Dynamic Synchronization of Teacher - Students Affection in Affective Instruction

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Abstract

Based on Bower's affective network theory, the article links the dynamic analysis of affective factors in affective instruction, and presents affective instruction strategic of dynamic synchronization between teacher and students to implement the best ideal mood that promotes students' cognition and affection together. In the process of teaching, the main mood of teacher and students varies spirally from unbalance through balance to unbalance, ultimately attains affective balance on the higher level, and the teacher steps well together with students. Moreover, the dynamic synchronization is analyzed in detail from induction, edification, activation, and adjustment of basic factors in instruction, and contributes to affective instruction goals.

Keywords: Affection, Instruction, Synchronization

In order to make education better adapting to social development, satisfying the requirement for improving the quality of citizens and training backup talents, we should completely change the unbalanced condition of teaching, which focuses too much on cognition and less on affection. Therefore we should pay attentions to affective factors in teaching, create a new teaching pattern that optimize teaching by affection, dig out teaching potentials deeply and push education development to a new stage. Optimizing teaching by affection means to stress both cognitive and affective factors in teaching and exert positive effects of affection so as to perfect teaching targets, improve every stage in teaching, optimize teaching effects, and actualize the comprehensive development of students (Jiamei Lu, 1999, p88-92). Affective instruction has already come into being projected and some explorations have been discussed on this subject. In practical teaching, the design and effect of affective instruction more depend on the recognition to the mutual influences between cognition and affection in teaching process.

1. Affective network theory

A research on psychology of affective instruction shows that there are three static affective sources in teaching ------ teacher, students, and teaching materials (Jiamei Lu, 2000). Among them, students are the main body of teaching. Their affection and cognition must be examined by affective teaching. Bower (1981) advanced the affective network theory (Bower, G.H., 1981, p129-148; K. T. Strongman, 2006, p77-78), which serves as the present study's basis. It mainly includes six key points: (1) Emotion is the network node, associating with network-related concepts, physiological systems, events, muscle movement, and expression patterns; (2) Emotional materials are stored in semantic network in the form of propositions or assertions; (3) Thinking generates by stimulating the nodes in semantic network; (4) Both internal stimuli and external stimuli can activate the node; (5) Activation can spread from one node to the relevant node; (6) As a network is activated, reaching the threshold limit, awareness arises.

According to this theory, Bower has put forward four assumptions: (1) Memory depends on mood and state (as learning matches the mood in the course of memory, the effect is best); (2) The consistency of mood: when the emotional value of learning matches individual mood, the memory and extraction effect reach the best; (3) The consistency of thinking: in theory, the individual's free recall, interpretation, thinking and judging match with the state of mood; (4) The strength of mood: the increase in mood strength leads to the increase in activation of interconnected nodes in the network.

This theory has already been confirmed by a large number of empirical studies. Interestingly, positive mood and negative mood generate different effects. The positive mood can make the individual focus on positive materials instead of negative materials. The negative mood can arouse the individual to recall the state of failure, fatigue, or similar memory, which further stops the individual from processing external stimuli.

Apparently, students' emotional tone, namely the mood, has a direct effect on learning, which in turn directly influences the teaching effect. In a sense, the key for affective instruction is to adjust and control students' emotion in teaching activities to insure students' emotion in the best state. In this way, affective teaching can drive students' cognitive activity and achieves better learning achievement.

2. Probe into the affective instruction mechanism

From a static view, we know that there are three essential elements in teaching activity, namely teacher, students, and teaching materials (See the Figure 1). As a matter of fact, the three elements are also three basic sources for affective phenomena in teaching. As the teacher and students start to involve the teaching activity, focusing on teaching materials, these affective elements are activated. They flow back and forth between the teacher and students in the form of affective information. As a result, a dynamic network of affection exchange in teaching arises, making up a dynamic affective field.

In the dynamic affective field, there are three main affection communication loops, divided into nine tributaries. There exists a communication loop, that is, along with the cognitive information transfer in teaching, the circuit of teacher and students' basic affective state (Jiamei Lu, 2000, p11). We suppose that this circuit reflects the relation between teacher's dominant mood and students' mood in teaching, which holds an irreplaceable position in the whole affective field. However, the mutual effect of teacher-students mood is different from people's daily communication. Under the control of teaching aims, teaching happens at the stipulated time, place, and situation. Moreover, teaching is an ordered, with control, and aimed process of affective communication. Next, we will make an in-depth analysis of the characteristics of this circuit.

(1) Dynamic. In teaching, both teachers and students, as information processor, are emotion-loaded persons. They keep in exchanging internal or external cognitive and affective information input and output. Along with information exchange, their affection fluctuates around the dominant mood. Surely, the dynamic also tends to transfer from one state to another. The circuit of affective information exchange may happen between affective communication circuits, or interact with cognitive information circuit.

(2) Duality ------ teacher dominance VS students' subjectivity. The teacher is the organizer and guider of teaching activity. His or her dominance determines the position of teacher in the communication circuit. Meanwhile, the teacher, as a matured individual, can control the affection to a greater degree than students. In other words, in the communication process the teacher is more positive. He or she can control the communication process by many ways. Students, as the essential element in teaching activity, are also emotional. However, they are still at an immature stage. As teaching objects, they receive more stimuli in teaching, which can drive the formation and development of affection. Therefore, students, as the subjects in teaching, show their subjectivity in this communication process.

(3) Openness. Both teacher and students are in an open state in affection information communication. They are influenced by internal and external factors at the same time. First of all, the teacher is affected by the contents of teaching materials. Secondly, the teacher is under the influences of personal cognition and affective information flow. Also, the teacher is influenced by students' feedback information. Other information, such as noises and sights can also disturb the teacher's affective state. So do students.

We know that affective instruction aims at improving teaching by affection, driving cognition by affection, and perfecting both cognition and affection, finally achieving an ideal state of harmonious perfection of cognition and affection. In our opinion, as the teacher and students match in mood around teaching contents, in other words, as the two sides change at the same step, the whole information system reaches the best state. However, there is a conflict. Both the teacher and students fluctuate in mood. Then, how to achieve the match of their best moods?

3. Dynamic synchronization of teacher-students affection

In our opinion, in order to achieve the ideal state in a dynamic teaching stage, we must adopt the dynamic synchronization mode. It is a circular and ascending process from unbalance to balance, further from balance to unbalance, for teacher and students' affection. In this process, the teacher and students' cognition and affection can match with each other, stepping forward together according to the teaching program. In the following, from the four basic steps in affective instruction, namely induction, edification, activation, and adjustment, we examine this process in detail (Jiamei Lu, 2006, p55-60).

(1) Induction. In the process of teaching activity, the teacher instructs stipulated teaching contents by following certain process and order, at the stipulated time and place. However, a series of "stipulated" rules make teaching activity fail to match with students' needs at certain time. Even sometimes, students' maximum need may not the need for knowledge. As a result, teaching activity is not in accordance with students' need. Even if students have the

need for knowledge, the particular contents of students' need may not be in accordance with specific teaching contents. Especially at the very beginning of teaching, the teacher has already reached the top level of mood when preparing for the class. In contrast, students may not reach the required state for learning due to diverse kinds of internal and external elements. At this moment, the teacher-students affection does not match with each other, staying at an unbalance state. Therefore, in the course of induction the teacher should guide or instruct students to focus on the subject of teaching, activating students' motives in learning. In this way, students can keep the same space with the teacher in mood, and a balance state arises for the first time.

(2) Edification. When teacher-students' affection is in match through gradual induction, the affective instruction passes into the edification step. At this step, the teacher can make best use of the nice balance state and dig out the affective factors in teaching materials, pushing forward the cognitive activity, cultivating students' high emotion and moral, developing their affective intelligence, and further promoting the harmonious state of three factors, including the teacher, students, and teaching materials.

(3) Activation. Along with the development of teaching, the enhancement of learning difficulty, and harder task, the initial learning drive is not enough to support later learning. That is, after the unfolding of induction and edification, teacher-students affective state shows unbalance again. However, the unbalance has a quality difference with the one in the course of induction. This time it reaches a higher level. During this period the teacher should give students a positive acceptance and encouragement, increase their confidence and competence, and activate them to study further. As a result, the mood of teacher and student reaches a new level, where teaching continues to develop in a harmonious tone.

(4) Adjustment. In teaching activity, students may face various affective experiences. The adjustment factor in affective instruction mode is to place students' affective state in pleasure all the time. In other words, students' dominating mood is in a pleasant and interesting state. The factor of adjustment is to help students' affection stay a study-favorable state in the whole learning process. It is the key factor for teacher-students affective synchronization. And the whole process of synchronization depends on the factor. Through many times of mutual adjustments, the teacher-students affection develops from unbalance through balance to unbalance, then reaches the balance at a higher level. The teacher-students affection keeps in achieving synchronization, stepping in the best affective state gradually, realizing the ideal harmonious pattern.

4. Implications of the dynamic synchronization of teacher-students affection

4.1 Promote the realization of affective instruction goal

Chinese scholar Jiamei Lu makes exploration from two aspects, the psychological theory of affective instruction and the students' affective development in teaching. He concludes three dimensions for the affective goals of class teaching: the degree of pleasant affection, the degree of edified affection, and the degree of harmonious affection (Jiamei Lu, 2007, p1453-1456; Jiaji Zhou, Haigen Gu & Jiamei Lu, 2002, p676-679).

Firstly, the synchronization of teacher-students affection can benefit the improvement of students' pleasant affection ------ students' interests in learning. As the guider of affective synchronization, the teacher can induct students' interests in learning by organizing learning materials, activating students' motives in learning, making students be involved in pleasant learning state. Also, the teacher can exert the influences on students, driving students into the better learning state. By making best use of mutual influences of teacher-students affection and students-students affection, the teacher can arrange excellent students to help other students step into the teacher-students affective matching state from an unbalance state. Secondly, once the teacher and students enter the affective matching stage, the teacher can use the synchronization to adjust students' learning state, motivate students properly, and maintain students' state at a better level. Integrating with teaching contents, students will possess more chances to experience and express affection, obtaining rich affective experiences. Finally, the dynamic synchronization of teacher-students affection can improve the teacher-students relations. Although in teaching process the teacher and students develop activities around teaching materials, the affective synchronic process is also a mutual communication process. In this process, students can feel the teacher's dedication. Meanwhile, by comparing with other students, they can improve abilities of distinguishing, understanding, and supervising of affection, and improve their ability of interpersonal communication.

4.2 Improve the overall teaching effect

The process of affective synchronization needs the involvement of the teacher and students. It is an interactive process between the teacher and students. In this process, the teacher and students recombine the affections and deepen the mutual understanding. Here, the teacher is the provider of knowledge. And he or she is also the exchanger and sharer concerning the teaching subjects, opinions, thoughts, and affection. In contrast, students are

not only the receivers of knowledge, but also the constructors of teaching themes. They dedicate themselves to feeling the problems, the facts, the affection, and the values in teaching stages. Meanwhile, students convey their thoughts in detail, participating into the teaching activity. By this way, teaching actualizes its general effect. Therefore, the teacher-students affective synchronization is a process of sharing knowledge, spirits, wisdom, and meanings.

4.3 Achieve the harmonious development of students' body and mind

The teacher-students affective synchronization can exert the organizational and healthy function of affection to a great degree. In the teaching process, students' affection always fluctuates around the dominant mood of teaching, but does not stray away. The state is easy to stimulate the teaching-related positive memory and experience instead of past negative experiences, decrease the threat over students, and make students be involved in a safe and comfortable environment. Thus, students will have more chances to explore their selves, and organize their knowledge, physical experiences, and memories together so as to form harmonious self and implement the organizational function of affection. Moreover, the affective synchronization process satisfies students' needs for knowledge, improves their senses of belonging, gives students positive experiences, drives the brains to secrete neural hormones, enhances body immunity, and finally benefits body health. Therefore, the teacher-students affection matches each other by continuous adjustment, which has irreplaceable effects on the harmonious development of students' body and mind.

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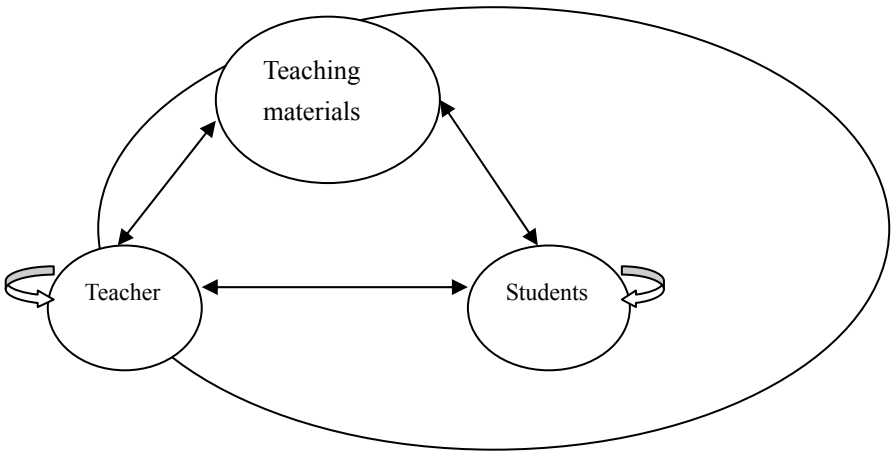

Figure 1