

## **Relating the Epistemological Paradigm of Constructionism to the Practices of Action Learning: a Case Study in a Taiwanese Elementary School Context**

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**Abstract:** Constructionists assert that knowledge is not only constructed by an individual's interaction with his/her own world (or experiences) but also co-created by his/her interaction with other individuals within a specific social community. This implies that both cognitive and social processes are involved in teachers' knowledge expansion through the process of reflecting on and sharing their own experiences and others' experiences or ideas. Accordingly, this paper attempts to develop its theoretical propositions of: (1) how the epistemological paradigm of constructionism relates to the concepts and practices of action learning and (2) how the implementation of action learning brings about teachers' knowledge sharing and therefore knowledge expansion. A school-based investigation is conducted and observation as the research method is applied to explore how the process of knowledge sharing and expansion is carried out through the conduct of self-facilitated action learning by a group of elementary teachers for a concentrated period of time and also to indicate essential issues involving in the sharing and expansion processes within an elementary school in Taiwan. By reconstructing the social phenomenon of how such the self-facilitated action learning set progresses in the Taiwanese elementary school context, readers may be able to gain insights into the potential benefits of action learning for teachers' professional development.

**Keywords:** constructionism, action learning, knowledge sharing, teachers' professional development

### **Introduction**

Personal experience, reasoning and research are specified as the means for individuals to search for truth (Cohen, *et al.*, 2000). Personal experience is recognised merely as commonsense knowing which may service as the source when the individual is confronted with a problem-solving situation. On the other hand, reasoning and research are regarded as the more systematic means to comprehend a reality and discover truth and are approached differently by numerous theorists who embrace diverse philosophical perspectives on knowledge. According to the above explanation of how individuals know what they know, it is more helpful to firstly clarify the nature of teachers' knowledge and subsequently to specify how teachers seek knowledge relates to the epistemological perspectives of constructionism.

### **Constructivism versus Constructionism**

Before proceeding to the main discussion of the themes in question, it is necessary to give a brief introduction of so-called constructionism by means of distinguishing the difference between constructivism and constructionism. According to Lincoln and Guba's (1985) naturalistic inquiry (in contrast to scientific inquiry proposed by positivists), knowledge is constructed through the interaction between an individual and his/her world. That is to say, the knower and known are interactive and inseparable. In a similar vein, the notion is also asserted by constructivists who *are deeply committed to the contrary view that what we take to be object knowledge and truth is the result of perspective. Knowledge and truth are created not discovered by mind* (Schwandt, 1994: 125 also see Franklin, 1998; Schwandt, 2003). From the perspective of constructivism, knowledge is the product of cognitive processes which result from an individual's interaction with his/her world. For instance, Kelly's (1955) personal construct theory is one of the examples of such cognitive constructivism. Accordingly, there exist multiple realities since the same social phenomenon is interpreted (or understood) by individuals differently from one another (Lincoln and Guba, 1985).

Nevertheless, it is further pointed out that the constructivist perspective focuses exclusively on *the meaning-making activity of the individual mind* but has a lack of consideration to *the collective generation of meaning as shaped by the conventions of language and other social processes* (Schwandt, 1994: 127; also see Franklin, 1998; Schwandt, 2003). Those social processes include communication, negotiation, conflict and rhetoric where individuals express their perspectives and views members of specific with communities (Garfinkel, 2003; Gergen, 1985; 2003). That is to say, knowledge can be transmitted through individuals' interaction with each other in a social context. Accordingly, knowledge, viewed by social constructionists, is the product of not only individual cognitive processes but also social processes. Therefore, knowledge is intersubjective within a variety of particular communities. The notion of intersubjectivity denotes the importance of shared language and understanding throughout knowledge transmission within the specific social contexts.

### **Characteristics of Teachers' Knowledge**

In terms of the characteristics of teachers' knowledge, it is indicated that teachers' knowledge is not simply existing facts and theories *but a living, experiential, processual, flexible, creative, compilation of insights, memories, information, association, and articulation* that instantly go into the resources of teachers' decision-making and action (Woods, 1987: 122). This implies that teachers' knowledge remain mainly tacit forms of knowledge. In this regard, it is assumed that teachers' knowledge is constructed by individual teachers from their own experiences to be appropriate for their own teaching contexts and

therefore it is personalised and context-specific (Gardner, 1989; Marland, 1998). This infers that the development of teachers' knowledge involves the process of self-reflection on their personal experiences, which rather relates to the epistemological position of constructivism. Besides, Buchmann's (1987: 7) argument, teachers as *members of in-group* are capable of catching the meaning of a teaching situation and knowing a way of acting appropriate to the situation, infers that most teachers have shared knowledge of teaching in some degree. That is to say, teachers' knowledge is intersubjective and could also be accessed, communicated and understood by teachers involved in similar situations, which relates to the epistemological position of constructionism.

### **Epistemological Perspectives of Constructionism on Teachers' Knowledge**

In the light of the above examination of the nature and theory of teachers' knowledge, it is concluded that teachers' knowledge is constructed and co-created by teachers with their self-consciousness and social interaction within a particular context; therefore, multiple realities cannot be understood and reconstructed in isolation from their context (Lincoln and Guba, 1985; Rodwell, 1998). In terms of how teachers justify what they know, constructionists argue that there is no certain final and ultimate criterion to test knowledge to be valid and truthful; instead, they tend to believe that knowledge is tentative and agreed upon at certain time and under certain conditions (Lincoln and Guba, 2003; Schwandt, 2003; Wu, 2003). Consequently, true or valid knowledge is mainly generated from agreements within a community which are regarded as the subject of community negotiations and as the result of dialogues (Lincoln and Guba, 2003).

### **Teachers' Knowledge Expansion Through the Practice of Action Learning**

Feldman (1994) gives an example of how two physicists, meeting in a research presentation, inspire each other after talking about the findings being discussed in reference to their own work. He (*ibid*) further claims that knowledge grows not only from the readings of books or articles but also through the exchanges of knowledge among colleagues formally and informally. The above instance exemplifies the importance of social interaction and socialisation in the expansion of knowledge. Furthermore, Kirkham's (2003) proposition of the *reflexive professional* specifies the relevance of taking others' actions, experiences or ideas into account in self-reflection. For this to be achieved, the initial step is to identify opportunities and ways to access to others' knowledge. Accordingly, knowledge sharing among individual teachers may bring about an opportunity for them to access, communicate and understand others' experiences or ideas, which commonly takes place at group level informally.

Action learning has been leveraged and practised as an approach to develop students'

criticality in higher education (e.g. Anderson and Thorpe, 2004; Bourner and Forst, 1996) and to enable organisational learning process in knowledge-intensive organisations (Zaharias, *et al.*, 2001). These two examples infer that the practice of action learning may bring about knowledge sharing and expansion. The implementation of action learning (e.g. McGill and Beaty, 1995; Pedler, 1991; Revans, 1983; 1998; Weinstein, 1999; Zuber-Skerritt, 2002) involves a group of adults (in the educational context teachers), known as a set, working together for a concentrated period of time. Throughout the process of diagnosis, individual teachers learn with and from each other by dealing with real problems and reflecting on their own experiences. In addition, the practice of action learning inspires new ways of thinking and behaving and also brings about an active attitude and confidence since it is defined *the process [of action learning] helps us to take an active stance towards life and helps to overcome the tendency (merely) to think, feel and be passive towards the pressures of live* (McGill and Beaty, 1995: 21). The above aspects and practice of action learning infer that teachers may experience and benefit from the process of self reflection and social interaction.

In terms of the quality of teachers' knowledge sharing, I attempt to integrate action learning practitioners' (Bourner and Forst, 1996; McGill and Beaty, 1995; Weinstein, 1999; Zuber-Skerritt, 2002) perspectives on interpersonal skills involved in the process of action learning with the purpose of indicating further issues affecting the knowledge-sharing process, as follows:

- Recognition of benefits and achievements.
- Willingness to share knowledge for problem solving.
- Willingness to create change and make significant contributions to others and schools.
- Openness to new ideas, challenges, criticisms and feedback from others.
- Trust in self and others' ability to find solutions to a problem.
- Mutual respect for individuals' needs and differences.
- Listening to others carefully and questioning them critically in order to foster self and collaborative reflection.
- Honest, belonging and love developing friendships and also establishing a safe and caring place for learning.

### **Research Methodology and Instrument**

The case study research (Burton, 2000; Hamel, Dufour and Fortin, 1993; Stake, 1995; Yin, 1989, 2003) was conducted from September 2004 to January 2005 since it was regarded as the appropriate design and direction for much school-based research (Hitchcock and Hughes, 1995) and organisational studies (Hartley, 1994). An elementary school in Tao-Yuan County in Taiwan was selected due to the geographic convenience and six teachers (encoded as T1, T2, T3, T4, T5 and T6) from the school were involved owing to their voluntariness to

participate in the investigation. To understand the complex phenomena of how teachers share and create their knowledge in a school context, I attempted to employ a qualitative research method as observation to explore how social realities operate and influence on the daily practice of the six participants and the school (Berg, 2004).

### **Observation of Self-Facilitated Action Learning Set Meetings**

As specified previously, I intended to apply the notion of action learning (e.g. McGill and Beaty, 1995; Revans, 1983; 1998; Weinstein, 1999) in the course of the investigation with the purpose of bringing the opportunity for the six participants to experience the process of knowledge sharing and expansion as well as exploring how they share their experiences and ideas with each other and issues involved in the sharing process. In addition, I also attempted to evaluate whether the application of action learning carried out potential advantages for the individual participants.

Prior to the investigation, the six participants were informed that they would be involved in a self-facilitated action learning set (McGill and Beaty, 1995) and a written guideline was provided. The term, self-facilitation, means that the participants themselves take the responsibility to lead the process of the set meetings. The dates, time and person(s) in charge of the set meetings were negotiated with the participants. Once the above details were communicated, an action learning guide with a timetable was provided to the participants so that they might be able to know the direction of what and how they were going to do. The set meetings took place nearly once every two weeks for ten times (one to two hours). The major elements of the meetings comprised the use of autobiography (the first six meetings), the process of brainstorming (carried out mainly at the seventh, eighth and ninth meetings) and a focus group interview (the last meeting).

At the first six meetings, the notion of autobiography was employed as the means to assist both me and the participants to understand how they evolve, develop and change their knowledge in the way they were influenced and shaped by their personal experiences. In the course of each meeting, the leading participant shared his/her autobiography in either oral or written manner with other participants and attempted to generalise essential aspects according to the autobiography, which would be the focuses for the subsequent peer discussion. By the diagnosis of the autobiographer's own life collaboratively, it was hoped that s/he might be able to sketch his/her knowledge and clarify and theorise certain perspectives formed by his/her past experiences. Subsequently, the autobiographer was capable of connecting the reflection and analysis to form actions towards his/her future professional life. Moreover, the rest of the participants might be able to gain insights from the other's stories. Prior to the seventh, eighth and ninth meetings, I collected and disseminated issues or problems the

participants wished to shared and discussed with others, which could be generated from their classroom observational notes or their teaching diaries. The process of brainstorming aimed to increase the effectiveness of the participants' professional development by means of reflecting on their daily practices and issues cooperatively and continuously for emerging learning and subsequently more effective actions.

During the application of the self-facilitated action learning, I had the role as a facilitator to arrange the time and place for the set meetings; to collect and disseminate issues the participants wished to discuss before each meeting; and to prepare tea and snacks. As a result, the participants did not need to spend extra time to deal with the above chores and also a harmonious atmosphere might be encouraged. Unlike classroom observation, tape-recording and video-taping were the techniques adopted to record the process of the self-facilitated action learning set meetings so that the social interactions among the participants could completely be recorded. The discussion of each meeting was transcribed and distributed to the participants for their validation.

In following sections, I firstly describe how the six participants shared their knowledge through the self-facilitated action learning set meetings, secondly relate issues involved in the process of the meetings to the factors affected the process of knowledge creation and finally illustrate the participants' opinions on their participation in the set.

### **Knowledge Sharing Through the Set**

In the course of the set meetings, each leading participant firstly described his/her own autobiography. However, it appeared that they tended to purely describe what were happened in the past and to not reflect on how the past experiences influenced the development of their knowledge. As a result, before and on the 3<sup>rd</sup> meeting, I intended to remind the leading participant (T3) and the rest of them to try to think about how past experiences affected the development of their knowledge and also to generalise importance aspects of the autobiography for the subsequent discussion. Still, the rest of the participants seemed to follow the way how the previous participants described their autobiographies. Subsequently, in the brainstorming part, the participants intended to bring up issues or difficulties they had encountered; subsequently, others provided their opinions or suggestions in relation to their past experiences. For example, T4 asked T1 about the pupil whom T1 previously taught and afterwards T1 told T4 about the pupil's personality and how she helped the pupil in the past. Moreover, these issues or difficulties related to not only classroom teaching but also school affairs. For instance, T1 and T6 brought up questions such as how to prepare curriculum in order to increase its effectiveness and efficiency; how to implement performance achievement in order to provide a stage for pupils and also integrate teaching; how to create a

harmonious atmosphere between administrators and teachers; and how administrators and teachers could complement each other. At that time, the school confronted with inharmonious atmosphere resulted from the arguments between certain teachers and administrators about the preparation of curriculum and pupils' performance achievement. Sometimes, the participants shared their current practice of certain teaching techniques with each other. For instance, T5 asked T1 how she gave household jobs as one type of homework and subsequently how others related the discussion with the implementation of 'good sentence activity'. Besides the sharing of so-called tacit knowledge, T2 shared children storybooks and how she used the storybooks to educate her pupils certain meanings. Moreover, T5 also attempted to share books and CDs related to moral education and their usefulness. Furthermore, some participants complained certain events or people and the others tended to give them consolations. For instance, T4 brought up the argument she had with the Grade 3 teaching team leader and appeared to seek for opinions from other participants on the event.

### **Issues Involved in the Process of Knowledge Sharing**

Issues involved in teachers' knowledge-sharing process are classified as below.

#### **1) Motivation to participate in action learning.**

With reference to the six participants' willingness to join in the investigation, it was identified that T1 tended to have intrinsic motivation since her intention to join in the investigation was to broaden the knowledge related to this research and to share her teaching experiences with me. Besides, the rest of the six participants' motivation to join in the investigation tended to be extrinsic and was based on the social relationship with the researcher and the colleague. For example, T4 joined in the investigation because she was my sister's teacher. Moreover, T2, T3, T5 and T6 joined in the investigation because they got along well with T4 in the school.

#### **2) Attitude towards action learning.**

The six participants' attitude towards action learning was complicated to indicate and conclude. All of them excluding T4 prepared notes prior to describing their autobiographies and T3 and T6 even typed their autobiographies in written forms; T1 appeared to bring up more issues than other participants for set discussion; and T2 and T5 shared children storybooks as well as books and CDs related to moral education respectively. The above examples demonstrated that most of the six participants made great efforts to share their life and teaching experiences with each other and also attempted to absorb knowledge from others. However, it was identified that all of the participants seemed to not concern about their involvement in the implementation of action learning. Even I had reminded them I would collect issues they wished to

discuss in the seventh set meeting, they appeared to not understand what was going on when I asked them for the issues. Moreover, they tended to not put the participation of the set into the top priority when confronting with various circumstances simultaneously, such as talking with administrators or parents, preparing for exam papers and doing family affairs. Furthermore, in terms of attitude determining behaviour, T4 appeared to have more negative behaviours in the course of the set meetings. For example, she was the only one reminding me what time it was; she sometimes talked with other participants while the others were discussing; she was the only one who did not prepare the autobiography and told others she would only need twenty minutes to finish her autobiography; and she talked with an administrators loudly in front of the set members and also made pupils' achievement results while others were discussing in the last meeting. It was assumed T4's motivation to join in the investigation was based on the social relationship with me and therefore she tended to act in a perfunctory manner.

### **3) Time and opportunity issues engaged in the process of action learning.**

As argued previously, opportunity determined the quantity of teachers' knowledge expansion. It was proved that without providing the opportunity for the six participants to experience the process of knowledge sharing through the implementation of action learning, their experiences of joining in professional development initiatives would decrease one time. Furthermore, time issues were also engaged in the process of action learning. The time for the set meetings was arranged with the six participants on Fridays after working hour; however, they were always late. The meetings were last for no more than two hours. It was inferred that the participants' allowance of time for such activity was two hours even they were willing to join in the activity after working hour. Besides, the process of action learning was interfered with by administrators, parents or family. For example, T1 and T3 were late because of talking with parents; some administrators came and talked with certain participants while they were engaging in set discussion; and T5 always left earlier before five o'clock because she needed to pick out her children. That is to say, time for participating professional development activities might partially be intervened by a variety of factors.

### **4) Meeting management skills.**

It appeared that the six participants had the lack of meeting management skills; that is, being clear about the purpose and contents of each meeting and also being able to lead the flow of the meetings. For instance, in the forth and sixth set meetings, as T6 and T4 finished describing their autobiographies, they did not have time to practise the brainstorming activity. In addition, although I had told the six participants the notion

and purpose of self-facilitated action learning twice prior to the set started to cooperate, they seemed to lose the direction and focus of the set meetings at the beginning. Consequently, I reminded the participants to focus on experiences affected the construction of professional knowledge and educational beliefs when describing their own autobiography, to generalise essential aspects according to their own autobiography and to lead the process of the set meeting including moving on the stage of brainstorming in the third meeting. It was assumed that it was the participants' first time to engage in such an activity and therefore they might not be familiar with how it should be operated.

#### **5) Social relationship among the set members.**

T2, T3, T4, T5 and T6 had not only colleague relationship but also friend relationship since they (T2, T3, T4 and T6) travelled together during summer vacations. Moreover, as mentioned previously, T1 was regarded as one of the senior teachers in the school and therefore the participants tended to respect her. That is to say, the social relationship among the set members was fraternal excluding the relationship between T1 and T4. It was indicated that T4 had negative preconceived ideas about T1, which determined her behaviours such as expressing T1 was affectedly and criticising T1's issues as commonplaces in front of me in private. However, it was difficult for me to conclude whether T4's attitude towards T1 affected the process of knowledge sharing since it was appeared that T4 sometimes actively asked T1 questions but sometimes ignored T1's questions.

#### **6) Social interaction among the set members.**

I intended to create a relaxed environment, such as a staff common room, for the set meetings and therefore I arranged classroom furniture and prepared tea and snacks before each meeting. Moreover, I had held parties at the beginning and middle of the investigation with the purpose of making the social relationship among the participants such as trust stronger, which might also influence the interaction among them. Throughout the set meetings, the interactive atmosphere was identified as harmonious since the participants acted as talking with friends informally with laughs and without arguments. Besides, the participants were able to get feedback from others such as opinions or suggestions to overcome certain issues or problems as well as consolations to soothe bad moods.

#### **7) Researcher's support as the administrative support.**

As explained previously, my role in the process of action learning was regarded as the facilitator in terms of arranging time and place, preparing tea and snacks, providing

written meeting minutes and providing the written outline of issues to be discussed previous to the meetings so that the meetings could run smoother and the participants did not need to spend extra time to organise the meetings in advance. The above example implied that satisfactory administrative support was required when implementing activities for teachers' professional development.

### **Evaluation of the Set**

When asked the five participants' (T6 was not available to participate in the last meeting) opinions on how they regarded this self-facilitated action learning set, they all tended to have a positive attitude towards the set. They identified benefits by means of sharing teaching experiences and knowledge with each other. For instance, through the set meetings, they "*are able to find out the solutions immediately*" (T1) when confronted with issues or difficulties, "*to organise and integrate [their] thinking and experiences*" (T2) which they did not used to have time to accomplish, "*to encourage and assist each other in order to improve*" (T3) and "*to know how others think, integrate others' strengths into [their] beliefs and consequently modify [their] weaknesses continuously.*" (T5) Besides the above advantages, T4 expressed that her bad mood was calmed down after complaining certain issues with the set members. The evidence showed that the implementation of action learning assisted the set members not only technically but also emotionally. Furthermore, T1 pointed out that she wished to continue this action learning set even the investigation ended and all the other set members agreed with her. This inferred that the participants might realise the value of action learning and regard the practice as one of the useful strategies for their professional development.

### **Summary**

In this paper, I make an attempt to present a part of my Ph.D. research findings in regard to teachers' knowledge sharing and influential factors engaged in the sharing process through the implementation of action learning. Firstly, I argued that the nature and theory of teachers' knowledge are related to the epistemological perspectives of constructionism and address that both cognitive and social processes are involved in teachers' knowledge expansion. Secondly, I illustrated how the notion of action learning may bring advantages of teachers' self reflection and social interaction and therefore of teachers' knowledge expansion. Thirdly, I explained why the case study approach was employed and introduced how such the self-facilitated action learning set was applied and progressed in terms of knowledge sharing. Fourthly, I indicted issues involved in the practice of action learning and evaluated the effectiveness of such practice. Finally, I concluded that by means of working on the real issues or problems collaboratively, the six participants were able to organise their thinking and past experiences, to reflect on others' ideas or opinions and thus to modify their current practice if inappropriate. Simultaneously, they were also able to get emotional support from

the set members. That is to say, the implementation might be regarded as one of the useful initiatives for teachers' knowledge sharing and expansion.

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