



What Are the Academic Emotions of Intern Pre-teachers?

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Abstract. Pekrun, Goetz, and Titz (2002) believed that emotions generated during learning are academic emotions. Intern pre-teachers are positioned between students and teachers. Learning environments for interns are different from classrooms. This study summarized positive and negative emotions from intern diaries and weekly diaries of 25 intern pre-teachers using content analysis. Then the data from another 47 intern pre-teachers were used for verification. The results show that intern pre-teachers had 8 positive academic emotions, including happiness, delight, joy, surprise, relief, pride, hopefulness, and gratefulness, and 6 negative ones, including anger, harassment, worry, nervousness, fear, and anxiety. The main source of positive academic emotions was "children counseling", while that of negative academic emotions was their "insufficient professional abilities".

Key words: Intern Pre-teacher, Academic Emotion

1. INTRODUCTION

Emotions allow people to show themselves in a unique way and enrich communications between people. Hyson (2004) described emotions as a color pen, and that by wielding the pen, childhoods are painted with wonderful colors. Heck and Williams (1999) once pointed out that teaching is a profession in which people can easily become exhausted emotionally. Teachers devote themselves and put in continuous efforts in terms of emotions and knowledge during interactions with students. Therefore, teachers' jobs are emotionally labor intensive.

Studies have pointed out that an internship is a transition period. Some interns feel frustrated and doubt themselves for they have little control over situations and nothing is what they expect. During this transition period, they are anxious, scared, and lonely and can sometimes be filled with negative emotions (Chen, 2004; Tsai, 2004; Epstein & Dygdon, 2006). However, the findings of studies by Wang (1998) and Lin & Tsai (1997) were different. They observed that pre-teachers' viewpoints on preschool education changed during their internships. They can enjoy their jobs as pre-teachers and feel a sense of achievement. Although these studies did not mention what factors changed these teachers, at least we can understand that an internship period is not necessarily a purely negative experience. During an internship period, there are still emotions such as joy and happiness. For example, children's naïve and cute talk may lead to positive emotions such as merriment. Research has been focussed on the training pre-teachers for years. After internships, some students begin to fear for their future jobs as pre-teachers and want to try other jobs. However, some are more determined to devote themselves in preschool education. Are the emotions experienced during internships the cause of

pre-teachers' changes in attitudes toward their future preschool jobs? This issue should be discussed.

Emotions are defined roughly as individuals' feelings caused by some stimulation (Chiang, 2004a; Chang, 2004; Barrett, Mesquita, Ochsner & Gross, 2007). According to several recent studies (Gonul Sakiz, 2007; Pekrun, Goetz, & Titz, 2002; Pekrun, 2005; Pekrun, Markus & Andrew, 2006; Turner, Meyer, Midgley, & Patrick, 2003; Wentzel, 2003), emotions play an important role in learning for they can influence students' interest in learning and learning achievement. Goetz, Pekrun, Hall, and Haag et al. (2006) believed that students' emotions are related to their sense of happiness. The influence of emotions on learning and achievement is an important issue.

Emotions in learning are field-specific, which means that learning different subjects leads to different emotions (Pekrun et al. ,2002; Rubie-Davies, 2006; Västfjäll, Gärling & Kleiner, 2004). I believe that although intern pre-teachers are teachers working in an intern capacity , they are still in a way students. In their internships, they have to deal with different people, affairs, and things. Their learning environments are different from classrooms. Of course emotions they may experience are different. This type of learning process is an emotional experience. Pekrun et al. (2002) believed that these experiences are academic emotions. What is the relationship between emotions and learning? This issue is discussed below in the following section.

1.1 Emotions and Learning

From a psychological perspective, emotions are a set of complex interactions

between subjective and objective factors and are adjusted by the nervous system and hormone systems (Lindquist, Barrett, Bliss-Moreau, & Russell, 2006; Scherer, 2005). Functions of emotions include (1) causing experiences of affections such as being alert, merry, or unhappy, (2) creating cognition processes such as affection-related perception and evaluation and classification works, (3) activating general physiological adaptation into an alert state, and (4) leading to behaviors that are usually expressive and goal-oriented, as well as adaptation behaviors.

For a long time psychologists have put a lot of emphasis on emotions as a research subject, including the relationship between explicit behaviors and tacit cognition. However, Pekrun and Frese (2002) analyzed studies from PsycINFO from 1974~2000 regarding emotions and found that, other than studies on anxious emotions, there have not been many studies about learning-related emotions. Thus Pekrun further studied the relationship between learning and emotions. In 2002, Pekrun, Goetz, and Titz performed qualitative interviews with high school students to find out their emotional feelings during learning. After analyzing the interview data, it was found that students experienced a rich variety of emotions in an academic situation, not just “anxiety”. There were 9 other emotions, including joy, hopefulness, pride, relief, anger, boredom, hopelessness, and shame.

In sum, emotions are closely related to learning. In a learning process, a learner may experience various emotions. The role of intern pre-teachers is between teachers and students. For college students, positioning themselves is not an easy thing to do. In addition, an internship period is a kind of “survival period” in a teacher's career, for interns have to try everything they can to deal with teaching and class management difficulties other than adaptation issues (Tsai, 2004; Larson

and Anne, 2005).

1.2 Contents of Academic Emotions

As for the categorization of emotions, according to recent studies (Pekrun et al., 2002; Russell, 2003; Russell & Barrett, 1999; Västfjäll, Gärling & Kleiner, 2004), emotions should not be simply categorized into positive and negative. Individuals' energy and mobilization regarding emotional feelings must be taken into consideration. Therefore, emotions can be categorized into activating ones and deactivating ones. Activating emotions (e.g. hopefulness or shame) provide individuals energy and mobilization, while deactivating emotions (e.g. relief or hopelessness) reduce energy and mobilization. Pekrun et al. (2002) divided emotions into four types based on valence and activation, including positive activating emotions (enjoyment, hopefulness, and pride), negative activating emotions (e.g. anger, anxiety, and shame), positive deactivating emotions (relief), and negative deactivating emotions (helplessness and boredom). As many studies have pointed out, interns are anxious and may feel helpless during the process of internship.

However, there is a question: what are intern pre-teachers' emotional experiences in preschools? So far there has been no further study regarding this issue. Internships are important in the process of students becoming teachers and are crucial for the future quality of teachers (Jiang, 2004b; Ministry of Education, 1999; Tsai, 2004). For an intern preschool teacher who has just stepped into a teaching situation, the influences of his emotional efforts and possible changes on his future career should not be ignored. Thus, the researcher expected to find out the sources of academic emotions of intern pre-teachers and possible types of academic

emotions. Other goals of this research include the development of an applicable scale and an understanding of the current status of intern pre-teachers' academic emotions.

Thus, the purposes of this study include the following:

- To explore the types of academic emotions of intern pre-teachers.
- To explore the sources of academic emotions of intern pre-teachers.

2. METHODS

2.1 Participants and Data Collection

The research subjects of this study were divided into three groups. The 25 intern pre-teachers in the first group were those who had done their internships in preschools in 2008. The 47 intern pre-teachers in the second group were those who had done their internships in preschools in 2009. The third group consisted of 3 intern pre-teachers. This study aimed to further explore types and resources of academic emotions of intern pre-teachers during their internships. The intern diaries and weekly diaries of the subjects in the first group were the basis of the text analysis. The collected texts were categorized, summarized, coded, and named. Then, the data from the second and the third groups were used for the reliability tests.

2.2 Data Analysis

Content analysis is a method of objective quantification for obvious delivered contents. In other words, it is a research method used to study and analyze contents of documents with an objective and systematic attitude using a quantification technique and qualitative analysis in order to infer the backgrounds of meanings of

those documents (Ou, 1994). In sum, content analysis is a method which focuses on both quantity and quality, using “quantity” of contents to infer their “quality”. It is also called a quasi-statistical analysis. It categorizes, codes, and names words or sentences from interview contents. Naming methods can be based on existing theories or newly developed concepts to create core categories.

2.3 Research Instrument

2.3.1 Analyzing Categories

In this study, the categories used were "types of academic emotions" and "sources of academic emotions" in order to reach research goal 1. In addition, literature review was conducted on studies related to academic emotions, including definitions and descriptions of academic emotions, in order to summarize meanings and orientations of academic emotions as the basis of sub-categories for this study. The categories and sub-categories are summarized in Table 1.

Table 1 *The analysis tools and keywords used in this study and their corresponding meanings*

Category	Sub-category	Keywords	Description
Types of academic emotion	Positive academic emotions	Joy, pride, delight, happiness, excitement, hopefulness, relief, safety, gratefulness, peace	Themes of text show that individuals feel satisfied with evaluation results of emotional stimulations
	Negative academic emotions	Rage, sorrow, anger, anxiety, tiredness, surprise, shame, disappointment, boredom	Themes of text show that individuals do not feel satisfied with evaluation results of emotional stimulations
Sources of academic emotion	Children counseling	Feedback, children's happiness, hurt, sorrow, gratefulness	Children's behaviors require guidance or interns receive responses from children
	Classroom affairs handling	Class order, in-class manners	Management of class order and effectively handling in-class situations
	Teaching work	Teaching, teaching practicum	Interns' self-evaluations or evaluations by others
	Preschool affair administration	Administration, preschool regulations	Administrative affairs or affairs that need to be executed in preschools

2.3.2 Text Content Analysis

The intern diaries of the research subjects in the first group during their internships were analyzed. There were 25 intern pre-teachers in the first group. Their internships were 7-weeks long. Every day they had to write their intern diary for that day. Every one of them had to write 35 diaries. The researcher performed emotion description analysis and subject selection based on their intern diaries. A total of 875 intern diaries were analyzed. The unit used for weekly diaries was "one

week". Weekly diaries were used to retrospect how incidents were handled during internships. A total of 175 weekly diaries were analyzed.

The process of content analysis was conducted as described below:

1) The researcher read every intern diary in detail and underlined every expression related to some emotion.

2) The emotion-related expressions were categorized into either positive or negative emotions and marked.

2.3.3 Liability and Validation Tests

In the field of social science, qualitative researchers are often asked about liability and validation issues. Patton (1990) believed that the liability and validation of a qualitative study can be obtained by allowing several researchers to review that study over and over. Thus, in order to verify the credibility, transferability, and reliability of intern pre-teachers' academic emotions, this study performed liability and validation tests in two parts: an intern peer part and a teacher peer part.

1) Verification with Intern Peers

After applying content analysis to the intern diaries and the weekly diaries, intern pre-teachers' academic emotions were summarized. The researcher summarized the emotion-related events described by the subjects from the above-mentioned data as the basis of the questions (with three options each, including agree, disagree, and no comment) for the second group members to answer. When a second group member checked the "agree" option of an item, it meant that

they agreed with the emotion-related event described by the first group members. When a second group member checked the "disagree" option of an item, it meant that they disagreed with the emotion-related event described by the first group member. When a second group member checked the "no comment" option of an item, it meant that they had no comment about the emotion-related event described by the first group members. According to the Pareto principle, 80% of results are determined by 20% of causes (Chen, 2010). It means that for many phenomena, 80% are merely a result by majority. Thus, for an emotion-related event, if 80% of the second group members checked "agree", that event was listed as an emotion of intern pre-teacher. And if less than 80% of the second group members checked "agree", that event was excluded.

2) Verification with Teacher Peers

The purpose of the reliability test of the content analysis was to find out if, when the research analyzed categories, contents could be categorized into the same categories so that the results were consistent (Ou, 1994). After the researcher analyzed the intern pre-teachers' emotion categories, 3 teachers who were also intern pre-teachers performed independent analyses. This way their viewpoints could be compared to find out if analysis results were consistent. In addition, the influence of the researcher's subjective viewpoints could be reduced. The inter-coder reliability analysis consisted of inter-coder agreement and coding reliability. They were calculated using the equations below (Huang and Chien, 1997).

$$a \cdot \text{Inter-coder agreement } (P) = \frac{2M}{N_1 + N_2}$$

M: Number of completely agreed items

N₁: Number of items agreed by the first analyst

N₂: Number of items agreed by the second analyst

$$b. \text{ Average inter-coder agreement } = (P) = \frac{\sum_{i=1}^n P_i}{N};$$

N: Number of comparisons

c · Coding reliability

$$\text{Reliability} = \frac{nP}{1 + [(n-1)P]} ; n: \text{Number of analysts}$$

3. RESULTS

3.1 Types of Intern Pre-teacher' Emotions

After analyzing the intern diaries and weekly diaries of the subjects in the first group, the types of academic emotions were summarized. A total of 153 positive emotion-related descriptive expressions and 190 negative ones were found (Table 2 and Table 3).

Table 2 *Statistics of types of intern pre-teachers' positive academic emotions after content analysis*

Emotion-related word	Happiness	Delight	Joy	Pride	
Number of occurrences	32	20	16	13	
Percentage (%)	21%	13%	10%	8%	
Emotion-related word	Hopefulness	Satisfaction	Gratefulness	Peace	
Number of occurrences	13	11	10	9	
Percentage (%)	8%	7%	7%	6%	
Emotion-related word	Relaxation	Surprise	Enjoyment	Relief	Total
Number of occurrences	9	7	7	6	153
Percentage (%)	6%	5%	5%	4%	100%

Table 3 *Statistics of types of intern pre-teachers' negative academic emotions after content analysis*

Emotion-related word	Anger	Fear	Boredom	Nervousness	
Number of occurrences	32	30	28	26	
Percentage (%)	17%	16%	15%	14%	
Emotion-related word	Anxiety	Frustration	Helplessness	Harassment	
Number of occurrences	18	14	14	13	
Percentage (%)	9%	7%	7%	7%	
Emotion-related word	Worry	Sorrow	Hatred	Total	
Number of occurrences	9	4	2	190	
Percentage (%)	5%	2%	1%	100%	

Some words were the same or similar and therefore excluded. Then there were a total of 70 emotion-related words left. Among them, 29 were positive while 41 were negative. They are listed in Table 4 below.

Table 4 *Summary of words related to intern pre-teachers' positive and negative emotions after excluding duplicated or similar ones*

Positive emotions (n=29)			Negative emotions (n=41)		
Happiness (n=5)	Pride (n=4)	Peace (n=1)	Anger (n=6)	Boredom (n=6)	Fear (n=6)
Delight (n=6)	Hopefulness (n=1)	Gratefulness (n=2)	Nervousness (n=5)	Hatred (n=1)	Harassment (n=3)
Joy (n=3)	Surprise (n=2)	Relief (n=1)	Anxiety (n=3)	Frustratio n (n=3)	Sorrow (n=1)
Enjoyment (n=1)	Satisfaction (n=1)	Relaxation (n=2)	Helplessness (n=3)	Worry (n=2)	

3.2 Results of Verification with Intern Peers

The verification with intern peers consisted of listing the 70 emotion-related expressions for the research subjects in the second group to choose among "agree", "disagree", and "no comment" according to their viewpoints on the descriptions of those emotion-related events. After the second group of subjects were done, there were a total of 24 emotion-related events with over 80% of the second group of subjects checking the "agree" option. They are listed in Table 5.

Table 5 *Summary of the emotion-related events after the verification with intern peers*

Positive/negative emotion	Description of emotion-related event	Percentage of "agree"
Positive Emotion	01. The children's in-class performances are good. I am happy about it.	91%
	02. The children are polite. It is a delight to me.	87%
	03. It is a joy for me to listen to the children sing.	85%
	04. I am happy when I see the children complete their work.	87%
	05. I am surprised because of the children's amazing learning abilities.	89%
	06. The counseling teacher cares about me a lot. I feel hopeful.	89%
	07. I am grateful to the children for the considerable feedback they have given me.	80%
	08. I can remember every child's name. I think I am amazing. (pride)	83%
	09. The children can get along well. That makes me feel relieved.	85%
	10. I feel peaceful when seeing these cute children.	89%
	11. I am grateful for I have learned what a preschool teacher should do.	87%
Negative Emotion	01. I am troubled because the children can't stay in a line. They always rush on to be the first.	82%
	02. I am worried when the children are sick.	83%
	03. I am worried when the children are running around in the classroom.	80%
	04. I am troubled when the children do not follow existing plans during performances.	80%
	05. I fear for the children when they perform dangerous acts.	83%
	06. I am scared when the children get hurt.	85%
	07. I am nervous if my field teaching is not smooth.	89%
	08. I am anxious if I am not prepared for my field teaching.	89%

According to the results of the verification with intern peers in the table above, a

total of 11 positive emotion-related expressions of events and 8 negative ones were agreed by over 80% of the intern peers.

There were a total of 14 positive and negative emotions, including 8 positive ones, which were happiness, delight, joy, surprise, relief, pride, hopefulness, and gratefulness, and 6 negative ones, which were anger, harassment, worry, nervousness, fear, and anxiety.

3.3 Sources of Intern Pre-teachers' Academic Emotions

During their internships, intern pre-teachers have to learn about children counseling, class affairs handling, teaching, school administrative work, etc. (Tsai, 1998; Epstein & Dygdon, 2006; Ni Chang, 2007). In order to explore sources of intern pre-teachers' academic emotions, this study used the things that intern pre-teachers must learn as the categories for analyses to find out what caused their academic emotions. The researcher categorized the sources of the intern pre-teachers' emotional experiences into children counseling, class affairs handling, teaching works, and school affair administration based on the associations of the text contents, for the purpose of exploring the interpretability, exportability, and reliability of the sources of intern pre-teachers' emotional experiences.

After the research samples, categories for analyses, and units were determined, the verification with teacher peers was performed in order to obtain the reliability of each category. Reliability is the degree of consistency among the categorizations by the coders. Higher consistency leads to higher reliability. In this study, the degree of consistency was defined by the common views of the four people, including the researcher and the 3 teachers who taught practice courses. Higher consistency

meant higher reliability of the content analysis and more precise and objective analyses. The four teachers coded the 19 emotion-related expressions. After using the equations, the obtained degree of mutual agreement and reliabilities were summarized and are presented in Table 6.

Table 6 *Mutual agreement and reliability of the coding results*

	Researcher	Teacher peer #1	Teacher peer #2
Teacher peer #1	0.891		
Teacher peer #2	0.900	0.850	
Teacher peer #3	0.887	0.910	0.883

$$\text{Average mutual agreement} = (0.891 + 0.900 + 0.887 + 0.850 + 0.910 + 0.883) / 6 = 0.8418$$

$$\text{Reliability} = 3 \times 0.8418 / [1 + (2 \times 0.8418)] = 0.9410$$

Some scholars have pointed out that inter-coder reliability must be over 0.90 (Yang and Hsieh, 2003). In this study, the reliability obtained with the coding results by the researcher and the three teacher peers was 0.94, which is acceptable. After the verification with the teacher peers, the sources of intern pre-teachers' academic emotions are summarized in Table 7.

Table 7 *Summary of the sources of intern pre-teachers' academic emotions after the verification with teacher peers*

	Children counseling	Teaching works	Class affair handling	School affair administration	Total
No. of emotion-related expressions	9	5	5	1	19
Percentage(%)	46%	25%	25%	4%	100%
Rank	1	2	2	4	

According to the information above, "children" was an important influential

factor in the field for intern pre-teachers' academic emotions. "Children counseling" was an important source of intern pre-teachers' emotion-related events. The main sources of the positive emotion "delight" and the negative emotion "anger" were related to children. In addition, teaching and praise for interns from counseling teachers in preschools were also a source of interns' emotion-related events.

The verification with teaching peers was performed for the sources of intern pre-teachers' emotional experiences in the field based on the 4 major topics to be learned: class affairs handling, children counseling, teaching work, and preschool affair administration. According to the results, in the domain of positive emotions, "children counseling" was an important source of interns' positive emotions. Because of children's responses to the interns or the interns seeing children's growth, the emotion of joy was developed. In addition, "class affairs handling" and "teaching work" also led to positive emotions due to the interns' experiencing of the children's growth. Thus, positive interactions between children and intern pre-teachers were the main cause of interns' positive emotions. And if interns did not participate in "preschool affair administration" during their internships, positive emotions were not generated.

As for negative emotions, most interns had negative emotions when they could not guide children to achieve good learning performance. In short, the source of intern pre-teachers' negative emotions was their lack of professional abilities. From above, it was found that the positive emotion-related events that intern pre-teachers had experienced during their internships were more diversified than negative ones. Most of intern pre-teachers' negative emotions during their internships were caused by their bad performances caused by their inabilities, such as not being prepared

before field teaching or not being able to maintain class order during field teaching. This type of negative emotion was due to interns' lack of professional abilities. This conclusion supported Lin's (2006) study, which suggested that the main trouble factors of intern pre-teachers during their internships included lack of teaching ability and poor class management.

However, intern pre-teachers could also experience diversified positive emotions during their internships. These types of emotions were developed as a result of children's and counseling teachers' feedback. Intern pre-teachers may feel sense of fun and achievement during their internships. Some studies in Taiwan (Wang, 1998; Lin & Tsai, 1997) also had the same viewpoints. This kind of sense of achievement can be personally experienced and felt by interns during their internships.

4. CONCLUSION

Expressions of intern pre-teachers' academic emotions were diversified. Previous studies had suggested that different subjects lead to different emotional feelings (Pekrun et al., 2002; Rubie-Davies, 2006; Västfjäll, Gärling & Kleiner, 2004). The findings of this study shows that intern pre-teachers' academic emotions included 8 positive ones, which were happiness, delight, joy, surprise, relief, pride, hopefulness, and gratefulness, and 6 negative ones, which were anger, harassment, worry, nervousness, fear, and anxiety. Intern pre-teachers' academic emotions covered almost all emotions.

In sum, during internships, intern pre-teachers had both positive and negative academic emotions. And what caused their emotions included children, counseling teaches, and the interns' selves. Pekrun et al. (2002, 2006, 2007) considered a

"quality teaching environment" as an antecedent to creating happy learning emotions in their control-value theory and cognitive motivation model. This study supported the assertion of Pekrun et al. Intern pre-teachers had negative emotions of anxiety and nervousness because they were not familiar with teaching situations and lacked sufficient skills. All the other emotions, both positive and negative, were caused by classroom atmosphere, counseling teachers, and children's feedback. Thus, both children and counseling teachers were people with great influences on intern pre-teachers' academic emotions.

High quality field teaching environments helped to create positive inner values for learning achievement for intern pre-teachers and further generate positive affections. On the contrary, low-quality field teaching environments facilitated negative emotions. Thus, children, counseling teachers, interns themselves, and the learning atmosphere in field teaching environments were important indexes which influenced interns' performances.

In conclusion, intern pre-teachers' positive academic emotions (happiness, delight, joy, surprise, relief, pride, hopefulness, and gratefulness) were more diversified than their negative ones (anger, harassment, worry, nervousness, fear, and anxiety). In the verification with intern peers, the percentage of positive academic emotion-related events agreed was higher than that of negative ones. This means intern pre-teachers' academic emotions during their internships were mostly positive. And intern pre-teachers believed that the causes of negative academic emotions included field teaching performances not being as good as expected and a lack of professional abilities, for example not being completely prepared. Several previous studies (Wang, 1999; Lin & Tsai, 1997; Tsai & Yang, 1999; Starnes &

Bohach, 1995) discovered that almost every intern found himself not having enough professional competence during his internship. Thus, more efforts should be put in to improve intern pre-teachers' professional abilities in the field of preschool teacher training.

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