Daneel Rossouw

Reflective thinking among a selected sample of South African educators: a qualitative study

This article investigates how South African educators understand and practise reflective thinking, and whether they receive adequate training in reflective thinking during their in-service training. A literature study established a conceptual framework on reflective thinking, and an empirical investigation explored the experiences of a small sample of educators.

Besinnende denke by 'n steekproef van Suid-Afrikaanse opvoeders: 'n kwalitatiewe studie

Hierdie artikel ondersoek die wyse waarop Suid-Afrikaanse opvoeders reflektiewe of besinnende denke verstaan en beoefen, asook die vraag of hulle gedurende hul indiensopleiding toereikende opleiding in besinnende denke ontvang. 'n Konseptuele raamwerk met betrekking tot besinnende denke is aan die hand van 'n literatuurstudie saamgestel, terwyl die ervaring van 'n klein steekproef van opvoeders empiries ondersoek is.

Dr J D Rossouw, Dept of Further Teacher Training, University of South Africa, P O Box 392, Unisa 0003; E-mail: rossojd@unisa.ac.za

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The activity of reflection is not a new concept in education. Yet, educators often neglect to consciously engage in reflective practice in their daily classroom activities, which mostly involve making different kinds of judgements and decisions. Quality teaching implies educators who know what to teach and how to teach, and how to make rational decisions (whether knowingly or unknowingly). These decisions are informed by theory and research, by examining and assessing alternatives and applying criteria to select a given option or course of action (Cochran-Smith 2003: 96). Strategies are needed to stimulate teachers to think about what they are doing and why they are doing it to enable them to justify their decisions and actions in the classroom (Reagan *et al* 2000: 2). Where curriculum changes are needed, reflective thinking is essential as a process to help educators to learn how to implement new approaches and enable them to make sense of their teaching.

Current educational reform in South Africa is aimed at a social reconstructionist view of schooling, namely to improve society by implementing a curriculum based on outcomes-based education (OBE).[1] OBE involves a radical shift from a traditional education system which promotes an educator-centred approach, passive learners and rote learning to a learner-centred approach of active learner participation and learner responsibility which encourages the development of learners' critical thinking and problem-solving abilities in a co-operative learning, democratic classroom environment. The Committee on Teacher Education Policy (Thomen 2005: 813-4) maintains that implementing educational change depends on the professional development of educators. The *Norms and Standards for Educators* (DoE 1998: 50, 52-3, Thomen 2005: 819) describes seven educator roles and applied competences that integrate theory and practice by stressing that all teaching qualifications must include foundational, practical and reflexive competences. The latter requires educators "to reflect on what they have done and make changes to their practices in

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1   Cf Van der Horst & McDonald 2003: 4-5, *Norms and Standards for Educators* 1998: 50, Coetzer 2001: 89, Lipman 1994: 73, Coetzee 1999: 33.

light of this reflection" (DoE 1998: 50).[2] In the *Norms and Standards for Educators* (DoE 1998: 8), the model of professional development portrays the "educator as a reflective practitioner: a professional who is an accomplished and confident performer, but whose performance is continuously open to analysis and critical evaluation". The effectiveness of the outcomes-based education approach depends to a large extent on the teaching skills of educators. Educators should thus research their own teaching as reflective practitioners, relate theory to practice and seek to improve their own practice (Thomen 2005: 820).

It should be borne in mind that educators' reflective thinking should not be bound by a specific educational approach such as OBE. OBE principles and practices should also be critically analysed and investigated by means of the educators' reflective thinking.

This article reports on how a sample of practising educators are implementing educational change based on outcomes-based education by means of reflective thinking.

1. Research question and aim

In light of the need for reflective practice as a strategy to improve teaching in the OBE classroom, the researcher set out to examine the perceptions of educators regarding the use of reflexive skills. The following research questions were formulated: How do a selected group of South African educators encourage reflective thinking in their practice? Did they receive adequate training in reflective thinking during their in-service training for the implementation of OBE? In order to address these questions, the concept and practice of reflection in teaching was investigated in the literature, culminating in the findings of a qualitative investigation, which explored how a small sample of South African educators understood and practised reflective thinking to improve their teaching practice.

2   Cf forthcoming article by the author on "The need for classroom management and reflective practice skills in in-service teacher education for outcomes-based education".

2. Conceptual framework: reflective thinking

2.1 Concept clarification

Numerous opinions on reflection make it difficult to simply define the term.[3] According to Rogers (2001: 37-8), researchers not only use different concepts to describe reflection,[4] but the definitions are also vague. Schön (1987: 13) defines reflective practice as a "dialogue of thinking and doing through which I become more skilful". Dewey (1933) uses the concept of reflection to distinguish between routine and reflective teaching. The latter is identified by active, continual and careful deliberation of the end results (outcomes) and processes, by associating them with social, educational and political contexts (Hayon 1990: 59).

Over the years several ways of conceptualising reflective practice, as it relates to the classroom activities of educators, have been presented. Killion & Todnem (1991: 15), who use Schön's (1983) earlier work as a base, distinguish between three types of reflection, namely reflection-on-action, reflection-in-action and reflection-for-action. Both reflection-on-action and reflection-in-action are fundamentally reactive and are characterised by when the reflection takes place. Reflection-in-action refers to reflection during practice, while reflection-on-action refers to reflection which takes place after the experience. Reflection-for-action, as Killion & Todnem (1991: 15) point out, is to guide future action (the more practical purpose); it is thus proactive in nature. The beginner educator's reflection-for-practice and reflection-on-practice may thus be the most obvious characteristics of his/her practice; by contrast reflectivity may be best viewed in the experienced or master educator's reflection-in-practice.

In general, reflection is considered a form of thinking, that is a process of thoughtful consideration of professional and practical know-

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3 Cf Knowles *et al* 2001: 187, Reagan *et al* 2000, Osterman & Kottkamp 1993, Valli 1993, Calderhead & Gates 1993, Gore & Zeichner 1991.
4 For example, reflective thinking (Dewey 1933), reflection-in-action (Schön 1983), reflective learning (Boyd & Fales 1983), critical reflection (Mezirow & Associates 1990) and mindfulness (Langer 1989).

ledge which includes reference to an organised network of facts, concepts, generalisations and experiences which are constructed over time to obtain new knowledge from experience and to prepare the practitioner for action.[5] Osterman & Kottkamp (1993: 19) define reflective practice

> … as a means by which practitioners can develop a greater level of self-awareness about the nature and impact of their performance, an awareness that creates opportunities for professional growth and development.

They view reflective practice as a powerful means of educational change (Osterman & Kottkamp 1993: 1). This perception is based on the opinion that, in order to create meaningful change in their teaching practice and to improve themselves, educators must examine and, if necessary, alter customary thoughts and beliefs concerning their teaching practice. In doing so, they will improve the quality of their performance. Educators can make use of their knowledge base of well-formulated theory to help them with decision-making in their teaching practice. According to Knowles *et al* (2001: 187), reflection occurs when educators use thought to form a connection between the employment of professional knowledge and practice and to raise awareness in their intuitive knowledge.[6]

2.2 Advantages of reflection

Many researchers identify specific benefits for educators who practise reflection.[7] Reflection helps educators to understand their own behaviour, as they develop a greater awareness of their actions and the theories that determine their strategies.[8] It is a tool which educators can use to monitor their own behaviour and make changes to activate

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5   Cf McAlpine *et al* 2004: 338, Reagan *et al* 2000: 24, Sparks-Langer & Colton 1991: 37-8, Day *et al* 1990: 57-69, Shulman 1987: 13.
6   Cf McAlpine *et al* 2004: 337, Tate 2003: 774, Parsons & Brown 2002: ix, Osterman & Kottkamp 1993: 20.
7   Cf Rossouw 2006: 20-1, Reagan *et al* 2000: 26, Eby 1998: 15-8, Pollard & Triggs 1997: 9-19, Zeichner & Liston 1996: 6.
8   Cf Parsons & Stephenson 2005: 97, Osterman & Kottkamp 1993: 19, Colton & Sparks-Langer 1993: 50.

learners.[9] It enhances learning and overall personal and professional effectiveness, and supports professional growth by means of inner-directed learning.[10] It enhances problem-solving and self-evaluation skills (Leitch & Day 2000: 182), and helps educators to become more proficient and thoughtful professionals by encouraging them to place themselves into context and to examine and understand available views "toward resolving contradiction between one's vision and their actual practice" (Johns 2005: 71, Colton & Sparks-Langer 1993: 47). Finally, it is a social process promoted through collaborative work in order to address shared problems.[11]

The conclusive aim of reflective professional development is behavioural change and improved performance (Osterman & Kottkamp 1993: 32). According to Osterman & Kottkamp (1993: 34), behavioural change is a process which begins with the awareness that something is not right and requires careful attention to be paid to individual practice. Griffiths and Tann (Zeichner & Liston 1996: 45) believe that, if educators enter into cycles of action, observation, analysis and planning at different times and develop a greater awareness of their teaching practice (which is necessary for reflective thinking), they should be able to express, critically examine, and weigh up their practical views against alternative views and, if necessary, improve them.

2.3 Strategies and problems regarding reflective thinking skills

According to Hatton & Smith (1995: 36), many proposals have been put forward to promote reflective thinking in pre-service and in-service educator training. A nurturing environment is essential for reflective thinking (Osterman & Kottkamp 1993: 44). Dewey emphasises the training of the mind by means of activities, the expansion of language, observation and recitation (Lee & Loughran 2000:

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9   Cf Pedro 2005: 63, Reagan *et al* 2000: 26, Eby 1998: 15, Zeichner & Liston 1996: 6.
10 Cf Korthagen & Vasalos 2005: 48, Rogers 2001: 49, Zeichner & Liston 1996: 6.
11 Cf Parsons & Stephenson 2005: 101, 110-2, Pollard & Triggs 1997: 16, Zeichner & Liston 1996: 76-7, Colton & Sparks-Langer 1993: 50-1.

73, Zeichner & Liston 1987: 31). Schön recommends redesigning teacher education "to combine the teaching of applied science with coaching in the artistry of reflection-in-action" (Rogers 2001: 46). The role of mentors is also widely emphasised.[12] Other strategies include action research projects,[13] case studies and ethnographic studies of classrooms,[14] as well as structured curriculum tasks (Hatton & Smith 1995: 36, Zeichner & Liston 1987: 32). Rogers (2001: 47) advocates the use of structured experiences (Boyd & Fales 1983: 106-7) which can be achieved by means of relevant structured questions (Pedro 2005: 56-7), seminar group discussions (Zeichner & Liston 1987: 32), oral interviews (Hatton & Smith 1995: 36), reflective journals (Hatton & Smith 1995: 36, Rogers 2001: 47) or writing portfolios (Rogers 2001: 47, Hatton & Smith 1995: 36). It is thus clear that reflective thinking is achieved more easily by means of intentional and planned procedures.

Certain obstacles are identified in the encouragement of reflective thinking. The prevalent view of teaching is that it deals with instant pragmatic action by applying technical skills and teaching knowledge; reflective thinking and inquiry are regarded as academic activities.[15] In order to develop the necessary teaching and cognitive skills, educators require a suitable knowledge base in order to understand the concept of reflective thinking and to encourage it in their own teaching (Parsons & Stephenson 2005: 100, Hatton & Smith 1995: 37). Richert explains that the complex process of reflection can discourage beginner educators (Parsons & Stephenson 2005: 100). In general, a lack of time prevents educators from thinking reflectively, while it is time-consuming to teach the skills of reflective teaching (Lee & Loughran 2000: 72, Cruickshank 1987: 6). Finally, reflective thinking in a group setting is a high-risk process and educators who

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12   Cf Pedro 2005: 58, Rogers 2001: 46-7, Osterman & Kottkamp 1993: 55-6, Killen 1989: 51, Zeichner & Liston 1987: 32-3.
13   Cf Parsons & Brown 2002: 4, Hatton & Smith 1995: 36, Zeichner & Liston 1987: 31.
14   Cf Reagan *et al* 2000: 32, Hatton & Smith 1995: 36, Zeichner & Liston 1987: 32.
15   Cf Hatton & Smith 1995: 36-7, Gore & Zeichner 1991: 131, Zeichner & Liston 1987: 40-1, Cruickshank 1987: 5.

experience problems in the classroom do not ask for help for fear that it will be viewed as a weakness (Osterman & Kottkamp 1993: 44).

2.4 Dimensions and time frames of reflection

An essential element of the process of reflection is the time-frame in which it takes place: immediate and short-term or more prolonged and methodical (Hatton & Smith 1995: 34, Gore & Zeichner 1991: 121-9). Schön (1983: 42) distinguishes between the application of "external research-based theory and technique" and actions, and the decision-making processes which educators automatically carry out. Educators are mostly unaware of having acquired this unspoken knowledge and are unable to explain it (Zeichner & Liston 1996: 15). One way to conceptualise reflective thinking is to think about and become aware of unspoken knowledge; professional educators will use this knowledge to modify their actions.

Griffiths and Tann refine Schön's (1983) thoughts on reflection-in-action and reflection-on-action into five dimensions (or time-frames) of reflection, thus presenting a more systematic approach to reflection and teaching practice (Zeichner & Liston 1996: 45-7). They explain the five dimensions as follows. The first dimension (rapid reflection) refers to Schön's reflection-in-action where educators reflect instantly and all responses are automatic. The second dimension (repair) also refers to Schön's reflection-in-action. In this instance the learner reacts to an assignment and the educator must consider how s/he will respond to the learner. The third dimension (review) refers to Schön's reflection-on-action where reflection takes place before and after a lesson; in other words, the reflection takes place when the educator plans and thinks about his/her lesson and after the lesson when s/he considers what worked and what did not work. Review is mostly interpersonal and collegial, and occurs in interaction with other educators; educators are thus able to modify their teaching practice after reflecting on and reviewing their teaching practice (Johansson & Kroksmark 2004: 369). The fourth dimension (research) is where the thinking and observation become methodical and focused. The collection of information about one's classroom practices (by means of discussions with learners, peers and other colleagues) may take weeks or

months. The outcome of this action research can help to restructure classroom practice (Johansson & Kroksmark 2004: 369, Parsons & Brown 2002: 5-6). In the final dimension (re-theorising and reformulating), reflection is more theoretical. Educators not only examine their practical theories, but also deliberate on academic theories (Reagan *et al* 2000: 32-3). Griffiths and Tann believe that educators ought to reflect on all these levels at one time or another; reflecting on only one or some of the levels may lead to superficial reflection (Zeichner & Liston 1996: 47).

The researcher decided to use Schön's thoughts on reflection-in-action and reflection-on-action as refined by Griffiths and Tann into the above-mentioned five dimensions of reflection, as these dimensions offer a more methodical view of reflection and teaching practice.

3. Research design

Against the background of the theoretical framework provided by the literature review, an empirical investigation was undertaken to explore how a small sample of South African educators understood and practised reflective thinking in order to improve their teaching practice. The researcher used the purposive sampling method to identify a school and the participants (Schurink *et al* 2001: 313-33). The school is an independent school in a semi-rural catchment area. Learners come to school from surrounding townships and rural areas by public bus, taxi or family car. The school uses English as the language of learning and teaching, but most learners are English second language speakers. The learners' home languages include Tswana, Zulu, Xhosa, Sotho and Pedi. Schurink *et al* (2001: 317) assert that the ideal size for a focus group is between six and nine participants.

The nature of the research was explained to the principal of the school. Eight educators were chosen from grades 7, 8, 9 and 10. Four male and four female educators were identified to participate in the focus group interview. These educators were chosen because all of them should follow an OBE approach in their classrooms and had attended in-service training in OBE presented by the Department of Education (DoE). Educators from grades 7, 8, 9 already had practical

experience in the teaching of OBE, while the grade 10 educators were implementing the approach for the first time. It was also an opportunity for the different educators to share their views on the topic (Schurink *et al* 2001: 314).

The topic and the questions related to the theme of discussion in this focus group were arranged in an understandable and rational way in order to help the researcher to facilitate a natural and voluntarily discussion of classroom experiences by the educators (Schurink *et al* 2001: 315). All the educators shared their experiences spontaneously. The scheduled two and a half hours for the interview gave ample time for substantial discussions on the topic. The educators' years of teaching experience varied from three to twenty-five years. Their home languages included Afrikaans, English and Tswana. The data were gathered by means of a focus group interview. Such interviewing allows educators as participants to gather valuable information and an understanding of any problems they might encounter in their teaching practice, and to positively change their approach to any problems they might experience. Educators can create meaningful educational change by practising reflective teaching. After introductory comments, the concepts which had to be investigated were defined. An interview guide was designed which explained the new concepts, and the essential critical and key questions which were asked and discussed during the interview (Schurink *et al* 2001: 313-33). The participating educators did not see the questions before the focus group interview. The information covered by the questions was used to categorise the data during analysis (Schulze 2005: 758). The focus group interview was audio-taped and transcribed, and the transcript became the main data source for analysis. The data was analysed manually and main patterns were identified and categorised. The trustworthiness of the data was enhanced by the establishment of mutual understanding prior to the focus group interview, since the researcher was unknown to the participants. A nurturing environment, defined by openness and trust, was maintained as far as possible, and the participants were assured that all information would be kept confidential (Osterman & Kottkamp 1993: 44).

4.   Results and discussion of findings

The focus group interview was conducted on the basis of the following subheadings to determine how a small sample of South African educators understood and practised reflective thinking in order to improve their teaching practice: awareness of problems in teaching practice, dimensions of reflective thinking, in-service training in reflective thinking skills, and problems related to reflective thinking.

4.1 Awareness of problems in teaching practice

According to Dewey, true reflective thinking starts when educators are faced with real problems in their teaching practice which have to be resolved in a practical manner (Reagan *et al* 2000: 20). The participants indicated that they were faced with problems in the OBE classroom which they had seldom experienced prerviously. Educators found that learners tended to be "passive observers" in the classroom despite the emphasis on learner participation. The learners still tended to operate according to the old paradigm where learners "want to be spoon-fed". An educator described an incident to illustrate this:

> I gave a child an assignment the other day, which required a bit of research, and he responded by saying: 'We are modern kids, we don't look for information. We are modern kids'. In other words, he expected me to provide him with the necessary information.

Another educator had a similar experience:

> I downloaded information from the Internet […] and provided each child with the relevant information. I then asked them to extract particular facts. They were able to understand what they had read, but were unable to sort the information. I had to teach them how to read the information and then to sort it step-by-step […] They know where to find the information, but are unable to compartmentalise it.

The educators, however, showed that they had reflected on the causes of learner passivity. One felt that it was related to the learners' poor language skills in English (the language of instruction) and in Tswana (their home language). The educators also showed that they had endeavoured to find solutions to resolve these problems. One strategy was to review the formulation of questions and instructions,

because the children required clear and specific instructions. Attention to the style, content and format of educator questioning required more urgent attention than routine classroom tasks, and was time-consuming. Moreover, specific tasks with greater individual responsibility gave learners a more valuable learning experience.

It can be concluded from the above that the participants were, to some extent, engaged in what Dewey would describe as reflection. Practising educators should be adequately prepared and equipped for the challenge to change, and should view reflective thinking as a means for change or rather "a powerful force for educational change" (Osterman & Kottkamp 1993: 1). This type of reflection led to behavioural change in teaching practice, as one educator substantiated:

> I have definitely changed my approach. My children's books do not look the same as they did three months ago. I saw that my approach wasn't working, so I had to find another way of reaching them. So yes, there's been a definite change.

Osterman & Kottkamp (1993: 34) conclude that behavioural change is a process which begins with the awareness that something is not right and requires careful attention to be paid to individual practice.

4.2 Dimensions of reflective thinking

The following patterns emerged in an endeavour to establish the time frames or levels according to which educators advance reflective thinking in their teaching practice.

4.2.1 Rapid reflection/reflection-in-action

The reflectivity of the more experienced educators may best be observed in their classroom activities where they reflect immediately and automatically while they are engaged in teaching. When behavioural problems occur, most educators react automatically by using methods based on past experience and knowledge of which they are sometimes unaware. An educator explained:

> During one of my lessons [...] it was clear that one child did not understand. I then came up with the brilliant plan of using one of the stronger children in that class to explain to the weaker child — something I would not necessarily have done in another class. [...] The rest of the class got involved and helped him when he got an

> answer wrong. In this way, the weaker child was able to understand the work and could continue with the instructions.

Another educator related how past experience guides present practice:

> Try not to be too rigid in how you deal with the children. I once had a child who told me one morning that he wasn't in the mood to write. I told him [without thinking about it] that he was entitled to feel that way and that I wanted to read him a portion of scripture. I turned to Proverbs 26:14: 'As a door turns on its hinges, so a sluggard turns on his bed'. I […] left it at that. This child has just received his doctoral degree from the University of Natal. He was never lazy [again]. If I had punished him that day, I would have lost him.

All the participants were actively involved at this level of un-conscious reflection: they automatically and intuitively decided on how to respond to the learners' behaviour in the classroom. However, not all the educators have the same response to similar situations.

4.2.2 Repair reflection/reflection-in-action

In terms of this level of reflection, educators will momentarily pause (be thoughtful) and "read" the reaction of learners to a specific lesson. They may then decide to change their methods immediately in order to accommodate the learners or, based on previous experience, ignore the habitual behaviour of a learner which, when taken notice of, ends up in embarrassment and frustration for the learner. The educators explained how they had responded to previous situations. An educator described an incident:

> My biggest one is dictionaries. When I get to a word and it looks like the children do not know what it means, I will always ask them whether or not they understand the word. I then ask them to take out their dictionaries and to look up the word. This is something they have to do for themselves — I will not do it for them.

Another educator commented on how she had handled a particular behavioural problem:

> I have a child in my class who I suspect has a colourant and sugar intolerance. This intolerance manifests in behavioural problems in the class. I find that I generally react differently with him when he starts behaving aggressively than I would with the bullies, the naughty ones or those who merely try to disrupt my classes.

The above actions of the educators can be regarded as reflection-on-action. In other instances, they constitute delayed reflection-in-action which affords the learner and educator the time and privacy to discuss the problem:

> I sometimes ask them to come back during break time so that we can talk about the problem. If he really has a problem, he'll come back. And I remind him, as he is leaving for break time, that he wanted to speak to me.

This strategy works particularly well with serious behavioural problems. An educator described how she dealt with bullying:

> The bully then enters the scene and he misbehaves [...] His cry is: 'Notice me. Take an interest in me'. If we ask him what his problem is and invite him to tell us about it, he feels as though someone cares for him and is looking out for him. In this way, you might achieve something with this child. If you tell him that you are not interested in listening to his story, that he always misbehaves and that no teacher will want anything to do with him, then you will have real trouble.

The participants showed that they were serious about finding appropriate ways to handle learners. They also indicated that behavioural problems require immediate attention, and emphasised the importance of addressing problems as they occur, because a learner's trust is rapidly lost if one does not act swiftly. The participants unconsciously reflected on this level.

4.2.3   Review/reflection-on-action

Reflection-on-action usually takes place once the action in the classroom is completed, and is often interpersonal and collegial. Educators discuss the progress of learners (or groups of learners) and how the curriculum units should be interpreted. As a result, plans may be improved at a particular point in time. The educators were clear about this type of reflective dimension. One educator stated:

> We talk to each other on a regular basis — whether in the staffroom, during meetings or just generally. We ask each other for advice, find out what the others are doing or whether we can help in any way.

Other educators confirmed this:

> We do chat to our colleagues about problem areas. For example, when you see that your marks are very low and you don't know what to do about them. I mentioned to a colleague the other day that my Maths marks were low and he suggested that I set a target for myself at the start of each year — a target in terms of what I want to achieve during that year. I decided that I might consciously include that in my subject (teaching).

> I will generally talk to somebody about a child who is genuinely difficult. I want to know if it is just me who has the problem or whether others are also struggling with the child. Sometimes someone will suggest that I handle the child is a particular way. I follow their advice and the child's attitude often changes. It's really a group challenge to grow this child into a person.

This strategy has an important motivating dimension, as educators encourage and inspire one another. An educator elaborated:

> I haven't been here long, but there have been times when I have felt that the children are pushing me beyond my limits […] There will be times when the children will push you too far and you will say something or do something that you shouldn't have. It is at times like this when it is difficult to go back to school the next day and to talk to the same group of children about the situation. And we are able to pray for each other. If you come here, you must take another's hand and pray.

This type of reflection builds collegiality and reinforces teamwork among educators. An educator commented:

> I think the whole thing with teachers is really a people-driven science. And it is a people-driven profession. You cannot function as an individual — it just won't work.

Another educator pointed out the role of the school management in providing this kind of support. She mentioned:

> I think something which is very positive here is that our principals support us. They will not agree with us 100% of the time, but we know that they are on our side.

However, this did not negate opportunities for personal growth, responsibility and innovation. An educator commented: "But your choices regarding what you do in your classroom are still yours". The participants unknowingly engaged in refection on this level.

4.2.4   Research/reflection-on-action

When educators become engaged in planned action research projects over long periods of time, they conscious examine identified problems in their own teaching practice and changes in their teaching practices. According to Zeichner & Liston (1996: 46), "teachers' thinking and observation becomes more systematic and sharply focused around particular issues". This helps to transform reflection into action research (Parsons & Brown 2002: x).

According to the participants, they had at times engaged in reflection with a view to conscious change in terms of problems relating to discipline and the difficult choice of textbooks and other instruction material. Meetings with educators from other schools had led to specific actions to address these problems. An educator mentioned that this had resulted in informal professional development in the school in order to address the issues.

> We must choose textbooks. I, for example, asked colleagues what criteria they would use to select textbooks and what is important to them for their grades 7, 8 and 9 children. I also discussed the matter with the principal and the vice-principal. The principal instructed me to invite the relevant parties to make presentations to the staff. Each member of staff was given the opportunity to present his or her inputs before a decision was made.
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> Although we did not really form committees, we did form groups in which we discussed certain criteria; tasks were also allocated to each of these groups on an *ad hoc* basis.

Although reflection occurs on this level, educators require guidance and training if it is to lead to positive action. Thus, less time is devoted to this important level of reflection.

4.2.5   Re-theorising and reformulation/reflection-on-action

This type of reflection takes place over a long period of time (months or years) where formal research on problems helps to inform and enrich teaching practice. Consequently, reflection-on-practice informs and enriches the meaning of existing academic theories. None of the participants, however, was pursuing postgraduate education studies. Two participants were involved in undergraduate studies via distance education. This did not seem to improve teaching. An educator commented:

> To be honest, the information I get from the university about teaching practice and my real work situation are not the same. I am studying the FET band. The theory does not link up with the practice.

Day *et al* (1990: 58) emphasise that one should remember that reflection is a process (or rather a form of thinking) and that it should have a context. According to them, no process is not aligned to the context in which it occurs. They conclude that the "content of teachers' reflection will be professional and based on pedagogical knowledge". These educators should possibly exercise more rigorous reflection in order to integrate practical and theoretical knowledge, to initiate awareness of gaps and incompleteness in their practice, and to enable them to fill in these gaps (Day *et al* 1990: 69).

4.3 In-service training in reflective thinking skills

A certain knowledge base is necessary to help educators understand the concept of reflective thinking. The practice of reflective thinking also requires competence in methods of classroom enquiry, namely empirical competence, analytical competence and evaluative competence (Pollard & Triggs 1997: 12). According to the *Norms and Standards for Educators* (DoE 1998: 50, 52-3), all teaching qualifications in South Africa must include a mixture of foundational, practical and reflexive competence. The participants were asked whether they had received adequate training in reflective thinking during their in-service training workshops on OBE. Unfortunately, their experiences showed that there was no emphasis on training in these skills. One of the educators explained:

> [Presenters] never really mentioned it, but remember: you must be flexible. They do tell you to use different mediums, for example, but they never tell you that you must think on your feet while teaching.

> They then tell you that you will have to do the self-evaluation section, which must form part of the lesson planning. But this is all they say about it. What must you evaluate? What must you do if you evaluate yourself? How should you evaluate yourself? What should you do with the evaluation? They do not give any guidelines.

The identified gaps in the training were possibly due to the presenter's own lack of competence in this area or the fact that to many educators reflective thinking remains an elusive and abstract

concept which cannot be taught. However, the strategies described in the literature indicate a rich variety of techniques which can be employed to teach reflective thinking. Clearly, the Department of Education cannot require reflexive competence from educators if they do not provide the necessary in-service training.

4.4 Problems related to reflective thinking

The problems experienced by the participants in the focus group interview regarding reflective thinking were corroborated by the literature study. One educator felt that reflective thinking occurred unconsciously and spontaneously. An educator claimed: "I think this is an automatic part of our profession and a part of all of us, because there is always interaction between teachers". However, as indicated in the literature, to practise conscious reflective thinking and to implement and monitor concomitant action is time-consuming. An educator maintained:

> It is not that you don't want to do as they suggest or prescribe, but rather that there is insufficient time to record how each child reacted in a particular situation. There is not always time to do it on paper, but I do have it in my brain. You assimilate the information, but you don't always make notes.

The need for training in this regard and the need for school management and educator mentors to support reflective practice in the school are clearly indicated. An educator captured the dilemma:

> I don't think we really understand what the concept is all about. It's explained to us in one afternoon […] but it's difficult to integrate into our daily work. You can do it at your own speed — when you have time available, or as the curriculum and your subject allow it.

5. Conclusion

This article set out to investigate how South African educators understand and practise reflective thinking. This was done in order to probe their teaching practice and to determine whether or not the training they received during their in-service training adequately covered reflective thinking. A literature study established a conceptual framework on reflective thinking, and an empirical investigation explored the experiences of a small sample of educators. The

findings indicated that the educators were engaged in the activity of reflection, although they were not necessarily acquainted with the concept and how it functions in formal learning settings.

Based on the findings, it is recommended that the Department of Education should focus on the use of reflective thinking in in-service educator training. This will encourage educators to think about what they do and to analyse classroom life. School districts can promote actions where teams of educators define problems which occur in the classroom, and cooperate to develop and implement solutions. The latter can then be shared with other educators and school districts. The facilitator who coordinates such projects should be qualified and adequately equipped to undertake this complex process; otherwise it will be a waste of precious time — a commodity educators do not have.

The findings confirmed that reflective thinking is enhanced through collaboration and in association with other colleagues in an atmosphere of trust, understanding and respect for individuality. Although the results of this qualitative study can not be generalised, the research clearly indicates that adequate in-service training can empower South African educators to achieve an excellent state of professional competence, improve the quality of classroom practice, and interrogate (aspects of) OBE with a view to system-wide educational improvement.

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