This paper explains the use in teacher preparation of a psychoanalytical tool called the repertory grid, examining how the grid has been successfully integrated into physical education teacher preparation courses. Within the process reported here, student teachers engaged in semi-autobiographical reflection on the roots of their personal beliefs and knowledge about teaching physical education. Findings from studies using this approach suggest a postmodern perspective on knowing teaching based on individuals' relational quality to a context. This relational quality allows student teachers to acknowledge an evolving, changing perspective on the complexity of teaching. Such an acknowledgement enables them to transcend the limits of their biographies of being taught as they develop competence and resourcefulness within their communities of teaching. This paper demonstrates the process of developing and re-rating a repertory grid. Data from one student teacher's conversation on interpreting the grid are offered to show how the grid enables student teachers to frame and re-frame their relational quality to their practice in schools. A general review is given of emerging findings from 70 student teachers who have used the repertory grid process. (Contains 24 references.) (SM)
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Title:
STUDENT TEACHERS' TRANSCENDING THE LIMITS OF THEIR PAST: REPERTORY GRID FRAMING NARRATIVES FOR LEARNING TO TEACH

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STUDENT TEACHERS' TRANSCENDING THE LIMITS OF THEIR PAST: REPERTORY GRID FRAMING NARRATIVES FOR LEARNING TO TEACH

PURPOSE

The purpose of this paper is to explain the use in teacher preparation of a psychoanalytical tool known as a repertory grid (Kelly, 1955). The paper will examine how the grid has been successfully integrated into physical education teacher preparation courses. Within the process reported here, student teachers engaged in a semi-autobiographical reflection on the roots of their personal beliefs and knowledge about teaching physical education. Findings from studies using this approach suggest a post-modern perspective on knowing teaching based on what Gergen (1991) has referred as individuals' “relational quality” to a context. This relational quality allows student teachers to acknowledge an evolving, changing perspective on the complexity of teaching. Such an acknowledgement enables pre-service teachers to transcend the limits of their biographies of being taught as they develop competence and resourcefulness within their communities of teaching. This paper will demonstrate the process of developing and re-rating a repertory grid. Data from one student teacher's conversation on interpreting the grid is offered as evidence to show how the grid has enabled student teachers to frame and re-frame their relational quality to their practice in schools. A general review is then given of the emerging findings from seventy student teachers that have used the repertory grid process.

INTRODUCTION

Historically, research shows that student teachers will initially teach the way they were taught (Britzman, 1991; Lortie, 1975). Physical education research indicates that novice PE teachers not only teach the way they were taught, but often teach the way they were coached in elite sports (Siedentop & Locke, 1997). The biographies of physical education student teachers tend to show them as body-slim individuals who have been socialized by the rigors of highly competitive sport. It is expected that such experiences encourage prospective physical educators to adopt, unquestioningly, more elitist didactic teaching approaches that rarely relate to the learning needs of the diverse ability of children in most physical education programs.

In teacher education generally it has been argued that schools socialize student teachers into traditional, outdated pedagogy or that teacher preparation programs do not equip pre-service teachers to handle the demands of teaching (Tabachnick & Zeichner, 1984; Zeichner & Liston,
1987). In a review of current literature on learning how to teach, Wideen, Mayer-Smith and Moon (1998) point out that our understanding of how people learn to teach has greatly expanded in recent years. However, they highlight that what is discovered depends on how one conceives of what is to be learned by prospective teachers and how they learn it. This study has focused more on what Wideen et al (1998) have termed a progressive tradition based on understanding what student teachers know and how that knowledge is acquired. As such, this study draws on principles of learning associated with a constructivist orientation to teacher education (Richardson, 1997).

THEORETICAL FRAMEWORK

To understand teaching the studies reported here consider teaching knowledge to consist of three layers of knowledge -- personal, contextual and professional.

I. Professional or communal knowledge develops from a community of agreement. This community can be the profession of teaching, the sub-discipline within a subject area of teaching, or a community of peers engaged in related educational endeavors. For a person's professional knowledge to develop and adapt there has to be an adequate social network to converse with colleagues, to construct and re-construct teaching ideas and re-enact experiences of teaching.

II. Contextually situated knowledge.

This knowledge develops for the teacher in classroom settings with contextual and interactional episodes and cues. Contextual knowledge for teaching evolves from the enacted teaching act and the resulting learning that can be perceived by the teacher as he or she develops as a teacher. Contextual knowledge develops from the "feel" of teaching and the reactions of learners to planned and responsive teaching episodes.

III. Personal knowledge related to personal beliefs and experiences.

This knowledge relates to the experiences and ideas that a person draws upon in order to teach and evolve as a teacher. Beliefs, values, attitudes, biases and disposition are terms that relate to this personal knowledge. Clandinin and Connelly (1994) have referred to this pre-articulated sense of teaching as personal practical knowledge. Teaching is a dynamic process that is constructed and continuously re-constructed, as a teacher frames new experiences into personal practical knowledge on teaching.
In the process of educating teachers, the teaching profession has traditionally relied upon what has been termed a technical or technocratic rationality (Schön, 1987). Technical rationality develops an objectivist theory of teacher knowledge that implies that professional knowledge is a process of problem-solving, and professional competence is the skillful application of theoretical knowledge to the instrumental problems of practice. However, in teaching, the 'ends' are always contentious; they tend to be unruly; and often conflicting. The problems of the real world do not present themselves as givens, but as "messy", 'indeterminate' and 'problematic' situations which arise because of 'conflicting values'" (Carr, 1989, p. 9). Professional knowledge offers recommended alternatives, but professional knowledge does not fit the "messy" context of teaching. To understand the teaching context teachers use personal knowledge from their frameworks of knowing. In teacher preparation we need to help pre-service teachers become aware of their own personal knowledge of teaching as it constructs their understanding of teaching in a context, and then to adapt professional knowledge to the perceived needs of students.

METHOD AND DATA SOURCES

The repertory grid is a matrix. As shown in Figure 1 the matrix contains elements of interest as developed by the respondent student teacher on the horizontal axis and bi-polar descriptors (known as constructs) on the vertical axis. In this research to construct repertory grids student teachers were asked to select from a pool of teacher role titles (e.g., effective high school PE teacher, ineffective coach) representing a cross-section of their past effective and ineffective teachers. By classifying teachers they had experienced as effective and ineffective, participants decided the bi-polar constructs that, in their opinion, implied effectiveness in teaching. These teacher roles represented the type of teachers most physical education teacher education students would have experienced through their school experiences. Using the repertory grid process a matrix was developed where each teacher role from a participant's past was rated on a bi-polar construct using a one to five rating scale ('1' very positive and '5' very negative).

Once the elements and constructs were elicited, the computer software Shaw (1991) creates a grid, as shown in Figure 1. The computer software shows the clustering of number patterns for the elements and bi-polar constructs. This clustering process highlights the commonalities between teachers that the participant identified as effective and as ineffective, offering a frame of reference for understanding teaching. The computer software also indicates the bi-polar
constructs that have similar ratings for all the teachers considered. Such clusters construct the student teachers’ themes on effective teaching.

During a follow-up interview/conversational on the grid the student teachers were asked to explain why certain elements and bi-polar constructs clustered. All conversations were audio taped and fully transcribed from a sample of fourteen the student teachers. The sample was self selected based on the availability of student teachers to complete the post-practicum interview. A majority of the student teachers finished their teacher preparation program after completing their final practicum and were not available for a re-rating of their grids and an interview. Those student teachers completing a post-practicum interview were given their initial and final interview transcripts back for agreement and editing where necessary.

RESULTS

An example of a student teacher’s grid, Stacy is shown in Figure 1. The clustering identified by the computer software led the student teacher to articulate the themes shown by italics in Figure 2. Stacy was in her final year of a four-year joint honours degree in physical education and secondary education. She had previously taught in a school in a four week teaching practice. Stacy was a very good sportswoman who as a student in a school had always been one of the best athletes. During the teaching practice associated with this study Stacy taught for nine weeks in a large Suburban high school. The school was situated in a middle to high socio-economic catchment area, with a population of approximately eight hundred students. After an eight-week teacher practice, the student teacher re-rated her initial grid, which generated adaptation to her original themes. The student teacher’s re-rating of past teachers in light her experience of teaching led to anecdotal evidence from her that showed how she had re-constructed or, as Schön (1986) described, reframed, her teacher knowledge.

In the first interview on the cluster of the bi-polar constructs, Stacy felt that effective teaching comes from “teachers being fair and impartial because they allowed different options for students. They were inventive...addressed different learning modalities.” Rather than shutting learners down with “my way or the highway,” effective teaching meant you had to “Open up
learners.” For Stacy, “OPEN UP LEARNERS” became a theme for effective teaching. In addition, Stacy felt that the bi-polar construct “Love what they do - not genuine” really referred to a theme of teachers being “RECEPTIVE TO NEW IDEAS.” The bi-polar constructs “Energetic - Unprofessional” and “Enthusiastic - Inconsistent” were important as a theme of “INSPIRE STUDENTS WITH ENERGY” As Stacy said,

Energy and enthusiasm are very personal to me...people will feed off my energy or if I want to I can feed off other people's energy or stay away from other people because they suck the life out of me.... For a kid who is apathetic towards school, if you are super energetic person I think they just sense that 'I am not going to beat this person, I might as well give it a shot.' You have to get through to those kids.

At this point felt she could attract students to an activity with her energy, could inspire students to learn, because she could “beat” them with her energy.

On completing her teacher practice, Stacy's re-rated grid produced the themes shown in Fig. 3. The themes “Inspire students with energy” and “Receptive to new ideas” disappeared as Stacy's focus went away from on the teacher role. Her new grid developed from a more integrated focus on the teacher relationship to all students, the teaching milieu of the school and a more holistic understanding of subject matter. In the interview on the grid Stacy re-defined “Open up learners” as something that is not centered on the energy or charisma of the teacher. Rather, to get students to learn relies more on finding “what is appropriate for the learners, what would relate to what they want.” As said:

Well like in Badminton, basically I made a transition I think...I am really “gun ho” on making things new and being enthusiastic and having different things, and it was too much all at once...not appropriate. Did not develop kids learning though I thought modified games were fun. With them [students] the whole thing they were not into it, they just wanted to play. So I would make up tournaments and had them run their own tournament...I realized energy could not carry you for very long...I thought 'This does not work I have to be more perceptive of their needs than almost my needs...I just think I was trying to open-up learners with the wrong strategies sometimes...Appropriateness I mean I had to eventually just run a badminton tournament. How boring, I don't do a thing...if all lessons like that I would not feel very important. I changed things in the tournament but still it was not what I loved about teaching.
Stacy felt that she wanted to teach by example and enthusiasm but she realized that to “open up learners” she had to make an environment that gave students the freedom to play. Though this strategy worked in the context Stacy “did not feel important,” she felt that “Maybe, I should be teaching younger children...The reality of it, rather disappointing to me, is you cannot be as inventive in high school, or maybe I have not found out how.”

Stacy explained her theme of “INSPIRE STUDENTS TO LEARN” as the teacher enabling students to take responsibility for their learning environment and for each other. She told the following anecdote to explain how her experience in the school had developed this theme:

_It was the first day of the team handball unit. In the gym there was an upper part where there were weights for a work out. I had been told that the procedure in this unit was that...half of the class play and the other half go upstairs to do weights and watch...This put the students in an area where you could not see what they were doing. My co-operating teacher planned to sit upstairs, but he forgot and the students were kind of out of control...voices from above. I could not supervise while I was officiating...I could just feel that I was losing it._

_The next day my co-operating teacher was away sick and I had a substitute teacher ("sub"). The kids are like “Ha! Fun time with the 'sub'." The "sub" went upstairs but that did not turn out much better. Another disaster...I thought I was almost going to die._

_I had to make the kids accountable for their lack of sportsmanship, lack of respect for me and for each other...I turned the court into two courts which they had never done at the school...I dropped the curtain...I posted the tournament up [two pools of teams] and for each game that was playing there was two teams plus one team officiating. One team was assigned to “ref.”, score keep and assign sportsmanship points. Instead of having half of my kids sitting off I now had everybody busy...They flicked the score charts and assigned sportsmanship points which could be from plus three to minus three. This total would be tacked onto a team’s goal score at the end of the game. The officiating team was from the other pool so they were neutral...after the next class was over I sunk down with relief, sitting on the floor_
in the empty gym...In the lessons I...watched what was going on, I totally needed that. I needed to take myself out of the center of attention...

On that first day with the new system...I said “You want the ref. to be fair to your team, and you know you are going to be reffing [sic] somebody else so all of a sudden it is important to be fair.”

They still complained but not at me. They would say, “This is so unfair.” It was perfect I was so happy. They would say, “Bring back better refs. We want you to ref.” On the last day I gave them the choice of a full court or my new game structure. Only two people in the whole class wanted to play full court. They all wanted to play my new game.

Interviewer: That seems inspirational to me.

Stacy: Well my co-operating teacher said, “That was awesome to get the kids to accept a different game. That has never been done here before. You beat the system. We will use that.”

This new construction of effective teaching situated ’s teacher knowledge as she integrated her personal and professional knowledge into practice. To “inspire students to learn” Stacy had to take herself out of the center. Stacy’s narratives showed how her relational quality to the context of teaching shaped her new understanding of teaching as she professionally and personally transformed the context of teaching.

DISCUSSION

The key of the repertory grid process is to focus on the themes. The grid helps student teachers to create connections about teaching that they can then put into words. In Kellian terms, Stacy used the repertory grid process to observe, analyze and explain how she started to construe student learning based on her beliefs about effective teaching. From Stacy’s perspective, her stories showed how she was able to identify problems (“I had to make them accountable for their lack of sportsmanship, lack of respect for me and each other”), and she was able to go against tradition (“that has never been done here before”) to “inspire students to learn.” Stacy expanded her construction of PE subject matter from a focus on physical skill performance to the importance of “improving group dynamics” and developing students’ attitudes to physical activity, as she said, “feeling good about themselves.”

Before her practicum Stacy wanted to be the teacher that led by example, whose energy attracted
others to be physically active. The sense of being at the center of a PE lesson had roots in Stacy’s experiences of being a top student athlete in school. Stacy recognized that as a student she was favoured, “given special treatment.” Although she saw this as ineffective teaching practice, the experience may well have framed her initial actions and expectations as she tried to be at the center of the lesson, the “super energetic person.” However, when students did not respond and in the case of the Team-handball unit “verged on out of control,” Stacy’s response was to “take herself out of the center of attention.” She sought to “open students up to learning” and “inspire students to learn” by making them accountable for all the roles in running a game. Gore (1990) and others have commented that the PE profession attracts a largely homogeneous population of successful sport players. As students in schools these sport players have been privileged in their PE lessons. Stacy indicates how experiencing this “favoured” position shaped her desire to be the center of attention as a teacher of PE lessons, to “be important.” Though this ‘centering’ of the teacher role may not be unique to PE, Britzman (1991) has also noted it in teacher education generally; it may be additionally magnified by experiences in elite sports. Such a desire in prospective physical educators needs further research.

POTENTIAL AREAS OF RESEARCH FROM REP GRID INTERVIEWS

Seventy repertory grid interviews have been conducted with student teachers as a reflective practice task within teacher preparation courses. The majority of responses from PE student teachers have focused on effective coaches from their past, coaches who were instrumental in their success as athletes. Occasionally, PE teachers or other teachers from student teachers’ pasts come up as model teachers. It is these teachers, rather than the coaches, that offer the frame to understand the principles and concepts of effective teaching in PE. The coaches, though inspirational in a particular sport, rarely offer the strategies for teaching that transfer into effective PE teaching. The influence of experiences being coached as an athlete on PE teachers’ development as physical educators needs more crucial examination.

From examining the repertory grid themes of student teachers before a practicum and after a practicum it is noticeable how the focus of the themes move from teacher role and subject matter to a more holistic view including the students and the teaching milieu. I have found Schwab’s (1969) commonplaces, teacher, student, milieu and subject matter, a particularly useful framework in recognizing this shifting focus. Kagan (1992) in her review of learning-to-teach literature notes a similar shift in student teachers’ focus from teacher and subject matter to students and the context of teaching. This shift makes sense, however the question remains of how aware are student teachers aware of their own shift in focus? And, how would an awareness
of this initial focus and expected shift help student teachers in their growth as effective teachers? Both these questions needs further research.

The final area of interest is the metaphorical language. In Hopper (1996), the repertory grid interviews revealed individual student teachers’ strong descriptors for teaching. These strong descriptors implied a metaphorical frame. Such a frame offered insights into the ways in which the pre-service teachers generated possibilities and interpretations (Munby, 1986; Schön, 1979). As Lakoff and Johnson (1979) have suggested for root metaphors in language, and McWilliam (1994) has shown for student teachers advancing through a teacher preparation program, the implicit metaphor we use in describing our understandings frame the options we see in our experiences. The conversation on the repertory grid allows the student teachers to use their natural language to describe what they believe. This natural language used by student teachers to describe teaching changes after a field experiences as they re-construct their memories of past teachers. For example, in Hopper (1996) a student teacher Ted felt that “energy” was a key theme for effective teaching. Initially, Ted felt that students would metaphorically catch his energy, that is was “infectious...like a cold.” After his first practicum he felt that "kids feed off your energy." This idea of students "feeding" off a teacher's energy placed Ted at the center, as the source of energy. However, in a negative sense, feeding off Ted's energy can create an image of a teacher being drained of energy. In Ted's words, "The kids were just feeding off it...When I went home I was exhausted."

A year later, in Ted's third interview his understanding of energy had changed. Ted’s following story highlights this change.

*To get the kids excited about the topic I asked them to discuss their favourite music with a friend...The door was open and the noise was rising. I realized I needed to get the children back on track, but I did not want to shout and bawl. After all, I wanted them to get excited.... I went over to Elaine. I got on well with her so I knew she would respond. I asked Elaine, very quietly, what her favourite music was...Our discussion got very intense, but quiet. As we were talking, the rest of the class started to take an interest. In a few minutes all the class was silent — they wanted to know what we were talking about.*

Ted's low-key alternative strategy to shouting to get control avoided a confrontation with the class energy. The class was excited and interested in the topic. They were 'energized'. There
was no need to control them, just channel their energy. On reflection, Ted felt that this story highlighted his new sense of energy. For Ted energy in teaching was from the class energy that he, as the teacher, “ignites but also draws from as the students bring their energy to the learning.” This metaphorical language offers an interesting insight into change in teacher thinking about teaching. Future research will assess how this metaphorical language changes for student teachers after a major field experience and how the change connects to their self-reported insights on their teaching. Recognizing change will enable student teachers to assess their own personal growth as they develop an identity for teaching.

EDUCATIONAL IMPORTANCE

Rossi (1997) noted that the repertory grid process allows student teachers to ‘see differently’ the meaning of their memories and their unquestioned understandings. This re-seeing connects to Schon’s (1987) notion of re-framing because the repertory grid elicits storied snapshots of participants thinking at a particular time. Diamond (1991) explains that the narratives about self and teaching which the repertory grid reveals teaches student teachers “to compose their own narratives...chart their way through their present and towards their future stages of development as teachers” (p. 41). Rather than complain, “teachers teach the way they were taught” we need to use teachers’ frames of reference for teaching to enable them to see alternatives, to construct reality with a more enabling frame. The grid enables student teachers to research their own teacher identity, to gradually map their own development, as they combine personal, professional and contextual knowledge of teaching. The repertory grid process sponsors student teachers' voices as they take responsibility from their own professional development. The repertory grid offers a reflexive tool that allows pre-service teachers to transcend the limitations and constraints of the histories and biographies that have shaped them. Future research will seek to integrate the repertory grid process into senior teacher preparation courses to offer student teachers a systematic reflective tool that enables them to engage in self-study. Such self-study will enable student teachers’ to construct personal knowledge of teaching in relation to professional knowledge and contextual knowledge as they frame their understanding of effective teaching.
REFERENCES


Figure 1 - An example of a student teacher's grid

Figure 2 - Themes constructed by the student teacher from the grid analysis

Figure 3 - New clustering after the student teacher had re-rated her original grid
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