Exploring the Measurement of Learning Attachment Style in the Cooperative Learning

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Abstract

In many educational theories, learners engaged in peer discussion group is recognized as a critical factor to learning outcome. During the dialectical process of ideas constructed, the cooperative learning group is highly shaped by the peers' social status and relationships with others. The purpose of this study is to propose the theoretical model and to establish an instrument to measure learner's learning attachment style pattern in the cooperative learning situation. Questions derived from literature, focus group interview, and expert panel discussion. Through content validity, the learning attachment scale primary can be used to measure learner's learning attachment style.

Keywords: *Learning attachment style, cooperative learning, learning attachment theory / model*

1. Introduction

Attachment theory was originally developed by a British psychoanalyst, John Bowlby (1907-1990), who was attempting to understand the intense distress experienced by infants who had been separated from their parents. In the theory, attachment means an emotional bond between a child and his or her parents, and there are many types of attachment, e.g., secure, ambivalent, avoidant, and disorganized. Among the types of attachment, research has indicated that the secure child-parent bond can benefit individual's survival and development (Lyons-Ruth, Connell, Grunebaum, & Botein, 1990; Kochanska & Kim 2013). On the other hand, although Bowlby was primarily focused on understanding the nature of the infant-caregiver relationship, he believed that attachment characterized human experience "from the cradle to the grave" (Fraley, Waller, & Brennan, 2000). That is, the research subjects of attachment theory should not be limited in infants and young children, and adult subjects should also be taken into consideration.

Although attachment theory was initially studied in the 1960s and 1970s primarily in the context of children and parents, it was extended to relationship between adults in the late 1980s. Moreover, it was extended to the research of romantic relationships (Hazan and Shaver, 1987), social work (Nelson & Quick, 1991), and clinical psychology (Alexander, 1992), and career development (Blustein, Prezioso, & Schultheiss 1995), pet and attachment (Sable, 1995), and so on.

Attachment may occur in the process of learning. Learning is a product of interaction (Lias & Elias, 2011). In the learning situations, learners might interact with instructors and tutors, with content and/or with other people. Therefore, a bond may be created and enhance learners' learning. Therefore, many educators expend enormous amounts of effort in designing their learning to maximize the value of this interaction.

Interaction *occurs* in teaching and learning process and it is managed not only by the teacher in the classroom, but also the students. However, how learners interact with each other and manage the interaction is a neglected aspect in learning and instruction. Much instructional training is only devoted to helping instructors arrange appropriate interactions between learners and materials (e.g., textbooks, educational technologies) and some time is spent on how instructors should interact with learners; however, little is known about how learners interact with one another (Johnson & Johnson, 1989).

In current learning and instruction, cooperative learning considered to be an active learning style which is an instruction style which allow students work together to maximize their own and each other's learning in a small group (Johnson, Johnson, & Holubec, 2013). Therefore, the current study may be critically important in laying the groundwork for understanding what learners' psychological status when they are engaged in the cooperative learning environment.

2. Theoretical Framework

The current study stated that attachment occurs in learning situation; therefore, we define Learning Attachment Theory is a psychological model that attempts to describe the dynamics of interpersonal relationships among participants during learning process in a specific learning task. It results in the interaction among interpersonal relationships, learning environment and learning process.

The model we proposed was based on Bowlby's research (1969, 1973) and the contentions of related learning theories that attachment patterns reflect working models of the self and the attachment figure. There are four types of learning attachment styles: Cell I: learners in this learning attachment style have high assertiveness, low trust, low dependence, and high avoidance; Cell II: learners in this learning attachment style have high assertiveness, high trust, low dependence, and low avoidance; Cell III: learners in this learning attachment style have low assertiveness, high trust, high dependence, and low avoidance; Cell IV: learners in this learning attachment style have low assertiveness, low trust, high dependence, and high avoidance (Figure 1).
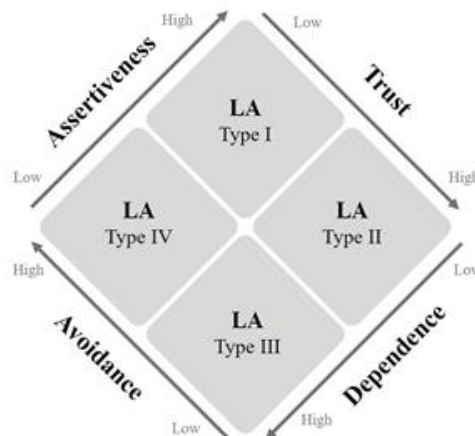

Figure 1. Four-Group Model of Learning Attachment

3. Instrument Development Process

The purpose of this research was to develop a valid instrument to measure learners' learning attachment pattern in cooperative learning environment. Since an appropriate instrument that would gather desired data could not be found, a survey questionnaire was developed (Table I. Survey research is considered to be a branch of social scientific research and is used to assess the characteristics of whole populations of people (Kerlinger, 1986). This is the intent when using a survey instrument to measure learners' learning attachment patterns in cooperative learning environment.

A four-stage research procedure was adopted with the following steps. Stage 1 involved synthesizing and establishing a set of preliminary items from there viewed literature. Stage 2 involved interviewing learners about their opinions of the quality of the cooperative learning. In stage 3, 10 experts were first asked to evaluate the preliminary items through a questionnaire, and then these items were refined by

categorizing items and ranking the importance of each item and the revised items. In stage 4, the items for learning attachment were finalized based on the opinions of learners and experts.

Table 1. Overview of instrument development and validation process

	Step	Methods	Results/Changes
1.	Item Pool Development	a. Literature Review b. Focus Group Interview c. Expert panel discussion	14 items 18 items 8 items Total 40 items
2.	Content Validity	Expert survey	5 items eliminated 1 items added Total 36 items

4. Determination of Expert Validity

Expert professional judgment should play an integral part in developing the definition of what is to be measured (Berk, 1990). To illustrate, Table 2 shows the main judgment from experts. The main judgments are: wording problem, two propositions in one question, negative worded style, and overlapped with other questions.

Table 2. Experts validity results

Factor	Original Version	Main Experts Judgment	Final Version
Assertiveness			
1	In any learning situation, I believe my ability is better than others	No comments.	In any learning situation, I believe my ability is better than others.
2	In cooperative learning situation, I am confident in my ability to keep up with the group discussions, so I can have capacity to do my own matter.	This question contains two propositions, and this will be confused by user. Just focus one main issue.	In the cooperative learning situation, I am confident of my ability to keep up with the group discussions.
3	I believe that my learning performance can get peer's praise and affirmation.	Wording problem.	I believe that my learning performance can earn recognition from peers.
4	I will not be afraid to show my work and opinion to peers, such as my presentation.	This is reserve asking style. The forward direction asking is recommended.	I can show my learning outcome to peers easily, such as my own presentation.
5	When I provide strategy to solve the learning task, peers usually concentrate on my talking.	Concentrate on your talking is not equal to agree with you.	When I bring up the idea for the learning task, my peers usually accept my opinion.
6	In cooperative learning situation, I always participate the group discussion.	No comments.	In the cooperative learning situation, I usually participate the group discussion.
7	At the time of study and discussion, I always try to choose an important seat to sit	Focus on the cooperative learning situation. "Important" is not a clear word.	In the cooperative learning situation, I always choose a core seat to sit.
8	In learning, I always pose various reasonable and appropriate	Provide various opinion actively is enough for the	In the cooperative learning situation, I always propose

	opinion actively.	assertiveness factor.	various opinion actively.
9	In learning, I used to lead the group learning direction and progress	Wording problem.	In the cooperative learning situation, I usually lead the group learning direction and progress.
10	I have the ability to help peers to achieve their own individual or group learning tasks	Wording problem	I have the ability to help peers to achieve their own or group learning tasks.

Trust			
1	In cooperative learning situation, I believe in peers' ability and opinion	Ability and Opinion are two different propositions; therefore, this question should be divided to two different questions.	In the cooperative learning situation, I always believe in peers' ability.
2	I always try to agree the recommendation of learning task which posed by peers	Agree peers' recommendation is not belongs to trust factor.	Delete
3	I believe that my peers can pose many valuable opinions and recommendations to solve learning task	Overlaps with the first question	Delete
4	Although my own ability is good, I can accept peers' opinion modestly	User will answer this question based on social expect; therefore, delete this question is recommended.	Delete
5	I can discuss learning issues with peers comfortably.	Not belongs to trust factor.	I can discuss learning issues with peers comfortably.
6	I think peers understand my learning ability	No comments.	I believe that my peers understand my learning ability.
7	My peers almost accept my learning ability and situation.	No comments.	My peers almost accept my learning ability.
8	I feel interesting and safe when learning with peers	Wording problem.	In the cooperative learning situation, I usually have a sense of security.
9	I could tell peers my problems of learning task comfortably and I believe my peers will listen to me.	Two proposition in this question.	I could share my learning problems with my peers comfortably.
10	I believe that everyone has his/her own profession and contribution to learning.	Two proposition in this question.	I believe that everyone has his/her own profession in learning.
11		Derived from Question 9.	I believe that my peer will listen to me about my difficulty in learning.

Dependence			
1	I always want to learn what peers have learned.	More clear statement is needed.	I always appreciate my peers' talent, so I want to learn what peers have learned.
2	I am a very indecisive and opinionated person, therefore, I normally do not have many suggestions in cooperative learning	Focus on the cooperative learning situation and related behavior.	In the cooperative learning situation, I usually listen to peers.
3	I usually totally agree peers suggestions in cooperative learning	Overlaps with the question 2. Modification is needed.	I often worry about my idea doesn't accepted by peer in the cooperative learning.

4	I will always seek the assistance from peers when the assigned task cannot be accomplished	No comments.	I will always seek the assistance from peers when the assigned task cannot be accomplished.
5	I would be very afraid of failure, so I need peers to work together to complete the learning task	Wording problem.	I often afraid of bad learning outcome, so I need peers to work together to complete the learning task.
6	When I have difficult in learning, my first thought is to ask peers to help me solve the problem	Overlaps with the question 4.	Delete
7	I kept up with peers as long as I could	Wording problem.	In the cooperative learning situation, I usually go along with my peers' opinion.
8	For the learning tasks, I tend to listen to peers' distribution	Wording problem.	For the distribution of learning tasks, I tend to listen to peers' assign.
9	I feel disturbed and lonely when I work alone in learning situation	No comments.	I always feel disturbed when I work alone in learning situation
10	I would be worried that I was neglected and abandoned in cooperative learning situation	No comments.	I would be worried that I was neglected or abandoned in the cooperative learning situation.
Avoidance			
1	I always want to escape when I need to learn new thing	Reserve asking style. Modification is needed.	When enter a new learning group, I usually want to avoid meeting new peers.
2	I feel disturbed when peers make the new direction for learning task	Wording problem.	I feel disturbed when peers make the new direction for learning task
3.	I feel difficult to establish relationships with new learning partner quickly	Wording problem.	I feel difficult to establish the relationships with new learning partner quickly
4	I am anxiety about assigned new learning task	Add degree to the question.	I always feel anxious when I assigned the new learning task.
5	I have difficult to adapt to new learning partner and difficult to accept new learning task as well	Partner and task should be separated.	I have difficult to adapt to new learning partner.
6	I always have a thought that I don't want to work with peers in cooperative learning situation	No comments.	I always have a thought that I don't want to work with peers in cooperative learning situation
7	I don't need peers' assistance during learning; therefore, I demonstrate my ability is good deliberately.	No need peers' assistance is not equal to the ability is well, so modification is needed.	I usually behave no need peer to learning together intentionally.
8	I feel uncomfortable to share my thoughts with peers.	Overlaps with the questions in Trust factor. Modification is needed.	I usually think learning with peer doesn't contribute to learning.
9	I do not like to be too close to peer in learning situation	No comments.	I do not like to be too close to peer in learning situation.
10	I can't seek innovative strategy for learning problem solving independently	This is reserve asking style. The forward direction asking is recommended.	I can seek innovative strategy for learning problem independently

5. Discussion and Conclusion

To develop an effective and useful questionnaire for identification of learning attachment style, the feedback from the experts' reviews were used to modify the items of questionnaire.

In the assertiveness subscale of the Learning Attachment Scale, all of the experts agreed with the content of each item; therefore, the items were maintained, except some adjustment in wording.

In the trust subscale, there were three deleted items because they overlapped with each other, were deviated from the core concept of trust, and were related to the concern of social expectation. Moreover, some experts pointed out item 9 contained two concepts; therefore, it was divided into two items.

In the dependence subscale, the experts indicated that item 6 overlapped with item 4; thus, item 6 was deleted. Other items in this subscale supported the core concept of dependence.

In the avoidance subscale, according to the experts' reviews, in the items clearly expressed the core meaning of avoidance, so only the sentence and wording adjustment were made to enhance the quality and readability of the questionnaire.

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