

Transforming beginner teacher mentoring interventions for social reform

 Tanya Smit and  Pieter H du Toit

Department of Humanities Education, Faculty of Education, University of Pretoria, South Africa
pieter.dutoit@up.ac.za

This article reports on an investigation into the use of action research for beginner teachers' professional development through the use of peer mentoring. Action research principles were applied by the mentor and the participating mentees/peers, forming a scholarly community of practice. The mentees were empowered to transform their teaching practice by applying the principles of Whole Brain[®] Learning (Herrmann, 1995) as a means to enact the role of facilitator and to take responsibility for developing scholarship of teaching, as it is aligned with the role of scholar and lifelong learner. The mentor (first author) who also was a beginner teacher at the time of the execution of the research project, had to enact the same roles with a view to transforming her mentorship practice, thereby enacting the role of transformative leader (Wolvaardt & Du Toit, 2012). Data collection methods included brain profiling and feedback questionnaires, observations, and video and photographic evidence. Some of the qualitative data collected by means of a feedback questionnaire are reported. Facilitating the mentoring programme offered the mentor the opportunity to develop professionally by using action research as a means to taking responsibility for her professional development per se.

Keywords: Action research; learning styles; mentoring practice; professional development; teaching practice; teaching styles; Whole Brain[®] Learning; Whole Brain[®] Mentoring; Whole Brain[®] Teaching

Introduction

As researcher, I as first author examined the application of the principles of action research and the application of the principles of Whole Brain[®] Teaching for beginner teachers' professional development, through the use of Whole Brain[®] Peer Mentoring. I consider this approach to mentoring to be an innovative contribution to our understanding of mentoring in the context of educator professional development in general, and a way of bringing about 'reform' of mentoring as suggested by Cartaut and Bertone (2009). This reform of mentoring resonates with the ideas of Chaliès, Bertone, Flavier and Durand (2008), who also advocate the moving away from the traditional approaches to mentoring. As the focus is on the 'self' my reporting is presented in the form of an auto-ethnographic narrative (Du Toit, 2013, 2014, 2015). This focus is relevant in the light of the array of work by scholars, who investigate beginner teacher behaviour. Research studies in North American school districts have established that approximately 40 to 50% of teachers exit the profession within their first five years (Anderson, 2000; Ingersoll & Smith, 2003; Maciejewski, 2007). The president of the National Commission on Teaching and America's Future considers the following as a reason for this phenomenon: "they leave for many reasons, but lack of support is at the top of the list" (Carroll, 2005:199).

As a beginner teacher and researcher at a primary school in South Africa, I have never received any support from a mentor. I had difficulty in maintaining the quality of my facilitating of learning, and wanted to promote quality learning in my teaching practice. While searching for a solution, I discovered an innovative concept, namely the Whole Brain[®] Teaching Programme (Biffle, 2002, 2004), which is an education reform movement. This programme focuses on promoting the principles of Whole Brain[®] Learning (Herrmann, 1996) as part of a learning-centred approach (Du Toit, 2012). I refer to Whole Brain[®] Teaching as the approach used to activate Whole Brain[®] Learning during a learning opportunity. At the time of the commencement of this peer mentoring programme, I realised that all the principles of different theories that concern my teaching practice and the beginner teachers' practice should be applied in my mentorship practice. I wanted to, in the words of Mullen (2000), who conducted a study on mentoring within the French education system context, become more confident as mentor, writer about mentoring and a knower, thereby collectively embracing the construct 'scholarship of mentoring'.

Having applied the principles of action research and the principles of Whole Brain[®] Learning inter alia in my teaching practice, and after investigating the effect Biffle's (2002) programme had on it, I decided to use it to support other beginner teachers/peers in guarding over some of their biggest concerns. I focused on implementing a peer leadership role in the form of mentoring as part of my own and other beginner teachers' professional development. Consequently, in the sections that follow, my professional development as beginner teacher should be read in tandem with my professional development as mentor.

Beginner teachers' professional development requires reconsideration in the changing education sector. The stark reality is that when beginner teachers are left to 'sink or swim', the costs for schools and districts are tremendous (David, 2000). Apart from the cost implications, one is confronted with the question: how can a beginner teacher taking part in an 'education sink or swim gala' be empowered to help transform society? Society in the context of my study entails the school environment in the broadest sense – including the school community at large, infrastructure, stakeholders, etc. A teacher's teaching practice can be considered a micro-society and the wider community a macro one. Any endeavour to transform a specific situation or society in

general should start with the *self*. The construct *self* should be interpreted in the widest sense of the word: the *self* as a person; the *self* as a group, etc. Therefore any beginner teacher professional development intervention should offer participants opportunities for self-empowerment. The construct (self-)empowerment is to be found in the work of scholars such as Mullen (2000). The specific focus of this study is on the self as teacher 'own practice', the mentor, and mentorship. With this clearly in mind, action research that allows one to take responsibility for one's own professional development and transforming one's teaching practice (McNiff & Whitehead, 2006) is considered an appropriate approach, entailing the enactment of the role of transformative leader (Wolvaardt & Du Toit, 2012). The purpose of the larger research study was to determine what effect the application of the principles of Whole Brain® Learning and action research as innovative ideas had on the professional development of beginner teachers through peer mentoring. However, due to the limitations in terms of word count as prescribed by the guidelines to authors, the focus of this article is on the thinking styles profiling of participants only. It is acknowledged that the larger research study provided for an array of data gathering methods and related outcomes that could have been reported.

No evidence of similar studies focusing on a Whole Brain® Approach to mentoring, using action research as a process for professional development in the South African school education context could be found. International scholars would find the study significant, as it provides a lens on individual teachers taking a leadership position in terms of the mentoring of peers in a South African context. This lens further offers international scholars the opportunity to learn about the South African education context from an asset-based point of view. The participants, their attributes and educational values, are considered assets that enrich their mentoring and teaching practice.

Theoretical Framework

The study reported in this article is rooted in constructivist theory, since the beginner teachers implemented action research (McNiff, Lomax & Whitehead, 1996) and Whole Brain® Teaching (Herrmann, 1996) while focusing on the following: "learning experiences and activities that are constructive, cumulative, self-regulated, goal-orientated, situated, collaborative and individually different" (De Corte, 1996:147). Mullen's (2000) study of mentoring in the French education system context shows it to be collaborative as well as practitioner-centred, experiential, research-orientated, reflective and empowering. And French authors on mentoring of educators, such as Chaliès et al. (2008) concur that mentoring is collaborative

and hands-on work experience. Jaworski and Huang (2014) who write about mentoring in mathematics teaching, is in agreement that mentoring is collaborative. The construct of collaboration is apt in the context of the study under discussion, as it translates into peer mentoring, which brought about reciprocal professional learning as integral part of my mentoring programme.

As a constructivist approach was followed throughout the mentoring programme, the following words of Gravett (2001:18-19) are apt: "Constructivist theories share some commonalities with behaviorist and cognitive theories for they focus on actively involving learners in learning and structuring knowledge frameworks so that these learners can extract maximum amounts of data." If this is true for learners, the same applies to mentees/beginner teachers in terms of professional learning, i.e. mentees as learners. In the context of my study, the participating teachers actively constructed meaning as they shaped and built frameworks (Greyling & Du Toit, 2008) to make sense of their teaching practice and professional development.

I realised that in order to mentor beginner teachers, I had to focus on their experience of successful implementation of innovative ideas in their teaching practice and their professional development, although some scholars such as Mitchell, Rosemary and Logue (2009) suggest that the focus should not be so much on their professional development. The rationale for my decision is that competence in facilitating learning and other related competencies within a constructivist action research-driven teaching practice (De Jager & Du Toit, 2010; Wolvaardt & Du Toit, 2012) cannot be separated from any other aspects of practice and development.

In this study, I focused on the use of mentoring as a way of influencing beginner teachers' professional development. Professional development is considered an essential mechanism to deepen teachers' subject knowledge and to transform their teaching practice. The following definition of the construct professional development clarifies its meaning:

It is concerned with growth, which requires nurturing in a conducive environment. It is an interactive process whereby professionals learn to practice as they learn about practice, not so as to adopt current practice unthinkingly, but to appreciate it critically. It must be practice focused. It also needs guidance and support, not just from someone older and wiser, but from fellow learners. Finally, it involves transformation, sometimes painful, at other times exhilarating, but essentially involving newer insights into one's self and one's engagement with good practice (Coles, 1996:152).

As indicated in the previous section, I consider Whole Brain® Learning as an innovative idea that forms an integral part of the professional develop-

ment of the participating beginner teacher. This theory is briefly explained next.

As the study reported revolved around a Whole Brain® Approach to mentoring and active participation, the following words of Reppas and Lufti (2006:24) are of significance: “the creative power of the brain is released when human beings are in environments that are positive, nurturing, stimulating and that encourage action and interaction.” Herrmann (1995:17) is of the opinion that man’s brain dominance is expressed in the way in which one thinks, learns, understands, solves problems and expresses oneself. He calls these actions cognitive preferences, or preferred modes of knowing. Teachers must accommodate and activate all the cognitive styles of learners during the learning process, and so should the mentor accommodate and activate all the cognitive styles of mentees. Thinking styles are defined by Herrmann and identified by the HBDI® (Herrmann Brain Dominance Instrument) not as fixed personality traits, but, to a large extent, as learned patterns of behaviour (Coffield, Moseley, Hall & Ecclestone, 2004:169).

Herrmann (1996) synthesised his construct of meaning regarding thinking styles, based on initial brain research by researchers, and years of their own research into the ways individuals learn. His construct of meaning led to the design of the so-called ‘four quadrant’ model. This metaphoric Whole Brain® Model is based on the following principle: “four interconnected clusters of specialised mental processing modes, that function together situationally and iteratively, making up a whole brain in which one or more parts become naturally dominant” (Herrmann, 1996:14).

It has been documented (Buzan, 1991; Knowles, 1990) that effective learning takes place if the whole brain is involved. In my own teaching practice, Whole Brain® Teaching is used to consider its effect on the quality of learning. Herrmann (1996) agrees that diversity of approach is needed to increase the overall level of learner engagement, and chances of success.

The following table indicates the expectations of learners in terms of the four quadrants referred to in the comprehensive Whole Brain® Model designed by De Boer, Du Toit, Scheepers and Bothma (2013). In brief, the A-quadrant mainly represents fact-based learning; the B-quadrant sequential learning; the C-quadrant emotive thinking, and the D-quadrant experimental and holistic learning. The table indicates the expectations of mentees and those aspects that they struggle with as per the respective quadrants. Specific indications within a mentorship situation are given, as the focus of the article is on mentoring. However, the same expectations or aspects mentees struggle with are true for mentors and individuals finding themselves in other contexts.

The peer mentoring of beginner teachers was approached against this background. Beginner teachers are considered as novices when they are in their first five years of practice (Mitchell et al., 2009). Veenman’s (1984) international review of perceived problems among beginner teachers has been found remarkably consistent across time and education systems. The following are some of the greatest challenges that were perceived then and are still present today: classroom management, motivation of learners, dealing with individual differences among learners, assessing learner work and relations with parents. It was also established by an international study that in countries as different as China, New Zealand and Switzerland, today’s beginner teachers experience the same problems (Britton, Paine & Raizen, 1999). Dealing with individual differences among learners was taken as essential phenomenon to explore under our group of beginner teachers’ collective scholarly lens.

Mentoring is a core focus of this study, as is constructivism. It therefore makes sense to consult constructivist mentoring. Löfström and Eisen-schmidt (2009) outline the critical constructivist theory that I applied in order to transform teaching practice by engaging novice teachers and peers in collaborative inquiry with equal participation. Research has shown that 60% of principals feel that a mentoring programme is one of the most influential resources for new teachers (Brock & Grady, 2007). Novice teachers need support. They also tend to need additional knowledge, skills and support in the areas of classroom management, planning of learning opportunities, comprehension of curriculum, school policies, procedures and effective communication skills with learners, parents, and fellow teachers (Amoroso, 2005; Brock & Grady, 2007).

In the mentoring programme under discussion, the focus was on addressing the specific needs of novice teachers regarding addressing different needs of learners and planning learning opportunities, in order to empower them to construct their own meaning. I consider the ideas of Fultz and Gimbert (2009) to be outdated. They still refer to the needs of novice teachers to be gaining knowledge and insight into what is necessary for increasing learner achievement in the classroom setting. No reference is made to the building of scholarship of teaching by means of collaborative and reciprocal learning within a community of practice (Du Toit, 2013) that follows a constructivist approach to professional development (Greyling & Du Toit, 2008).

In my constructivist mentoring practice, I used the following self-managing learning approach (Holbeche, 1996) in terms of my peer mentoring relationships: five peers formed a mentoring group; they met periodically and went through a process of formulating professional

development objectives as individuals and reviewing the progress in group meetings. Many participants commented on the value of tapping into one another's ideas, challenges and support over a period of time.

The motivation for this peer mentoring

relationship was to offer opportunities to the participating mentees for professional learning in order to construct new meaning in terms of all the competencies they needed to acquire to ensure the highest quality of learning (Slabbert, De Kock & Hattingh, 2009).

Table 1 Mentee expectations according to the different quadrants (De Boer et al., 2013)

Quadrant	Expectations of mentees	What mentees struggle with
A	<p>A-quadrant mentees expect:</p> <ul style="list-style-type: none"> - precise, to the point information from the mentor - theory and logical rationales for executing tasks - proof of validity - references to relevant sources - reading text - to work with figures, numbers and data sets - expertise in a field of specialisation 	<p>A-quadrant mentees struggle with:</p> <ul style="list-style-type: none"> - expressing emotions in peer mentoring or mentee/mentor relationships - lack of logic during mentoring sessions and argumentation - the communicating of vague, imprecise concepts or ideas during mentoring sessions
B	<p>B-quadrant mentees expect:</p> <ul style="list-style-type: none"> - an organised, consistent approach during mentoring sessions - the mentor to stay on track and on time - the mentor to work with complete units of learning (subject chunks) - mentoring sessions to have a beginning, middle and end - opportunities to evaluate what they have implemented in practice - the mentor to work with examples - to receive clear instructions/expectations from the mentor 	<p>B-quadrant mentees struggle with:</p> <ul style="list-style-type: none"> - taking risks - experimenting with innovative ideas - ambiguity - unclear expectations/directions from the mentor
C	<p>C-quadrant mentees expect:</p> <ul style="list-style-type: none"> - group discussion and involvement during mentoring sessions - to share and express feelings/ideas with other mentees and the mentor - to be offered opportunities for hands-on learning - personal connection with other mentees and the mentor - emotional involvement - a user-friendly mentoring experience - using all the senses during mentoring sessions 	<p>C-quadrant mentees struggle with:</p> <ul style="list-style-type: none"> - too much data and detail given by the mentor - lack of personal feedback from other mentees and the mentor - direct training or instruction, lack of opportunities to participate
D	<p>D-quadrant mentees expect:</p> <ul style="list-style-type: none"> - to have fun during mentoring sessions - opportunities to participate in a spontaneous fashion - playful, surprising mentoring approaches - the mentor to work with visual representations, metaphors and overviews - discovering new meaning - freedom to explore - quick pace and variety in mentoring format - opportunity to experiment with innovative ideas 	<p>D-quadrant mentees struggle with:</p> <ul style="list-style-type: none"> - keeping up with administration and details necessary for documenting progress during the mentoring programme - lack of flexibility in the mentoring programme

Action Research Design

Education in South Africa is deemed to be underachieving at present, and the research design used is considered a powerful process for change and improvement or even innovation and transformation. As an educator, I consider myself one of the key contributors to the transformation of education in South Africa, as advocated by Engelbrecht and Harding (2008). As part of my contribution, I opt for reflecting on my practice in a scholarly way, through the use of action research. I therefore believe that the change in our school

system should start in my teaching practice (our teaching practices). My urge to contribute to the social transformation in general and in the classroom specifically is driven by my belief in creating a community of practice through peer mentoring. This community of practice that inter alia has scholarship of learning and teaching as outcome aims at promoting the professional development of all participants. Whitehead (1993) concurs that it is through enquiring into our own practice that we are able to create a living form of educational theory: action research is referred to as

insider research and consequently action researchers engage in a form of professional development (McNiff et al., 1996).

My reason for introducing action research to the novice teachers as a means of addressing our professional development is that it is a practical process and generally does not require elaborate statistical analysis (Tomal, 2010). Therefore it was less problematic for all participants to administer it in our school settings. At the end of the mentoring intervention, two of the beginner teachers took part in an educational conference, showing evidence of their professional growth. This professional growth was set out as outcome of the mentoring programme. It also shows how a scholarly community of practice is established.

I consider action research to be distinguished from other research designs, because of the collaborative effort of the researcher in working with the participants (subjects) and developing action plans to make improvements (Tomal, 2010). Instead of referring to making improvements, I agree with Du Toit (2012), that it rather should be about transforming practice. Action research can take on a variety of forms as Cochran-Smith and Lytle (1993) have demonstrated, and can be individual or collaborative undertakings. Collaborative forms can be collaboration between teachers and outsiders, such as university researchers (Feldman, 1999) or collaborations among teachers that Feldman (1999) refers to as collaborative action research. The latter is used in the study reported, where I as the mentor and principal researcher worked with the other novice teachers to take action within our individual contexts in order to transform practice and to come to a better understanding of our respective practices.

McNiff et al. (1996) affirm that well-conducted action research can lead to one's own personal development, to better professional practice, to transformations (improvements) in the institution in which one works, and to making a contribution to the good order of society.

The Action Research Process

The following summary of the essential components and methods of action research (Carr & Kemmis, 1986:165-66) is widely accepted:

Three conditions are individually necessary and jointly sufficient for action research to be said to exist: Firstly, a project takes as its subject matter a social practice, regarding it as a form of strategic action susceptible to improvement; secondly, the project proceeds through a spiral of cycles of planning, acting, observing and reflecting, with each of these activities being systematically and self-critically implemented and interrelated; thirdly, the project involves those responsible for the practice in each of the moments of the activity, widening participation in the project gradually to include others affected by the practice, and

maintaining collaborative control of the process.

In this study, different spirals are present: the primary spiral – represented in the middle of the figure below – is the action research I conducted in a prior study in my own teaching practice. The outcome of this research is not reported in this article. However, it included the mentoring sessions I conducted with the five novice teacher participants/mentees. Mentoring is the core of this article that is reported. The secondary spirals represent the beginner teachers' administering this research design in their teaching practice. I implemented it in this manner, as I wanted to determine the effect action research and Whole Brain® Learning had on the beginner teachers' professional development.

Figure 1 illustrates this process by means of a visual representation. As has already been mentioned, I refer to several spirals in my study as illustrated in the figure. My action research study of the mentoring sessions is the primary spiral. In this spiral, various cycles are visible. The prior research I conducted in my own teaching practice is where Cycle 1 commenced. I presented a paper on this research at the Education Association of South Africa (EASA) 2010 conference (De Jager & Du Toit, 2010). Cycle 2 was concluded during the current study reported, when I conducted action research on my constructivist mentoring practice as a peer mentor to the five beginner teachers. The outcome of this research was reported by means of a paper at the EASA 2011 conference (Du Toit & De Jager, 2011). At this conference, two of the participating mentees acted as co-presenters (Du Toit & De Jager, 2011), which provides evidence of a major next step they had taken in terms of their professional development. It also provides proof of establishing a scholarly community of practice and promoting scholarship of learning and teaching (Du Toit, 2012).

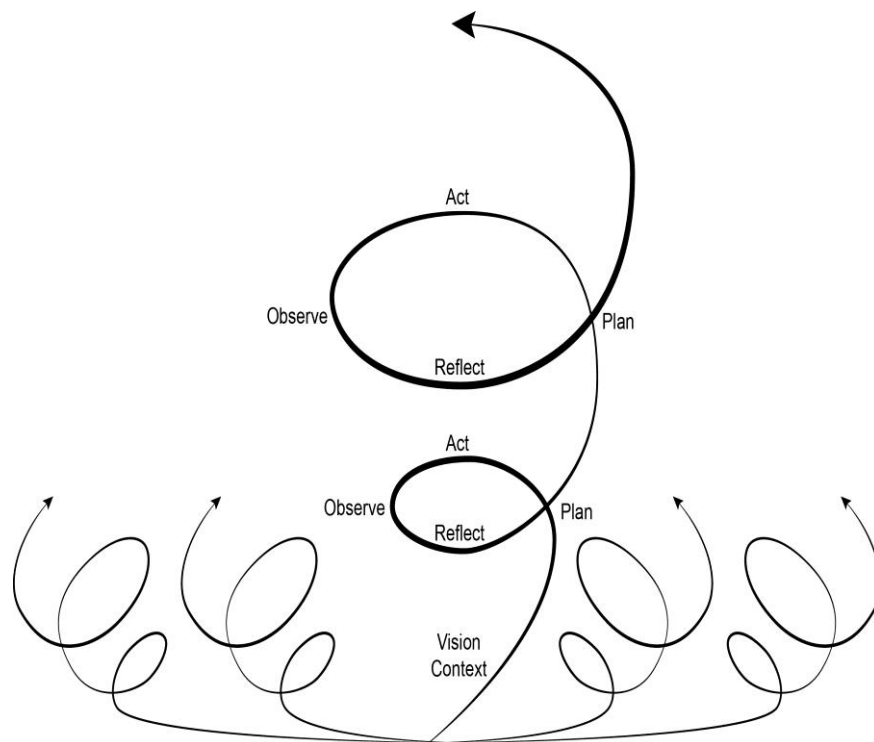
The four spirals emerging from the primary spiral as illustrated in the figure represent the action research conducted by the four active mentees. I consider the action research model, based on the work of Du Toit (2012), Fringe (2012), McNiff et al. (1996) and Zuber-Skerritt (2000) as a simplified representation of the action research executed by a scholarly community of practice.

Participants

I selected peers that could best help me understand the central phenomena of transforming teaching practice, using action research for monitoring professional development, establishing a community of practice, promoting scholarship of learning and teaching, etc. They were teachers from three different Afrikaans-medium public primary schools. The participating beginner teachers were involved as mentees. Each mentee was located in Pretoria, South Africa, and in his or her first five

years of teaching. Two mentees were in their first year of teaching, one in her second, and two in their third year of practice. One of the novice teachers unexpectedly had to undergo an operation, because of which he missed three mentoring sessions, but received the beginner teacher manual that I had

developed, as well as all the other relevant material. This mentee did not actively participate in the collaborative action research executed; therefore the inclusion of four secondary action research spirals only, as there were only four active mentees as alluded to above.



PROFESSIONAL PRACTICE ACTION RESEARCH PROCESS

Figure 1 Model reflecting the execution of action research in a community of practice

Primary Action Research Spiral

Four mentoring sessions were conducted during the primary action research spiral. My role was that of facilitator, co-researcher and peer mentor. The purpose was to consider the effect the application of the Whole Brain® Teaching approach and action research through peer mentoring would have on the professional development of these beginner teachers in terms of enhancing the quality of learning.

The participants completed two feedback questionnaires about the mentoring programme, and my facilitating of the group sessions. They were required to indicate the regularity and use of the following aspects: discussions, use of educational technology, activities, attention to their personal goals, consideration of their professionalism and how mentoring was conducted, and applying the principles of Whole Brain® Learning. From the feedback it is clear that the majority of the mentees had a very positive experience during the mentoring programme.

Secondary Action Research Spirals

The mentees conducted action research of their own practice as depicted in the secondary spirals. They had to reflect on a learning opportunity they had facilitated through the use of a video recording, questionnaires and observation sheets.

It was concluded that the beginner teachers' perceptions regarding their classroom practice had changed from the first reflection done during the introduction in session one to the final session completed at the end of the mentoring programme.

The learners in the learning environments of four mentees liked Whole Brain® Teaching a great deal. In one mentee's classroom, the learners had various opinions. The majority liked it, while diverse feelings were expressed. This mentee was the only one who indicated in his personal reflection that he did not like this approach to facilitating learning. I therefore sense that the sentiment of a teacher and his or her thinking preferences can affect the feelings of learners. However, it is clear

from the quantitative data that although he is not in favour of Whole Brain® Teaching, the majority of the learners had a different perception, as they liked it.

The initial problem identified was that no organised formal mentoring support is given to beginner teachers at their respective schools (and the wider South African education community) to address the difficulties they experience. The five beginner teachers implemented Whole Brain® Teaching in their contexts to consider its effect on enhancing the quality of learning. Action research was used by the participants to observe and reflect on their teaching practice.

The semi-structured interviews identified the following variables that cause the uncertainty that beginner teachers experience in the profession and in their teaching practice: staff politics, classroom

management, difficult parents, adaptation to change, lack of respect and support for novice teachers.

The mentoring programme designed by me, the peer mentor and principal researcher, focused on the professional development of the participating mentees. Everyone indicated the importance of a mentor for beginner teachers. The mentees pronounced during discussions the need for two different mentors in a school setting: a personal/general mentor dealing *inter alia* with emotional aspects, and a subject mentor. They were of the opinion that the mentors should be chosen in accordance with the HBDI® Profiles – indicating individual thinking preferences – established by all the staff members. Figure 2 below is a visual representation of my thinking preferences.

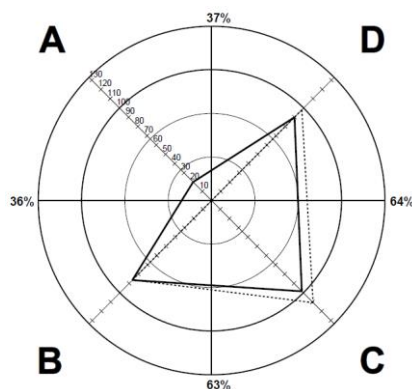


Figure 2 Profile of my thinking preferences
(The four-quadrant graphic is a registered trademark of Herrmann Global, LLC)

My profile can be interpreted by means of the primary preferences (indicated by a 1), secondary preferences (indicated by a 2) and tertiary preference (indicated by a 3), in sequence referred to as a preference code. My preference code is 3-1-1-1. This means that I do not have a preference for the A-quadrant mode of thinking (see attributes outlined in table 1); but do have a preference of the B-, C- and D-quadrants of thinking. Such a profile is considered triple dominant. As a mentor, the profile characterises me by a fair amount of balance between the organised and structured processing modes of thinking and problem solving. This indicates that I most probably would approach my mentoring practice in an organised fashion. Coupled to this are the interpersonal and emotional modes of thinking and problem-solving, and synthesising and creative modes of processing. The dotted line is an indication of my shift in thinking preferences when I am experiencing stress. My profile is quite different from most of that of the mentees¹ as depicted in the figure below. It should be kept in mind that the dotted line indicates the stress profile of each individual.

To illustrate the significance of thinking style profiling in a mentoring context, some examples in terms of my profile and the alignment with that of the mentees are explained next.

From the figure below, it can be detected that mentees 1, 4 and 5 have a triple dominant profile, while mentees 2 and 3 have double dominant profiles. According to the profile of Mentee 1, he has a tertiary preference for the C-quadrant mode of thinking. This may indicate that he does not appreciate attributes related to the C-quadrant, which is people-orientated. This is in contrast with my own profile, which shows a tertiary preference for A-quadrant modes of thinking, while his A-quadrant is the most preferred and the C-quadrant my preferred mode of thinking. In a mentor relationship this may bring about tension. The profile of Mentee 4 is an indication that our preferences are more aligned. This might be an indication that in a mentoring relationship it may be easier for us to communicate and collaborate. Since I have a primary preference for the D-quadrant and Mentee 2 a secondary preference for the same quadrant it means that I most probably may contribute to her

developing of innovative ideas that she can implement in her teaching practice. While both of us have a primary preference for the B- and C-quadrant, it might be an indication that we may find communicating and collaborating with one another quite easy. The secondary preference for B-quadrant thinking, as illustrated in the profile of Mentee

3, may be an indication that the mentee is more disorganised than I am, as my profile shows a primary preference for this quadrant, since I take an organised approach towards executing tasks. As mentor, I may contribute to this mentee's potential of becoming more structured, in especially his design and offering of learning opportunities.

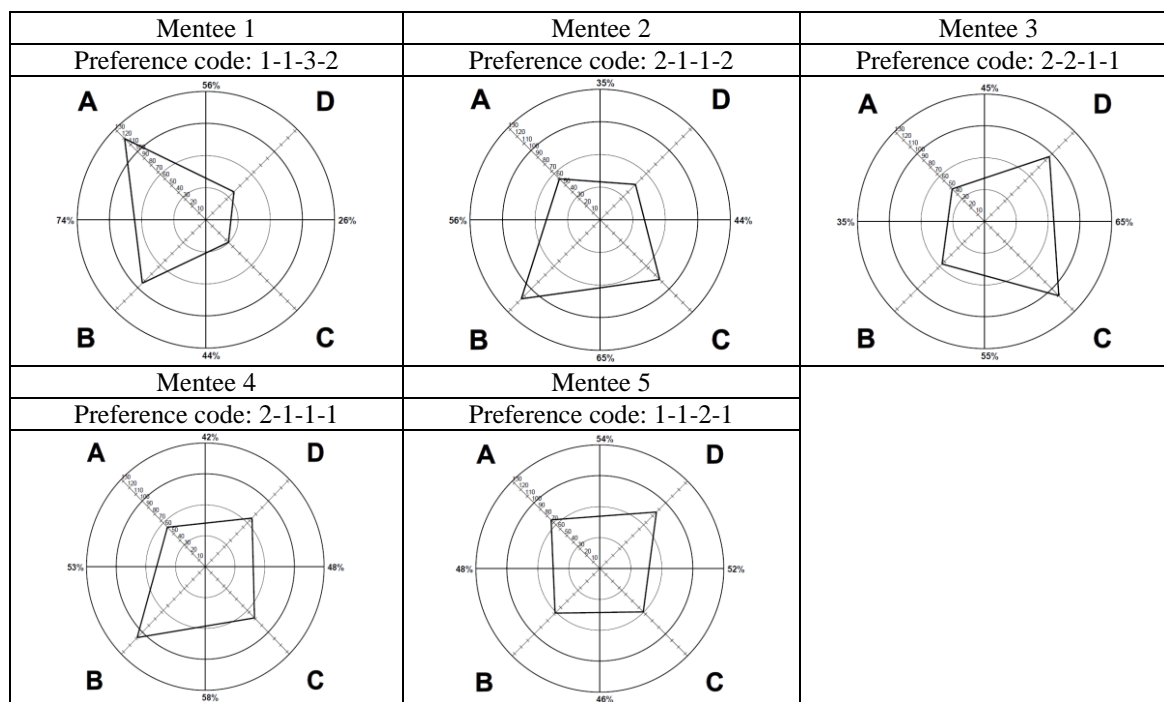


Figure 3 Individual profiles of mentees
(The four-quadrant graphics are a registered trademark of Herrmann Global, LLC)

When superimposed, the individual profiles of the mentees can be depicted as composite profile as illustrated in Figure 4 below.

The combination of the profiles is an indication of where we as a community of practice needed to develop. Most of the mentees, except me, reflect a primary preference for fact-based thinking of the A-quadrant; most of us have a primary preference for both the B- and C-quadrant, which are respectively characterised by organising and interpersonal attributes, while the entire group lacks creative and holistic modes of thinking as is typical of the D-quadrant, with one mentee showing a tertiary preference for this mode of thinking. Based on our differing profiles we were obliged to accommodate one another. In addition, we had to challenge ourselves to work beyond our comfort zones, while at the same time, challenge our peers to do the same with a view to developing our full potential as professionals.

The need for a peer mentoring programme that focuses on Whole Brain® Learning and action research was underscored. Three of the participants indicated that the first year of teaching would be the most appropriate time to complete such a programme. Two preferred it to be done in the sec-

ond year of teaching. The needs of such a specific beginner teacher group should be assessed beforehand so that support would be needs-driven. The role of the principal in the success of this programme was emphasised. The mentees agreed that various schools in the same district should form a beginner teacher group, as was the case in this study.

The progression of the mentees' professional development was acceptable. One of the participants did not show any progression during the mentoring programme. During personal reflection the rest of the group indicated advancement in their own professional development. It can be deduced that the reason for the participant who did not show much progression and who was 'neutral' in his feedback regarding the mentoring programme and implementation of Whole Brain® Learning in practice, is based on personal circumstances. He underwent an operation at the time of the implementation of the mentorship programme, and therefore missed three mentoring sessions. His journey throughout the programme can be said to be different to that of the other participants, where only one interview and information session could be conducted with him.

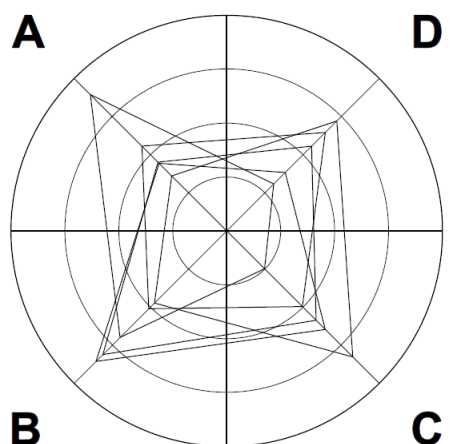


Figure 4 Composite profile of thinking preferences of the group of mentees
(The four-quadrant graphic is a registered trademark of Herrmann Global, LLC)

In their reflections on the notion of Whole Brain® Teaching as an innovative approach to practice, the participants responded as follows: four mentees responded in reflection 1 and 2 positively by indicating “I like it a lot” or “I like it”. The mentee who was hospitalised at the time of the conducting of the mentoring programme responded in both reflections by saying: “I did not like it”.

Three reflections were expected from all participants regarding their perception regarding progress made in terms of their professional development. During the first reflection, four mentees have indicated that they considered their progress as average; for reflection 2 and 3, three mentees have indicated that their progress was good, while one considered her progress as excellent during reflection 2 and 3. The mentee who responded negatively to other aspects, as is clear from the previous paragraph, was of the opinion that his progress was good, indicated as part of all three the reflections. This responses should have been probed as no conclusive deductions can be made based on these responses. It can, however only hypothesised that he is somewhat self-centred and of the opinion that there is not much to learn from his peers.

Another set of questions that formed part of a final reflection entailed, inter alia, the following: reflecting on practice by answering a question on whether a mentee’s practice had been improved after using Whole Brain® Teaching and action research; an indication of educator roles that had been improved; and whether the mentorship programme can be found to have had an influence on the mentee’s professional development.

Regarding the implementation of Whole Brain® Teaching, three mentees have indicated that it did by responding positively, indicating “yes” as answer, where one said “yes definitely”. Respondent 5 said “both yes and no”. Again, this is a somewhat neutral response. On roles that had been improved the following were identified:

- Learning mediator (1 respondent)
- Interpreter and developer of learning programmes (1 respondent)
- Leader (2 respondents)
- Administrator and manager (3 respondents)
- Researcher and lifelong learner (3 respondents)

It is notable that the role of researcher and lifelong learner was identified by three mentees as one of the key constructs in terms of educator professional development is action research. While four of the mentees selected more than one role Respondent 1 selected only one, namely that of administrator and manager. It came as a surprise to me that the role of facilitator of learning was not identified as, apart from the focus on action research, the focus was on Whole Brain® Teaching, facilitating Whole Brain® Learning.

Responses to the influence of the mentoring programme on mentees’ professional development were in general positive, as four responded by saying “very much” – indicating to what extent the mentoring programme may have had a positive influence on their professional development. Respondent 5 once again responded in a neutral fashion by saying “reasonably” – indicating to what extent the mentoring programme may have had a positive influence on his professional development.

After completion of the study, I, the peer mentor and two of the mentees, presented it to the EASA 2011 Conference (Du Toit & De Jager, 2011), as mentioned above. I reported on my mentoring practice with the beginner teachers. The two mentees described the effect of Whole Brain® Learning and action research had on their teaching practice. The outcome of the whole experience, which included the preparation of the paper and then presenting it at the conference, had a profound effect on the beginner teachers’ professional development.

All ethical guidelines, as outlined by the Ethics Committee of the Faculty of Education, University of Pretoria, were followed. This inclu-

ded permission from the Gauteng Department of Education and the School principals to conduct the research and informed consent from the participating beginner teachers.

Recommendations

In terms of further study, it is recommended that this research be taken a step further, by investigating the more extensive use of this programme in, for example, a school district or cluster. The effect of the programme has to be considered by using various mentoring groups in primary and secondary schools. In the South African education context, attention should be paid to the implementation of the programme in the lower performing schools. Whole Brain® Teaching is an innovative approach to facilitating learning that originated in the United States of America, where educationists also have a problem with beginner teachers leaving the profession.

The second recommendation is that attention be given to the professional development of mentors in schools. The question about how to prepare mentors for the implementation of the mentoring programme needs to be addressed. Mentors should be the role models for beginner teachers taking part in professional development interventions.

Another recommendation is that attention be given to the mentoring of student teachers in schools. The reality of the education profession needs to be emphasised prior to starting as a beginner teacher, to be adequately equipped for a career in teaching. Furthermore, it is recommended that mentoring as a career path be investigated and introduced in schools.

I have concluded that more action research be conducted in my own mentoring practice, and in the teaching practice of the beginner teachers who participated in this study. I regard the use of action research and the development of professionalism as an ongoing process. The impact of this programme on the participants' professional development can be researched continually throughout their careers. Such research might consider the impact it has on their careers and practice and their involvement in mentoring other teachers.

At a different level, I suggest that the recommendations stated above, and new meaning making of mentoring as a construct emanating from the study, be allowed to inform policy on professional development by the Department of Education. This is based on the goals of the South African Council for Educators (SACE) Act of 2000, which revolves around promoting the professional development of educators. This includes duties such as promoting and maintaining a professional image; advising the Minister on aspects pertaining to teacher education, which includes the quality of programmes that would promote educator professionalism; researching and

developing professional development policy; and promoting in-service professional development of all educators.

Conclusion

The problem of the lack of mentoring of beginner teachers was addressed by developing a peer mentoring programme. In the first instance, action research was used by the beginner teachers to consider their own teaching practice, while Whole Brain® Teaching was implemented as an innovative idea to consider its effect on the quality of learning. The Herrmann Brain Dominance Instrument (HBDI®) was used to focus the beginner teachers' professional development on the principles of Whole Brain® Learning.

The individual profiles show that each mentee has his or her own approach to innovating teaching practice. My profile indicates how I as mentor had to stretch myself, with a view to accommodating each mentee. At the same time, my profile indicates how I might have contributed to the mentees' development, in terms of thinking and doing in other quadrants, which constitutes a means to becoming more whole-brained in their approach to teaching practice. Their profiles indicate how they might have contributed to my development as a whole-brained mentor.

It can be concluded that the peer mentoring programme contributed to igniting the professional development of the beginner teachers as professionals and to developing their full potential. The significance of profiling thinking styles and the application of the principles of Whole Brain® Thinking in facilitating learning in general, and when it comes to mentoring specifically, is evident in the data reported. For all involved in a peer mentoring community of practice, professional learning is reciprocal, and each member contributes to other members' professional development in some way.

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