowledge about occupational competencies and occupational qualifications, had statistically significant effects on initial teaching commitment. Of these significant predictors, the standardized $\beta$ values suggested that attributing studying in PTE to personal factors, as well as professional knowledge about occupational competencies and qualifications, had a positive influence; attributing studying in PTE to employment prospects of PTE graduates and others' suggestions had a negative effect. The absolute t-values indicated that attributing for studying in PTE to personal factors was the most substantial predictor.

Most of the interviewees also clearly expressed the significantly positive connection between attributing their studying in PTE to personal factors and initial teaching commitment. "*Given that I decided to studying in preschool teacher education because of my strong inherent preference for interacting with kids, preschool teaching certainly appealed to me*," one student said (A28042009). Additionally, most of these interviewed also acknowledged that the more occupational knowledge they possessed, the more importance of preschool education they realized and the more they liked the field. These, in turn made them identify with the preschool teaching profession more and more confident about becoming involved in the profession in the future.

Both the statistics and the interview results suggest that PTE students' attributions for studying in PTE and occupational knowledge were significant predictors of their initial preschool teaching commitment. Of these significant variables, attributing studying in PTE to personal factors was the most critical determinant.

<Table 7 about here>

## 5. Discussion

### *5.1 Attributions for studying in PTE*

It was found that PTE students tended to predominantly attribute their studying in PTE to personal factors, and viewed employment prospects of PTE graduates and others' suggestions as the causes with little influences. That is, most of PTE students in the study tended to attribute their studying in PTE in the internal direction. Although most of these interviewed were well informed about the poor employment prospects in preschool teaching when they made their studying choice, they still insisted on studying in it because the intrinsic interest in and passions for preschool education fueled their desire to make the decision. This prioritization is reflected clearly in Super's (1957) self-concept theory, which posits that people choose careers that enable them to actualize their interests as reflected in their self-concept. This is also consistent with recent studies suggesting that besides considering ability, effort, task difficulty, and luck, people tend to attribute their behaviors to intrinsic factors, such as personal preferences and needs (Chedzoy & Burden 2007; Williams, Burden, Poulet, & Maun, 2004). However, this finding is not consistent with the results of Maringe's study (2006) which indicates that occupational opportunities associated with higher education exert the greatest influence on the subjects that students in England choose to study at university.

### *5.2 Occupational knowledge*

Overall, the participants in this study only possessed the most basic occupational knowledge of preschool teaching; their knowledge level was certainly not sufficient. A possible explanation for this is that because over three-quarters of them were not final-year school leavers who were facing the upcoming of graduation, it was not yet urgent for them to derive complete occupationally relevant information to apply to their upcoming work in the field (Gottfredson, 2002). Additionally, limited sources of occupational knowledge also may prevent them from acquiring comprehensive professional information.

Possessing professional knowledge about occupational qualifications is the first essential step toward beginning to enter a specific occupation. However, it is worth noting that although all of the interviewees expressed that they had sufficient knowledge of the occupational qualifications for preschool teaching, most of their information was incorrect. This indicates that there was a significant gap between students' self-recognition and the reality. Regarding the limited knowledge about occupational fringe benefits, according to the interviewees' descriptions, the main explanation was they rarely gained access to such information in the universities or in internship fields. Nevertheless, occupational fringe benefits are an important part of the employment prospects associated with graduates' career choices, and thus, PTE centers must provide sufficient related information for the students to make the proper career choices.

Additionally, the interviewees highlighted that their occupational knowledge as required for preschool teaching mainly originated from hands-on internship experience in preschools. This finding is in line with the study suggesting that pre-service teachers usually maintain that internship is the most important element of teacher preparation because it provides exploratory insight into the occupation, allow one to develop and sharpen work-related skills and knowledge (Brown, 2007; Rots et al. 2007).

### *5.3 Initial teaching commitment*

This study found that PTE students generally exhibited a moderately strong initial commitment to preschool teaching. Of the three dimensions of initial teaching commitment, the participants' level of job continuance was lower than their level of job identification and their level of job involvement. In the interviews, there were two types of job continuance described: entering the profession and staying for life, entering the profession after graduation but not sure whether to stay or not. Students' strong job continuance as associated with the first type stemmed from personal factors and the investment that they had made in PTE. The findings confirm that personal factors are crucial to teacher education students' entrance into the teaching profession (Huasman & Goldring 2001), and that the more an individual invests in his/her occupation, the more he/she desires to continue working in the field, as Becker's (1960) side-bets theory argues. Additionally, the poor employment prospects of preschool teaching lowered their level of job continuance associated with the second type. However, the results reveal that employment prospects of PTE graduates were the least powerful attribution of students' studying in PTE, despite the fact that they were well informed about them. It is apparent that the students in this study might possess more anticipatory aspirations that influenced their studying in PTE, but they might possess more experiential occupational aspirations that inspired them to make different occupational decisions after studying in PTE for a few years. The transition was the compromise process in which some PTE students apparently adjusted their aspirations to accommodate the external reality (Gottfredson, 2002).

*5.4 The effects of attributions for studying in PTE and occupational knowledge on initial teaching commitment*

The statistical analysis indicates that PTE students' attributions for studying in PTE and their occupational knowledge as required for preschool teaching had an impressive effect on their initial teaching commitment. Of significant predictors of initial teaching commitment, attributing studying in PTE to personal factors was the most substantial. Additionally, these who attributed their studying in PTE more to personal factors and who possessed a higher level of professional knowledge about occupational competencies or qualifications were more likely to demonstrate a higher degree of initial teaching commitment in the future; these who attributed their studying in PTE more to employment prospects of PTE graduates or others' suggestions tended to display a lower degree of initial teaching commitment in the future.

The statistical results of the study suggest that attributing studying in PTE to personal factors (the internal attributional style) had a significant positive effect; attributing studying in PTE to employment prospects of PTE graduates and others' suggestions (the external attributional style) had small negative effects. Although the negative effects of the latter two variables on initial teaching commitment were small, they were still significant. These statistical findings seem to largely confirm the above interview results regarding initial teaching commitment: PTE students displayed a moderately strong level of initial teaching commitment mainly due to personal factors, including their preference for preschool education, a strong sense of individual responsibility, and a sense of preschool education's great value for them personally and the society; however, the poor employment prospects of preschool teaching seemed to make them less committed to the field.

Additionally, these statistical and interview findings appear to confirm the locus of causality element of attribution theory, in which those who attribute their behavior to internal causes show a tendency to take responsibility, whereas those who do otherwise indicate a self-serving or responsibility-shirking tendency (Zhou, 2006). That is, the PTE students in this study who attributed their studying more to personal factors might see themselves as more responsible for their earlier choices, which in turn may make them more committed to preschool teaching. On the other hand, external causes can be seen as out of one's control. Perhaps, for this reason, students who attributed their studying in PTE more to external factors tended not to see themselves as responsible for their earlier studying choices, which in turn led them to be less committed to preschool teaching in the future. With this in mind, the attribution retraining models suggested in the literature (Wilson, Damian, & Shelton, 2002) could be incorporated into intervention strategies in the context of career counseling for PTE students. These students who tend toward external attribution may be trained to redirect their attribution process so that they feel responsible for their career choice.

Attributing studying in PTE to personal factors (including personal preferences and personality characteristics) was the most important predictor of initial teaching commitment. This finding confirms that for prospective teachers, internal motivation for maintaining a commitment to professional teaching is still substantial (Hong, 2010; Aksu, Demir, Dalloglu, Yildrim, & Kiraz, 2010; Rots et al. 2007).

Additionally, this study found that PTE students with greater professional knowledge about occupational competencies or qualifications tended to be more committed to preschool teaching in the future. The result would seem that even beyond professional knowledge about occupational fringe benefits, characteristics, and ethics, professional knowledge about occupational competencies and qualifications is the critical prerequisite for committing oneself to preschool teaching. The finding also partially confirms that increased knowledge about a specific occupation could directly affect students' preference for and the value placed on the occupation, which involve commitment to the occupation (Wise et al., 1976). Therefore, initial commitment to preschool teaching as a profession can be developed and nurtured by building professional knowledge about occupational competencies and qualifications in PTE programs (Otis-Wilborn et al. 1988).

## 6. Conclusions and Implications

The study attempts to explore the influence of attributions for PTE studying and occupational knowledge on the PET students' initial teaching commitment. The findings indicate that PTE students tended to predominantly attribute their PTE studying to personal factors in the internal attributional style. The results also suggest that PTE students had substantial but incomplete occupational knowledge with the limited knowledge of occupational qualification and fringe benefits. With this in mind, it suggests that PTE centers must encourage the students to do their best to acquire more occupational knowledge, especially knowledge of occupational qualification and fringe benefits through all professional sources, such as reading professional books and journals, taking extra courses, and attending professional speeches and conferences.

The study found that the PTE students of the study the study generally demonstrated moderately strong level of initial teaching commitment, and that the individuals' degree of job continuance was much lower than their degree of job

identification and job involvement. Hence, it is worth noting that although initial teaching commitment in this study consisted of three dimensions, the weight of each dimension must obviously be different. To achieve a more authentic understanding of PTE students' initial teaching commitment, future research should carefully examine each dimension and its weight.

The findings indicate that the PTE students' attributions for studying in PTE and occupational knowledge had significant influence on their initial teaching commitment, and PTE studying attributions to personal factors was the most powerful predictor. The PTE students with more studying attributions to personal factors and more professional knowledge about occupational competency and occupational qualifications tended to display stronger initial teaching commitment. However, it is notable that the PTE students in this study had limited professional knowledge about occupational qualifications required for preschool teaching, and this may have a negative effect on their initial teaching commitment. In addition, it was also found that internships at preschools were the primary source of professional knowledge. Hence, professors in PTE centers should make good use of and properly arrange fieldwork to equip PTE students with sufficient and correct professional knowledge about occupational competencies and qualifications as required for preschool teaching.

In this study, professional knowledge about occupational fringe benefits did not have a statistically significant effect on initial preschool teaching commitment. However, the interview results indicate that the poor employment prospects of preschool teaching had a negative effect on PTE students' planned job continuance. Additionally, as mentioned earlier, students had the most limited knowledge about occupational fringe benefits. Therefore, based on these results, further research should carefully examine the true relationship between professional knowledge about occupational fringe benefits and initial commitment to preschool teaching.

Finally, attributions for studying in PTE and occupational knowledge accounted for 48.6% of the variance in the PTE students' initial teaching commitment. In other words, half of the variation remains unexplained. Thus, further conceptual and empirical efforts should focus on identifying the additional variables related to initial teaching commitment among prospective preschool teachers. In addition, future research may examine if professional knowledge plays a mediating role in the relationship between attributions for an individual's studying in PTE and her/his level of initial teaching commitment (attributions for studying in PTE→professional knowledge→initial teaching commitment).

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Table 1. Means and Standard Deviations of Attributions for Studying in PTE (N=1463)

| Dimension | M | SD |
|---|---|---|
| **Attributions for studying in PTE** | | |
| Others' suggestions | 3.132 | 0.271 |
| Employment prospects of PTE graduates | 2.548 | 0.292 |
| Personal factors | 3.610 | 0.285 |

Table 2. Dependent-sample One-way ANOVA of Attributions for Studying in PTE (N=1463)

| Source | *SS* | *df* | *MS* | *F* | Post hoc comparison |
|---|---|---|---|---|---|
| Between subjects | 1514.394 | 1461 | 1.037 | | 1>2; 3>1; 3>2 |
| Within subjects | 1786.07 | 2924 | | | |
| Effect | 827.926 | 2 | 413.963 | 1262.440*** | 1-others' suggestions |
| Residual | 958.144 | 2922 | 0.328 | | 2-employment prospects of PTE graduates |
| Total | 3300.464 | 4385 | | | 3- personal factors |

*** $p$ <.001.

Table 3. Means and Standard Deviations of Occupational Knowledge (N=1453)

| Dimension | *M* | *SD* |
|---|---|---|
| **Occupational knowledge** | 0.875 | 0.118 |
| Occupational characteristics | 0.909 | 0.134 |
| Occupational qualifications | 0.771 | 0.206 |
| Occupational competencies | 0.978 | 0.109 |
| Occupational fringe benefits | 0.631 | 0.287 |
| Occupational ethics | 0.982 | 0.119 |

Table 4. Dependent-sample One-way ANOVA Analysis of Occupational Knowledge (N=1453)

| Source | *SS* | *df* | *MS* | *F* | Post hoc comparison |
|---|---|---|---|---|---|
| Between subjects | 108.990 | 1452 | 0.075 | | 1>2; 1>4; 2>4; 3>1; 3>2; 3>4; 5>1; 5>2; 5>4 |
| Within subjects | 268.591 | 3215.703 | | | |
| Effect | 132.648 | 2.213 | 59.936 | 1416.801*** | 1- occupational characteristics |
| Residual | 135.943 | 3213.490 | 0.042 | | 2- occupational qualifications |
| Total | 377.581 | 4667.703 | | | 3- occupational competencies |

*** $p$ <.001.

Table 5. Means and Standard Deviations of Initial Teaching Commitment (N=1451)

| Dimension | *M* | *SD* |
|---|---|---|
| **Initial teaching commitment** | 3.484 | 0.233 |
| Job identification | 3.610 | 0.213 |
| Job continuance | 3.117 | 0.210 |
| Job involvement | 3.961 | 0.287 |

Table 6. Dependent-sample One-way ANOVA Analysis of Initial Teaching Commitment (N=1451)

| SV | *SS* | *Df* | *MS* | *F* | Post hoc comparison |
|---|---|---|---|---|---|
| Between subjects | 1226.898 | 1460 | 0.840 | | 1>2; 3>1; 3>2 |
| Within subjects | 1087.072 | 2865.892 | | | |
| Effect | 525.461 | 1.962 | 267.874 | 1366.021*** | 1-job identification |
| Residual | 561.611 | 2863.930 | 0.196 | | 2-job continuance |
| Total | 2313.970 | 4325.892 | | | 3-job involvement |

*** $p$ <.001.


ISSN 1925-0746 E-ISSN 1925-0754

Table 7. Multiple Stepwise Regression Coefficients for the Effects of Attributions for Studying in PTE, and Occupational Knowledge on Initial Teaching Commitment (N=1451)

| Predictors | Initial teaching commitment | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Model I | | Model II | | Model III | | Model IV | | Model V | |
| | $\beta$ | $t$ | $\beta$ | $T$ | $\beta$ | $t$ | $\beta$ | $t$ | $\beta$ | $t$ |
| Personal Factors | 0.688 | 36.093*** | 0.681 | 35.731*** | 0.684 | 35.855*** | 0.664 | 31.903*** | 0.677 | 31.789*** |
| Occupational Competencies | | | 0.076 | 3.968*** | 0.093 | 4.572*** | 0.098 | 4.828*** | 0.098 | 4.824*** |
| Occupational Qualifications | | | | | -0.049 | -2.436* | 0.053 | 2.627** | 0.051 | 2.521* |
| Employment Prospects Of PTE Graduates | | | | | | | -0.051 | -2.476* | -0.076 | -3.371** |
| Others' Suggestions | | | | | | | | | -0.062 | -2.795** |
| Multiple $R$ | 0.688 | | 0.692 | | 0.694 | | 0.695 | | 0.697 | |
| $R^2$ | 0.473 | | 0.479 | | 0.481 | | 0.483 | | 0.486 | |
| Adjusted $R^2$ | 0.473 | | 0.478 | | 0.480 | | 0.482 | | 0.484 | |
| $R^2$ change | 0.473 | | 0.006 | | 0.002 | | 0.002 | | 0.002 | |

*$p$<05. **$p$<.01. ***$p$<001