
The use of public reflection circles and the promotion of metacognition: Teaching for autonomy and good practice

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Abstract

The purposes for this study range from the professional to the personal. We are university instructors who teach undergraduate and graduate courses about classroom processes, group development and facilitation, educational psychology, and change processes to pre-service teachers or individuals who use groups as vehicles for classroom, personal, community, or organizational learning and transformation. We are interested in how individuals in groups can co-develop expertise in practice. We are also committed to creating social environments in which individuals can learn, release their creativity, and become competent. Sometimes we are successful in this undertaking, and sometimes we are not. We would like to better elucidate and understand the powerful elements of this process, so we can implement them mindfully in the future.

Introduction

Groups are a common format for supervision when teaching skills within a practice area, such as teaching and group leadership (Craft 1998; Pavlovic & Friedland 1997). Within these, public reflection is a key tool for illuminating the inner world of the individuals under supervision. Public reflection is the practice of periodically stepping back in order to ponder and make explicit the meaning, to self and others in

the immediate environment, what has recently transpired, been planned, observed, and achieved in practice (Raelin 2000). It illuminates what has been experienced by both the self and others, providing a basis for future action.

It is generally assumed that the skills promoted within these reflection circles are metacognitive skills. Metacognition plays a central role when solving open-ended problems (Jausovec 1994), especially the skills of: problem recognition, definition, and representation; strategy formulation; and monitoring and evaluation of problem solving (Sternberg 2000). Metacognition is also a central and key feature of creative thought (Mumford et al 2003; Nečka 2003). In an open-ended field that depends on open-ended solutions (Wakefield 1989) such as teaching or group facilitation, metacognitive capacity can be an extremely important resource for the practitioner.

Although in-depth studies within a broadly-defined group situation have been undertaken in such apprenticeships as tailoring or midwifery (Lave & Wenger 1991) little has been done in the area of teaching, and none in the area of group facilitation. Research on the use of groups in education (communities of practice or problem-based learning) often do not detail the dynamic mechanisms and processes involved, focusing more on the products and outcomes of the metacognitive activity. Little has been done to chart the precise evolution of the metacognitive processes encouraged within such a social learning environment or how groups can help bridge the gap between novice and expert levels of metacognitive functioning. Professionals and trainers know intuitively that groups are useful for these purposes; however underlying and guiding theoretical models have not been developed to substantiate or refute these hunches. The focus of this inquiry was to chart this evolution.

Methodology

Since every group or classroom is different and unique, innovative thinking and reflective practice are required (Joy 2001) of group facilitators and teachers. This project attempted to illuminate the evolution of metacognition in order to begin to build a theoretical model of this phenomenon. It asked the question of whether a group of novices can build and establish shared metacognitive expertise.

Design

A qualitative methodology was selected, using an instrumental case study approach (Meador et al 1999; Yin 1993; 1994) since this method is more conducive to understanding meaning attributed by participants to certain events, how context influences actions, and the process by which events and actions take place, while also identifying unanticipated phenomena and generating initial theory propositions (Maxwell 1996).

Participants

The case was defined as a group of four novice group facilitators, women aged 23 to 45, who were also the teaching assistants for a university course in group dynamics (Stake 1994). Individual participants were seen as subsystems within the case.

One of the researchers, Rosemary, assumed the stance of complete member-researcher of the team (Adler & Adler 1994; Spradley 1980), since she was already a full member of the environment. Rosemary had been teaching this course since 1992. Being a complete member allowed her to grasp the depth of the subjectively-lived experiences and give an insider view; Gill, on the other hand, was able to balance this with the “outsider” perspective.

Practice Context

In order to position the development of metacognition as a support for praxis, we attempted to capture the phenomenon by locating and situating it in the natural world of the real life practice (Denzin 2002). The novice facilitators were teaching assistants in a university level course that attempted to teach the knowledge and skills associated with facilitating groups.

The course as a social framework

The course was an introductory course for undergraduate students in group dynamics. The goals of the course were:

- to provide experiences that help students to develop observational and diagnostic skills in groups;
- to acquire skills in competent participation and interventions in groups; and
- to acquire an understanding of the theoretical concepts of group development and the change process in groups.

The course used a “laboratory method”, in that learning was accomplished by the active application of theoretical concepts during involvement in a small group. This method entailed learning-by-doing (Kolb 1976; 1984). The course was delivered in an intensive format, that is, it met twice a week for three hours, over a six and a half week period in the summer of 2000.

Summary Of Data Collection Procedures

Various sources of data were drawn upon in order to map as fully as possible this small group of novices as a coherent knowing system, in order to understand it (Gruber 1988). In that the progression of expert metacognitive thinking is an ongoing process (Sternberg 1998), a developmental approach was taken.

Processing [debriefing] sessions

Stories are the closest we can come to experience as we tell others of our experiences (Clandinin & Connelly 1994). Telling stories as a way of sharing our internal world is such an intrinsic facet of our human culture that we often forget that these stories also shape our experience. One function of the processing sessions was to engage in retrospective sense making (Barrett 1999) in the form of telling stories of experiences.

Metacognition plays a central role in the development of expertise. Since these skills are modifiable, the metaformat of public reflection was used in order to surface and make explicit some of these processes and their relationship, as well as to transform storied experiences and observations into knowledge. Public reflection is a means of transferring individual learning into team learning into organizational learning (from the intrapersonal to the system);

- uncovers “theories-in-use”, those implicit assumptions and beliefs that guide actions;
- creates shared meaning and knowledge, which is the foundation for practice-based learning; and
- promotes reflective practice by developing a metacognitive perspective.

Directly after each class, the team convened to debrief and conceptually process the time each facilitator spent with her task group. The focus was on creating a reflective dialogue in which the participants could share their observations, stories, and understandings of the group process. It was also a time when the novices could identify interventions or leadership actions they took and subject them to critical consideration. This activity functioned as a way for participants to act as witnesses and audience to the stories of the others, co-constructing a conceptual understanding of each unfolding group process. As well, it provided an opportunity to determine a range of possible alternative responses for the next meeting of the task group. In this way, the focal process of the discussion was on moulding the salient features of the group’s development into a unified meaningful whole; this was an effort to practice “expert thinking” (Posner 1988).

In addition, this format of critical reflection allowed the participants to develop the ability to apply, reshape, and reform extant knowledge to the specific context in order to foster novel responses (Mumford et al 1994). These sessions were video taped in order to allow the voices and perspectives of the participants to be clearly recorded, and to create a fuller record of a social event than could be done with audio alone (Adler & Adler 1994). The processing times were opportunities for the team to open the “black box” of the mind and transform it into “glass” (Lave & Wenger 1991). The team tried to practise transparency in interpretations and understandings of how the groups and the class were progressing, how the development of each group was evolving, and what the groups and the class as a whole system needed in order to learn more effectively.

Individual interviews

In addition, each team member (except one who did not have time due to life commitments) was interviewed individually. The interviewing process was approached as a collaborative and interactive process, minimizing hierarchical relationships in favour of a joint enterprise approach (Oakley 1981). Using an open-ended conversational format in order to facilitate the development of trust, rapport, and maximum exploration of the phenomenon (Fontana & Frey 1994), stories were elicited, since this would be reflective of their consciousness (Vygotsky 1987).

Final group interview

It was also decided to use a group interview format, that is the systematic and formal questioning of all the participants simultaneously (Fontana & Frey 1994) in order to give the participants an opportunity to sum up the experience of the inquiry, to provide a rich data set, and to stimulate the participants to elaborate beyond the usual boundaries of expression constrained by individual interpretation. Group interviews tend to have a synergistic effect, generating more associations and insights than individual interviews (Morgan 1997; Vaughn et al 1996).

Data Analysis

The videotapes were then transcribed and rendered into text for analysis. Coding was undertaken using an open coding procedure (Strauss & Corbin 1998). However, rather than coding in disconnected, parsed categories which would need to be reconnected later, the technique suggested by Dey (1999) was used, in that a “category string” was generated in order to retain a holistic sensibility to the analysis. The string [a major representation] contains particular knots along a strand that was later plaited into the thread [subcategories linked to the major categories linked to representations], still connected through meaning.

Addressing Issues of Understanding and Trustworthiness

Maxwell (2002) suggested that understanding may be a more fundamental, and by extension, more useful concept than validity when considering qualitative research, since it refers more directly to accounts and inferences, the essence of the inquiry, rather than methods. Our overall rationale for using these methods was to utilize a coherence theory of truth approach that asserts that truth is coherence within a system (Lincoln & Guba 1985). The criteria that guided our work to ensure trustworthiness (Erlandson et al 1993) of the data were:

- credibility (in place of internal validity), that is, the extent that the constructions adequately represent the participants’ reality;
- transferability (in place of external validity) in that we took responsibility for adequately and thickly describing the experience so that those who wish to transfer this to another context can do so with an adequate data base (this is a particularly important dimension since systems are unique

in unexpected ways (Gruber & Wallace 1999), and therefore it may never be possible to make more than a few obvious generalizations);

- dependability (in place of reliability), that is, the data are internally coherent; and
- confirmability (in place of objectivity), that is, the extent to which the theoretical implications are grounded in the data.

These criteria are particularly vital if the purpose of the study is to describe or understand the experience of the researched, and not to predict or control that experience.

In order to promote the trustworthiness of the data, several safeguards suggested by Lincoln and Guba (1985) and Erlandson et al. (1993) were built into the project in order to provide a series of checks and balances:

- member checks: After the data were transcribed and coded, the description of the categories, along with the selections from the transcripts and their interpretations were circulated to the participants. Three of the four respondents were able to review the document, and all commented on how well this description mirrored their experiences;
- debriefing by peers (a no-holds barred conversation with a non-involved peer): Rosemary regularly reviewed the process of implementation of this inquiry with her dissertation circle and engaged in discussions during the analysis with Gill;
- triangulation in order to verify findings: videotape of sessions (planning and processing), individual and group interviews, participants' diaries, and recorded insights and researchers' notes;
- prolonged engagement and persistent observation: The total amount of time devoted to data collection was approximately 15 hours of planning sessions, 15 hours of post-session debriefing, which constituted the entire life of the group, and approximately 6 hours of interviews;
- thick description (Geertz 1973): a very detailed and evocative accounting of the codes for the processes within the inquiry was drawn;
- reflexive journal (a personal log to document and incorporate the state of mind of the researcher, biases that arise, commentaries, questions, hypotheses, and a cathartic section); and
- independent audit to examine the process and product of the data collection: A colleague who is both experienced with qualitative methodology and the field reviewed the data sources and critically examined the codebook.

Results

Since the literature has shown that metacognition is an important dimension of developing expertise, we examined the codes that reflected the main metacognitive

activity seen in this system: reflective practice and self-monitoring. These categories represent those statements that demonstrate knowledge about and awareness of one's own thinking and intervention processes that are specific to the field of group facilitation.

Statements that showed reflection about what one is doing in the role of facilitator were coded as the knot Process-Expert-metacognitive-reflective practice. These comments demonstrated the capacity to reflect on professional action so as to engage in a process of continuous learning and development. The interactions suggested the capacity to reflect in action (while doing something) and on action (after having done it). These included statements that integrated or linked thought and action with reflection, that is, thinking about and critically analysing one's actions with the goal of improving one's practice. In order to more clearly differentiate between who was using the metacognitive strategy so that we could uncover patterns of shared expertise, the knots for novice and expert were coded separately.

As can be seen from Table I, the frequency of novice reflective practice utterances far outweighs those of the expert. Part of this is due to the fact that there were four novices, but only one expert. Even when this is taken into account, the average is still slightly more than twice the number for the expert [$N= 62.75$ versus $E= 30$], suggesting the presence of shared metacognitive expertise and the role that public reflection plays in shaping this metacognitive thinking skill.

Table 1: Frequency Table of Code String for the Process Categories of Expertise

Code String	Sessions												Total
	<u>Early</u>				<u>Middle</u>				<u>Late</u>				
	Sessions 1-3			Sessions 4-9			Sessions 10-12						
	1	2	3	4	5	6	7	8	9	10	11	12	
Expertise-metacognitive													
reflective practice-E	-	1	1	3	1	-	-	3	14	4	1	2	30
reflective practice-N	14	24	26	15	32	18	16	10	35	4	10	47	251
self-monitoring-E	1	1	1	-	-	-	1	2	1	2	2	4	15
self-monitoring-N	16	15	24	13	28	24	16	19	24	8	23	32	242

A portion of this trend can be attributed to the individual's effect on the system since each participant expressed intentionality to engage in this activity. These novices were there because they wanted to improve their practice.

Lara: So I thought, I would... that [doing this teaching assistantship] would be a good opportunity to do that. Also, the course itself, I thought, was very very appropriate because it would give me also the opportunity to put into practice what I have learned... about groups and working in groups.

Rosemary: And so you saw that as a way of increasing your own... what?

Lara: My own knowledge, my own experience as well (personal interview, July 28, 2000)

We were all explicitly committed to and engaged in an effort to render transparent our internal processes. In addition, context in terms of the design using the format of public reflection encouraged this path of thinking and verbalization. This demonstrates that both the context (the format of public reflection) and intrinsic motivation (the intentionality to improve practice) can enhance metacognitive skills.

Self-reflective practice sometimes was expressed as doubt about what action to take, common for novices of all domains, seen here as Lara describes an event where she was at a loss how to respond to a student's question.

Lara: And I didn't know what to do with that, 'cause I had no idea, so I just... I just said, "Well, I don't know... I..." and smiled... (processing session 1).

However, sometimes this was expressed as certainty about actions taken, which can form the basis of the confidence that experts develop. Opal was faced with a puzzling situation when a group was very resistant to examining its own processes. But she was aware of her strong ethical position that it was her responsibility to make sure the group members gained some insight, despite their reluctance to face their process.

Opal: But, like, I felt I had to... "What are you taking with you? What have you learned? What happens when you go into a group next time?" (processing session 12).

By periodically stepping back from the experience, the novices were able to make explicit the meaning to self, by reflecting to an audience of others who were sharing a similar experience, what had recently transpired, been observed and achieved in practice during their time in the student group. Catherine became aware of some of the contextual features that determined her decision to intervene to clarify some of the underlying processes that were operating within her student group.

Catherine: And I felt like, okay, I could let them walk away totally miserable, and freakin' out, or should I say something? And it was so hard not to... So I said something (processing session 3).

Facilitators are not immune to some of the covert emotional dynamics that groups exert to evade responsibility (Bion 1961). Use of this metacognitive skill helped the novices create distinctions to what they were able to shape and influence or the extent of their responsibility for dynamics in the group.

Catherine: I know. I felt it when I was talking to them like, "Okay, I'm totally getting sucked into this" (processing session 3).

They also were able to become more aware of the emotional undercurrents inherent in group work. Ann was able to distinguish the fact that the group's performance in the presentation, and their subsequent grade, were not due to her process facilitation, but the group's steadfast ignoring of the criteria set out in the outline.

Ann: I don't remember ever saying this, but somehow... you have to blame somebody, so they blamed me.

Rosemary: You were the target.

Ann: I was the one! Anyway, then you start questioning... did I really...? But I know I didn't (processing session 12).

These contrasting positions provided them with a more realistic picture of their capacity, influence, and effectiveness in the role of facilitator, giving them a real sense of the limits of the ability to shape group process, or to merely reflect it. These ethical and psychological boundaries are extremely important for group facilitators and process consultants to maintain when working with groups, and are therefore necessary skills in developing shared expertise in this domain. This public reflective process also gave the group of novices the added advantage of illuminating the process facilitator's rationale for action.

Catherine: and I really did cut them off, because I felt they needed to leave with a little bit of a feeling like, "Okay, we at least know what we have to do for next week" (processing session 10).

A facilitator / process consultant must also consider an intervention of inaction. Being cognizant of the rationale as a basis for this choice, and making it more available to her conscious awareness, was also a by-product of this activity. Lara faced a choice of whether to confront one of the students who was distorting past group history in the last session, creating tension among members.

Lara: But I didn't say it, because I thought, okay, I'm going to create something else that I really, first of all...

Rosemary: Don't wanna go there.

Lara: No, and I don't feel that I have that responsibility to do something like that (processing session 12).

The metacognitive skill of reflective practice in turn forms a grounding for critical reflection and future action which can be fertile ground for creative thought (Wakefield 2003). In this way, mindful practice and more effective interventions rooted in solid theoretical frameworks are devised and "stored" for future use. Catherine was able to devise an effective intervention based on her reflection that the group was using a check-in ritual to waste time.

Catherine: And I'll give them that feedback in the processing next time, about maybe taking too much time... I won't say it like that, though (processing session 4).

However, many of these statements were the result of the social interactions among the individuals on the team, pointing to the shared nature of this emergence

of metacognitive expertise. During the early part of the processing sessions, reflective practice statements were most often activated by an effort to recreate the experience for others in storied form. Ann described the flurry of task activity in an early session.

Ann: They were flying, oh, they were right into it... I also didn't let them process for ten minutes, because it was just -- the conversation was going too quickly, so I only at the last five minutes, said, "Okay, we've got five minutes, you know we have to process. What did you observe about yourself?" Nobody can answer that yet. See, they only observe about the others (processing session 2).

Metacognitive reflective practice also appeared following a response to a comment, question, or observation by another member of the team, concerning some of the pressures inherent in a course in an intensive format.

Lara: And the rest was... small talk... where they've been.... what they're doing... vacations... really light inclusion.

Rosemary: Though there was a really strong theme, though, of "How come we have more work to do in less time than everybody else?"

Lara: And I didn't know what to do with that, 'cause I had no idea, so I just... I just said, "Well, I don't know... I..." and smiled (processing session 1).

In later sessions, reflective practice came to be seamlessly embedded within the observations about the classroom group shared in structural or organizational form. Public reflection took on a highly domain concept-driven storied format that focused mainly on salient process characteristics, rather than narrative detail. The only time this skill needed to be "nudged" by others through social exchange in later sessions was when the novice experienced a stress or crisis within the group, and was temporarily beyond the level of her present competence to deal effectively with the situation. Catherine was quite concerned about her susceptibility to be manipulated by the emotional dependency of group members around her position of "authority". She, in fact, was manoeuvred to become a "go-between" for two members who were engaged in conflict.

Catherine: Exactly. They're both doing the same thing. And ... any ways, what's going to happen now is: Zara said, "Could I call you or e-mail you and you could let me know Rosemary's take on this." They don't want to face it... they don't want to face it.

[Opal makes a motion of reeling a fish in with a fishing rod.]

Ann: That's what it's all about.

Rosemary [to Opal]: Yeah. Yeah.

Catherine: Honestly, they don't want to face it.

Rosemary: Did you just see what she did? Do it again, Opal.

Catherine: Fished in... fished in. But...

Rosemary: She hooked you and now she's reeling you in (processing session 9).

This interchange illuminates how the group was able to create a window for Catherine to examine a dynamic of which she was momentarily blinded. This points to the collective scaffolding of the metacognitive skill of reflective practice.

Statements that demonstrate self-awareness and self-management strategies that involve observing one's own behaviour or recording its occurrence while engaging in a task or activity were coded as the knot Process-Expert-metacognitive-self-monitoring. This is the mental act of knowing when one does or does not understand, or the extent to which a person perceives and regulates awareness, observations and assumptions. This metacognitive skill can alert the individual as to the progress they are making, and if the avenues being pursued are fruitful.

Again, as seen from Table I, the frequency of the knot for novice self-monitoring utterances far outweighs those of the expert. Adjusting for the difference in numbers, the average is still four times more than the expert [N= 60.5 versus E= 15]. Similar effects were observed, as for reflective practice, regarding the influence of the format of public reflection, the impact of social interaction with others, and the importance of intrinsic motivation to engage in improving practice.

A key concept in the domain of group facilitation, process consultation, and transformational change is the sophisticated notion of "self-as-instrument" (Funches 1995; Hanson 2000). The use of self as instrument focuses on the incorporation of personhood and relational skills as necessary tools for competency. In particular, self-examination and awareness in the areas of self-esteem, self-actualisation, the ideal self, and personal and cultural self-awareness are deemed essential. Coding for the statements that demonstrated self-monitoring suggests that this was becoming an emergent characteristic of these novice facilitators. These utterances gave them the opportunities to explore and verbalize the unsureness that is endemic to being a novice. When asked a question about a domain specific term, Ann surprised herself by demonstrating competency.

Ann: So then I explained what a norm was, and thought, "Thank goodness I remember!" [Laugh] (processing session 1).

It also highlighted their awareness of the borders of their own perception. Opal became aware of how she was relying on conjecture rather than concrete observation in puzzling out a group member's reaction to her intervention. This awareness also alerted her to the intrinsic limitations of this source of data about the group's processes.

Opal: And I think she had the impression that I felt... here's an assumption, but... that I felt that they should be disclosing things of more... a more personal nature (processing session 8).

It was also a time to "normalize" the fact that these problem spaces that were discussed during the public reflection time were open and ill defined, and that there were areas where we all lacked clarity and full understanding.

Catherine: ... when you say stuff about your group or you pick up on something, you actually made me realize a lot of this stuff I'm not getting in my group (processing session 10).

The self can be used as a powerful instrument of diagnosis, much like a barometer to measure air pressure, for some of the implicit and subliminal dynamics that are occurring in the group. In describing a group that was characterized by

intense frenetic and unfocused task activity, Catherine pinpointed her own bodily reactions to such an environment.

Catherine: I was getting a headache just watching them. I was totally... I felt so much tension in the group, because there were some members that were trying to vocalize and they couldn't, because there's too much going on. They were like... [strangled sound] (processing session 6).

However, no facilitator is infallible nor immune from misdiagnosing the situation and dynamics.

Lara: Yeah, well, they kind of said, "Yes, we're in openness, yeah!" They were all excited because they thought, you know, they'd passed the conflict, and they were in openness. At the beginning, honestly, I was a little bit fooled, and I thought, well, maybe they'll... you know, they'll be okay (processing session 11).

Self-monitoring skills provided a ground for these participants on which to compare their own insider experiences with what they observed from the outsider role of the facilitator. In finding her place in a new situation, Catherine reflected and compared her reactions in this situation to similar ones she had had previously.

Catherine: I kind of felt a little uneasy like... ooo ... you know, like I'm in a position where ordinarily I'd be.. probably be older, you know. So I felt a little bit uncomfortable about that (processing session 1).

It also became an opportunity to acknowledge their individual strengths and interests. Ann explained her awareness of one of the lens she used to focus her observations in the student group.

Ann: I also found that the roles that everyone's playing... that is my personal interest. I like roles, so I'm watching that (processing session 2).

Novices were able to measure and identify their own emotional reactions to the events within the group that could shape their interpretations. Opal became conscious of her empathetic response to one student that prompted her to intervene, but this was balanced by the concern for another. In weighing these two considerations, Opal was able increase the clarity about the group's task, and still have students feel comfortable in the environment.

Opal: I didn't want Lydia to feel as if she was left out, and I didn't want Oscar really to, you know, take anything badly (processing session 3).

It also functioned as a window to their "shadow side" (Arrien, 1993) that might, more alarmingly, skew their subsequent interventions. In this exchange, Lara revealed her own irritation at a student who was excessively complaining about other members' behaviour.

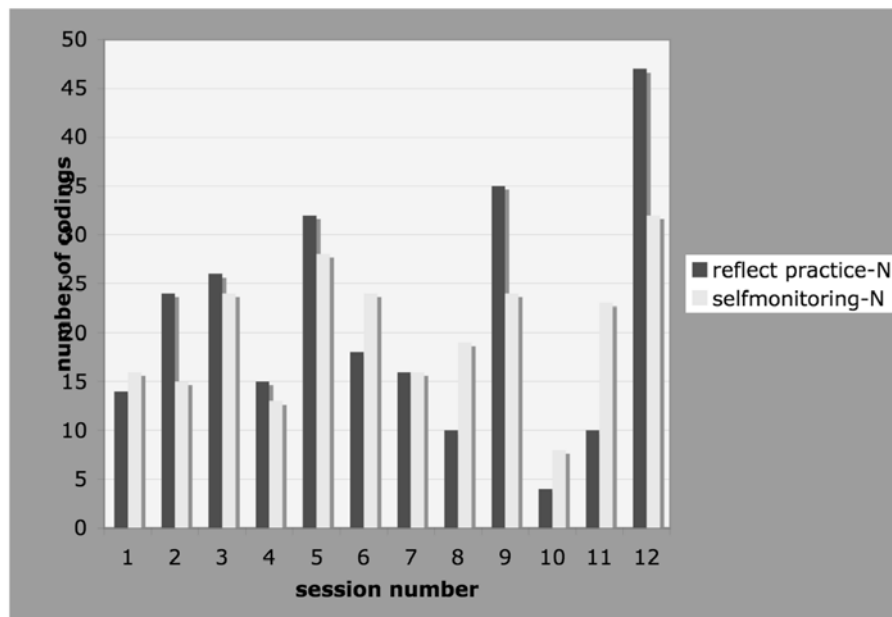
Lara: Yes, me too... and I started to get very annoyed. I didn't do anything, obviously (processing session 12).

All of these opportunities to self-monitor their own behaviour, thoughts, and reactions were times when they could fine tune themselves as more expert instruments. Generally, the reflective practice and self-monitoring statements demonstrated the emergence of the key ability to navigate the foreground of events

within the group with the background of mindful intervention and awareness and use of self as an instrument for group process consultation.

The process pattern seen in Figure 1 does demonstrate that key metacognitive skills can flourish over time with the format of public reflection. Novices can pool together expert metacognitive skills that can collectively compare favourably to those of an expert.

Figure 1: Process Pattern for the Novice Categories of Expertise



Support from the literature

Metacognitive expertise shared and constructed on the social plane as seen in this inquiry was achieved by offering multiple perspectives and insights which became part of the consciousness and the experience base of the other novices in the social system. This may be because stories are co-created through questioning and answering. This process also can trigger memories which allow for taken-for-granted incidents to be subjected to reinterpretation and restructuring (Barrett 1999). Public reflection as practiced here created virtual and vicarious experiences that drew on the strengths of case-based learning (Donmoyer 1990), which are:

- accessibility, which took the novices to places they have not yet been, expanding the range of interpretive options;
- seeing through another's eyes, which fostered perspective-taking and enhances the development of mature relationships and the skill of conditionality;

- elaborating cognitive structures and knowledge connections by using different perceptual and theoretical lens; and
- creating a collaborative climate of learning which defuses feelings of defensiveness and resistance when basic assumptions are challenged.

Within the reflective dialogue, participants, through joint metacognitive action were able to create a common set of meanings to understand the 4 groups. In this way, each participant through the social interaction imaginatively took on the role of the other three novices in vicariously living this experience yet constructing significant and unique meaning from it. Certain descriptions and assertions in narrative form provided the opportunity for vicarious experience; listeners extended their memories through the creation of parallel experiences, and thereby added to their propositional and experiential knowledge (Geertz 1983; Polanyi 1983). The listener then came to know some things told, as if she had experienced them. This created a living case on which to draw on in the future (Stake 1994). Theory to practice links function to apply, reshape, and reform extant knowledge to the specific context in order to foster novel responses (Mumford et al 1994) which can then be carried into the future. In a sense, the sharing of multiple perspectives allowed the participants to create multiple packages of situated knowledge (Lave & Wenger 1991) that could be activated or reformulated in the future. These multiple packages of an approximate / virtual / “borrowed” prior exposure (shared expertise) to a problem could be used.

Implications for Practice

Metacognition as socially shared

An important concept to emerge from the analysis of cognitive activity in naturalistic settings is the notion of socially shared or distributed cognition, in that cognition is not just a product of one head, but a product of several heads in interaction with one another. We actively mould and influence each other’s knowledge and reasoning processes, also building epistemology on the basis of what we are told by others (Resnick 1991) and are, therefore, not bound by the limitations of any one person’s cognitive capacity or experience. Social cognition, then, is an effort to give meaning to the persons and tasks with which we are interacting and to make sense of the processes with which we are engaged (Perret-Clermont et al 1991).

The patterns evident within this inquiry point to the likelihood that shared metacognitive expertise is a product of social cognition. Each individual used her conversational “turn” as an arena to practice her metacognitive capacity, and in turn, examined and shaped the metacognitive musings of the other novices in an effort to clarify ideas (an intrapersonal process) or create common understandings and meanings (an interpersonal process). Public reflection allowed increased access (Lave & Wenger 1991) to how experts and novices think, decide, and translate into action their conceptions of group development and intervention. Organized multivocality (Resnick 1991), vicarious participation engineered by listening to each other’s narrative constructions, and comprehension as a private achievement were

realized, but through collective interaction. The individual's private comprehension was then shared. This introduced it back into the collective space, thus allowing information proposed and skill demonstrated by one to be observed and assimilated by all. This then created the collective comprehension (Hatano & Inagaki 1991) indicative of social cognition.

Reflective practice as a rehearsal for creative improvisation

Schön (1983) refers to reflective practice as the ability to integrate professional experience with theoretical formulations to produce solutions to problem situations. It is a skill that cannot be taught, but can be coached. By reflecting on knowing-in-action, we can reveal all sorts of know-how in intelligent action, and render explicit the tacit knowing implicit in action. This then allows the emergent professional to examine under scrutiny what influences actions, both theories-in-use and espoused theories, which include values, strategies, and underlying assumptions. Explicit discussion allows individuals the opportunity to translate tacit experiential knowledge into propositional form (Donmoyer 1990), rendering more visible the partial hypotheses they may use to approach future problem definition or problem finding.

Though Schön (1983) contends that it is not possible to design an intervention for an action that has not yet happened, since contextual features are unique, this inquiry suggests that collective public reflection, and the accompanying process of reflective practice, allow novices to

- 1) clarify underlying beliefs and values that act as an orienting compass for future interventions, and
- 2) generate a range of possible options for response.

Lara, in particular, originated an interesting metaphor to elaborate the latter dynamic.

Lara: So I took... I accepted her idea. I took it in. I put it in my bag of ideas that... that lives in my brain, like a shopping bag. I love shopping, but that's another story. So I learn from everything I do. I take it in. That's... that's one thing about me. So I put her idea in my little shopping bag (personal interview, July 28, 2000)

Lara suggests that each and every possible solution and intervention that was elicited in the context of the public reflection can be stored and used at some point in the future when deemed appropriate by the context and the practitioner. Sharing experiences, interweaving perceptions, and reshaping meaning in a social system then raises facilitation and group process consultation as practised in this inquiry to the level of a joint performance. Collective reflective practice using a long-term, developmental multiple case-based approach seems to be an effective way of creating metacognitive expertise in the domain of group facilitation and process observation, and in promoting flexible approaches to ill defined group situations.

Activity is generally improvisational in nature (Lave 1993). Improvisation is combining, recombining, and varying a set of figures or actions within a schema

which bounds and gives coherence to a performance. The extensive discussion of reflective practice and self-monitoring gave each novice a deep reservoir of schemas on which to draw. Moore (1994) suggested that improvisation is built on several key characteristics, including thinking in a reflective-practice mode which reflects how “gaps” came to be and different ways of framing the problem for solution. Improvisation then begins as a form of hypothesis testing and continues until the problem can be either solved or reformulated. Therefore, an improvisational approach allows facilitators and group process consultants to constantly change both the problem context and the solution context.

But the theatre of improvisation is not in people’s heads, but in their public acts (Joy 2001). Participation in a community of practice develops a constitutive role in learning for improvisation (Lave & Wenger 1991). Therefore, it is in the teaching of these skills within this domain in a group format that allows for this foundation to be established. Improvised responses to situations in authentic contexts set the stage for expert metacognitive learning (Bateson 1999) and provide a springboard to expand and enrich the set of social constructions available for practitioners.

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