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Safety and security at school: A pedagogical perspective

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ABSTRACT

Education law and policy currently focus on broader physical aspects of safety and security at schools, as well as, for example, on pedagogical insecurity such as is caused by discriminatory teaching, but law and policy have yet to pay attention to the overall and far-reaching pedagogical safety and security of learners.

By means of a descriptive study, quantitative in nature, we explored teacher and learner responses to a questionnaire in order to determine to what extent teachers accommodate diverse pedagogical needs in the classroom.

The significance of this article lies in its exploration of pedagogical safety and security in a South African context that extends education law literature beyond the established knowledge base on physical safety and security.

The research found (1) discrepancies between teachers' approaches towards teaching and accommodating learning needs, (2) deficient equipment of teachers to meet the pedagogical needs and fundamental rights of learners, and (3) lack of accommodation of learners' preferred learning styles.

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1. Orientation

In narrow terms, safety and security in education are associated with eradicating physical harm, as can be found in attempts to prohibit dangerous weapons and illegal substances at schools. A broader view, however, reveals any threat to a learner's well-being as a safety and security issue. As Duke (2002, p. xvii) points out, such an issue does not refer merely to statistics regarding school crime and discipline. A variety of perspectives must therefore be considered when evaluating safety and security in education. We argue in this article that one of these perspectives should be the sense of safety and security learners experience in their intellectual development, which could be reflected in their learning styles being accommodated and their fundamental rights being advanced. In this article these fundamental rights refer to the basic rights afforded to all South African learners.

As the Constitution of South Africa, Act 108 of 1996 (SA, 1996a, (chap. 2); SA; hereafter Constitution) guarantees the fundamental rights of all children and therefore of all learners, and the South African Schools Act 84 of 1996 (SA, 1996c; SA; hereafter Schools Act)

protects both the legal and the fundamental rights of learners, one could argue that South African legislation and policy ultimately have this sense of learners' pedagogical safety and security in mind.

In South Africa, Education White Paper 6 (SA, 2001; SA; hereafter White Paper) describes how the education and training system must transform itself to establish a caring and humane society, how it must change to accommodate the full range of learning needs, and which mechanisms should be put in place to achieve these needs.

Moreover, one of the major characteristics of Outcomes-Based Education in South Africa is a paradigm shift regarding beliefs about learners, learning and teaching practices; a realization that learners learn in different ways and at different paces. This is where inclusion comes in, acknowledging that all learners have the right to education, can learn and need support. It is about respecting the fact that all learners are different in some way, and therefore it requires from teachers a change in attitude, behaviour, teaching methodologies, assessment strategies, curricula and environments. The focus is on teaching and learning activities, with the emphasis on the development of efficacious teaching strategies that will be of benefit to all learners (SA, 2001, p. 17; SA), thus ensuring their pedagogical safety and security by overcoming barriers in the system that prevent it from meeting the full range of learning needs and fundamental rights.

The National Department of Education (SA, 2004, p. 39; SA) identifies four barriers to learning:

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- Pedagogical barriers that call for sufficient teacher support to all learners, fair assessment procedures, flexible curricula and linking teaching to the preferred learning style of learners.
- Medical barriers that call for attending to sensory disabilities, physical disabilities and cognitive disabilities in the classroom.
- Societal barriers that call for support to learners from backgrounds characterized by severe poverty, abuse, crime and violence.
- Systemic barriers that call for adequate facilities at school, the availability of appropriate teaching and learning support material and proper attention to each learner.

Focusing on the pedagogical barriers, this research set out to explore the relatively new concept of pedagogical safety and security by establishing the extent to which teachers link their teaching strategies to the learning needs of the learners, thereby advancing the fundamental rights and pedagogical safety and security of all South African learners. As pointed out in the Constitution (SA, 1996b, sect 3; SA), teaching and learning should meet the pedagogical rights of learners. Therefore the grounding of such rights is indisputably found in the fundamental rights of learners in South African classrooms.

The research aims to establish the extent to which learners perceive the classroom practice of teachers as compatible with their pedagogical needs and fundamental rights, and the extent to which teachers are empowered to address the pedagogical needs and fundamental rights of learners. It also aims at determining whether learners have learning style preferences.

2. Problem statement

It is clear that classroom activities in South Africa need to accommodate different approaches to teaching and learning in order to comply with the pedagogical needs of learners, as well as with their fundamental rights, such as to learn according to their own style. The central questions addressed in this article are:

- To what extent are teachers' teaching practices compatible with the pedagogical needs and fundamental rights of learners?
- Are teachers empowered to meet the pedagogical needs and fundamental rights of all learners in their classrooms?
- Do learners have a preference for particular learning styles and are these styles accommodated?

It was deemed important for the research to determine whether the learners do indeed prefer particular learning styles, in order to support the argument that teachers need to adapt their teaching to accommodate diverse learning styles.

3. Pinpointing pedagogical safety and security

In South Africa, while section 29(1) of the Constitution (SA, 1996a; SA) provides that every child has the right, among other things, to basic education, section 28(2) enhances this right by pointing out that children's best interests are seen to be of supreme importance in all matters that affect them. Even though it appears that the State is primarily liable to provide these rights, in view of the fact that it is the party against whom fundamental rights are generally directed, Robinson (1995, p. 108) and Van der Vyver (1997, p. 306) maintain that the State's responsibility is complementary to that of the parents or their substitute and would arise only if the parent or substitute (such as the teacher) is unable to do so. It is therefore clear that South African teachers need to acknowledge and accommodate the fundamental rights of learners.

Moreover, according to its preamble, the Schools Act (SA, 1996c; SA) aims at upholding the rights of, *inter alia*, all learners. Various sections of this Act refer to taking into account the rights of a learner (section 5(6) and section 34(1)), best interests of the learner (section 4(1)), consulting the learner (section 8(1)), protecting the interests of the learner (section 8(5) and section 9(3)(c)) and providing quality education for the learner (preamble, section 8(2), section 20(2) and section 36). These aspects are all aimed at laying a strong foundation for the development of all South Africans' talents and capabilities (SA, 1996c, Preamble; SA), thereby protecting their fundamental rights and ensuring their pedagogical safety and security.

Section 3 of the Norms and Standards for Teachers, as found in the *National Education Policy Act 27 of 1996* (SA, 1996b; SA; hereafter Education Policy Act), propounds seven roles of teachers. For the purpose of this article, the five roles that are highlighted are (1) the teacher will mediate learning sensitive to the learners' needs; (2) the teacher will pace the learning sensitive to the learners' needs; (3) the teacher will demonstrate responsiveness to the changing needs of the learners; (4) the teacher will uphold the Constitution; and (5) the teacher will know and use appropriately the different approaches to teaching and learning.

Following from the relevant sections in both the Schools Act and the Norms and Standards for Teachers, it could therefore be assumed that the class presentations of teachers which include implementing specific teaching strategies, would play a major role in ensuring learners' pedagogical security.

Legislative directives emphasize the right of learners to quality education which, according to the Education Policy Act (SA, 1996b; SA), mediates learning sensitive to their changing needs by using different philosophical approaches to teaching and learning. Such approaches would ensure psychological integrity, uphold human dignity and satisfy Outcomes-Based Education objectives. This would ensure the learner's sense of being intellectually cared for, auguring well for a more humane, literate and content society.

This can, however, be achieved only after the pedagogical needs of the learners have been investigated, firstly by consulting existing literature on the topic and later by analysing the findings of the empirical study.

4. Describing the pedagogical needs of learners

Pedagogical needs relate, among other things, to linking teaching to the preferred learning style of the learner. Absence of such a link would imply no sense of being cared for intellectually, and therefore no pedagogical safety and security. Human-beings are different individuals, each individual having a unique way of doing things. Peoples' perceptions and interpretations of the same event are hardly ever identical. This understanding holds true for learners in any given teaching and learning situation. Felder (1996, p. 18) indicates differences between learners in that some learners focus on facts, while others are more comfortable with theories. Furthermore, some learners respond strongly to visual forms of information such as pictures, diagrams and schemas, while others get more from verbal forms such as written and spoken explanations. While some prefer to learn actively and interactively, others function more introspectively and individually.

If teachers teach exclusively in a manner that favours their learners' less-preferred learning style modes, the learners' discomfort level may be great enough to interfere with their learning. On the other hand, if teachers teach exclusively in their learners' preferred modes, the learners may not develop the mental dexterity they need to reach their potential for achievement at school and as professionals (Felder, 1996, p. 18).

According to Gunter, Estes, and Schwab (2003, p. 3), concern for learners should be the foundation of all teaching. The present study

indicates, however, that little attention has been paid to the differences among learners. Teachers often claim that they teach all learners in the same way (Kruger & Adams, 2002, p. 213), believing that this is an accepted professional method of avoiding bias and discrimination. Much as this method is socially accepted, research has shown that treating learners uniformly does not always yield successful results (Kruger & Adams, 2002, p. 215).

Our research indicates that matching teaching with the preferred learning style of a learner could be a more effective form of teaching and learning. The empirical findings of the present study confirm that because every learner has unique talents, potentials, abilities, as well as shortcomings, it is beneficial for teachers to recognize, acknowledge and cater to these assorted needs in order to promote learner performance and competency.

Moreover, Kruger and Adams (2002, p. 215) maintain that teachers need to characterize learners in such a way that their individual characteristics are adequately addressed. They advise that, in order to do this, teachers should acknowledge the differences that exist among learners; recognize that such differences may have impact on how learners learn; and plan and implement learning programmes which respond to these differences.

According to Felder (1996, p. 18), an outcome of education should be to help learners build skills in both the preferred and less-preferred modes of learning. Learning style models that categorize these modes provide sound frameworks for designing instruction with the desired breadth. The goal is to make sure that the learning needs of learners in each model category are met at least part of the time. This is referred to as “teaching around the cycle” (Felder, 1996, p. 18).

Learning needs should be identified within the prescriptions of supporting and promoting learning and should try to avoid labelling and stigmatizing learners. Teachers taking serious note of this can avoid falling into the trap of stereotyping or favouring some learners at the expense of others.

According to Kolb et al. (quoted by Grosser, 2001; Maja, 2006), learning styles refer to orientations towards approaching learning tasks and processing information in different ways. That is why one of the central ideas behind Outcomes-Based Education is that learners learn differently, so that teachers cannot expect all learners to achieve outcomes in the same way. A broad understanding of learning styles will therefore help teachers to understand and support learners throughout learning processes, aiming at promoting a sense of intellectual safety and security which can lead to better achievement.

Educational psychologists have studied several differences in learning styles and four of the most effective learning style models were considered for providing the theoretical framework for the article:

- The Myers–Briggs Type Indicator (MBTI), according to which Lawrence (1994) classified learners by their preferences on scales derived from psychologist Carl Jung’s theory of psychological types. Learners may be extraverts who try things out, focusing on the outer world of people or introverts who think things through, focusing on the inner world of ideas. Learners may be sensors who are practical, detail-oriented, focusing on facts and procedures or intuitors who are imaginative, concept-oriented, focusing on meanings and possibilities. Learners may be thinkers who are sceptical, tending to make decisions based on logic and rules or feelers who are appreciative, tending to make decisions based on personal and humanistic considerations. Learners may also be judgers who set and follow agendas, seeking closure even with incomplete data or perceivers who adapt to changing circumstances, resisting closure to obtain more detail.
- Kolb’s learning style model (Kolb, 1984), according to which learners’ preferred style of learning can be divided into four major categories. Convergers/sensors and feelers prefer to learn by intuition, being sensitive to feelings and atmosphere, and seeing, hearing and feeling. Divergers/watchers prefer to learn through perception and observation, therefore preferring lectures and demonstrations. Assimilators/thinkers prefer to analyse logically, create understanding for themselves, preferring to read theory and study themselves. Accommodators/doers prefer to learn by trying things out and taking risks. They prefer practice to theory and enjoy learning activities that enable them to do something, such as projects, tasks and discussions.
- Hermann Brain Dominance Instrument (HBDD), which classifies learners in terms of their relative preferences for thinking in four different modes that are based on the task-specialized functioning in the brain (Hermann, 1990). In the Quadrant A (upper left brain) mode, the learners are logical, analytical, quantitative, factual and critical. They prefer precise to-the-point information, theory and logical rationales, proof of validity and textbook readings (Maree & Fraser, 2004, pp. 136–137). In the Quadrant B (lower left brain) mode, the learners are sequential, organized, and structured in their work. They prefer an organized, consistent approach to classroom teaching with clear instructions and expectations (Maree & Fraser, 2004, pp. 136–137). In Quadrant C (lower right brain) mode, learners favour learning in the emotional, interpersonal, sensory and kinesthetic modes. They prefer group discussion, sharing and expressing ideas and hands-on learning (Maree & Fraser, 2004, pp. 136, 138). In the Quadrant D (upper right brain) mode, the learners tend to be visual, holistic and innovative. They prefer discovery and exploration during learning and opportunities to experiment (Maree & Fraser, 2004, pp. 136, 138).
- The Felder–Silverman Learning Style Model (Felder, 1996, p. 20), which classifies learners as sensory learners who are concrete, practical and oriented towards facts and procedures or intuitive learners who are conceptual, innovative and oriented towards theories and meanings; visual learners who prefer visual representations of presented material or verbal learners who prefer written and spoken explanations; inductive learners who prefer presentations that proceed from the specific to the general or deductive learners who prefer presentations that go from the general to the specific; active learners who learn by trying things out and working with others or reflective learners who learn by thinking things through and working alone; sequential learners who tend to be very linear and orderly and who learn in small incremental steps or global learners who tend to be holistic systems thinkers who learn in large leaps.

Constructivism, the educational theory on which Outcomes-Based Education is based, has a specific view regarding learning, namely that it should be an experiential experience. Kolb (1984) developed a model for experiential learning, which indicates that the learning process involves four stages that link directly with four learning styles, namely concrete experience (sensors/feelers), reflective observation (watchers), abstract conceptualization (thinkers) and active experimentation (doers). For the purpose of the article that focuses on research done in classrooms where teaching and learning are Outcomes-Based, it was decided to utilize the model of Kolb as a frame of reference. A closer examination of the discussed models reveals strong links with the model of Kolb. It can thus be concluded that the division of learning styles into sensors/feelers, watchers, thinkers and doers reflects a general classification of learners.

This research argues that, in order to provide pedagogical safety and security to learners, teachers need to meet the pedagogical needs and fundamental rights of learners by balancing teaching styles, teaching methods and strategies and assessment activities with the learning styles of learners.

5. Balancing teaching with learning

Research indicates that teachers' beliefs about knowledge and knowledge acquisition influence and shape the way they think and make important instructional decisions (Brownlee, Purdie, & Boulten-Lewis, 2001, pp. 247–268; Chan, 2008, p. 264; Chan & Elliott, 2004, pp. 817–831; Johnston, Woodside-Jiron, & Day, 2001, p. 5; Muis & Sinatra, 2008, p. 146; Schraw & Olafson, 2008, p. 42; Tabulawa, 1998, p. 252). These instructional decisions include the choice of teaching styles, teaching methods and strategies and the choice of assessment activities. According to Cunningham and Fitzgerald, Fielstein and Phelps, as well as Prawat and Floden (in Schraw & Olafson, 2003, p. 184) the most frequently used terms in the literature to describe teachers' beliefs about knowledge and knowledge acquisition refer to "realist", "contextualist" and "relativist". Johnston et al. (2001, p. 11) refer to realists as teachers who promote "received knowing" and relativists as teachers who promote "constructed knowing."

Weinert and Helmke (1995) assert that the realist worldview assumes that there is an objective body of unchanging knowledge that is best acquired through experts via transmission and reception. Teachers with a realist worldview teach actively while their learners are viewed as passive recipients of pre-established knowledge (Schraw & Olafson, 2003, p. 186). Realist teachers are apt to use norm-referenced assessment such as standardized tests because they want to determine how much of the pre-established curriculum has been learned (Schraw & Olafson, 2003, p. 186). This type of assessment focuses on recognizing facts, rather than generating own answers.

According to McCaslin and Hickey (2001), the contextualist worldview assumes that learners construct shared understanding in collaborative contexts in which teachers serve as facilitators. Contextualists assume that knowledge will change over time and that learners need skills to acquire new knowledge on their own. They prefer to use authentic assessments that match cooperative activities (Schraw & Olafson, 2003, p. 186). It is more likely that contextualist teachers will use alternative assessments such as portfolios and performance-based assessment.

For Cobern (2000, pp. 219–246), the relativist worldview assumes that each learner constructs a unique knowledge base that is different, but equal to that of other learners. Knowledge is subjective and changeable. Teachers with relativist worldviews deny the primacy of their own knowledge and emphasize their role in creating an environment where learners can learn to think independently. These teachers rely on criterion-based assessments tailored to each learner's individual needs, and include assessment practices that demonstrate learner achievement through the use of written, numerical, oral, visual, technological or dramatic media (Schraw & Olafson, 2003, pp. 187, 191).

The above-mentioned beliefs differ in a variety of important ways and suggest three distinct ways of teaching and assessment, which in turn impact on the learning styles that are addressed through teaching and assessment.

Drawing on principles established in earlier research, Table 1 summarizes the researchers' view on linking teaching beliefs with teaching styles, the various types of teaching and learning methods and strategies, as well as assessment activities with a particular learning style. This supports the researchers' argument that linking all aspects of teaching with learning in the classroom would enhance pedagogical safety and security.

Teaching styles refer to a certain manner in which learning activities are presented to learners. The transmission and reception style of teaching implies that the teacher takes a central role and is the source of learning (Schraw & Olafson, 2003, p. 186). Learners are seen as passive receivers of information. The facilitation style makes way for the learner to take a central role, participate in constructing meaning and understanding, and undertake tasks by themselves (McCaslin & Hickey, 2001; Schraw & Olafson, 2003, p. 186). Knowledge is seen as subjective and highly changeable (Cobern, 2000).

In support of the argument of Tabulawa (1998, p. 252) we argue that it is clear from Table 1 that a particular teaching belief gives shape to classroom practice and influences the teaching style, the choice of teaching methods and strategies and assessment activities. We extend the argument by indicating that the choice of teaching and assessment strategies will in turn accommodate a specific learning style. In order to accommodate all the learning styles (to enhance pedagogical safety and security), all teaching methods and strategies and assessment activities therefore need to be varied in the classroom.

Our argument corroborates the views of Sing and Khine (2008, p. 290) and Schraw and Olafson (2008, p. 32) who indicate that teachers who are inclined to view teaching from a teacher-centred and content-oriented perspective adopt a realist approach that emphasizes teacher control and learners accepting a passive role. Teachers who are inclined to view teaching as a process of facilitating adopt a student-centred, learning-oriented, constructivist (relativist) approach to teaching. In their study Johnston et al. (2001, p. 5) highlight the relationship between teacher epistemology and classroom interaction and elaborates on the impact of these approaches on learners. Learners from classrooms where the focus is on teacher authority, transmission of knowledge ("received knowing"), correct answers, clear structure and no engagement in academic discussion among learners and sharing ideas, impact on the way learners' view their roles in knowledge consumption and production. These learners lack a sense of authority with respect to learning and knowledge production and indicators for competence are tied to accuracy, and convention more than sense-making (Johnston et al., 2001, pp. 14–19).

In contrast to the above, learners from classrooms where the focus is on "constructed knowing" and the acquisition of knowledge is viewed as an interactive process, get the opportunity to develop as thinkers, take part in discussions and decision-making, express their feelings. The teacher does not take a centralized, authoritative role and respects the uniqueness of each learner. Learners from these classrooms feel comfortable to disagree with others and have a strong sense of their own authority and uniqueness. The teacher is not seen as central to knowledge production, and the classroom is characterized by collective efforts, multiple perspectives and interdependent thinking (Johnston et al., 2001, pp. 19–25).

Hofer and Pintrich (in Sing & Khine, 2008, p. 288) argue for epistemological development among teachers. They indicate that generally teachers' epistemological development will move and advance to more sophisticated levels, starting with dualism (knowledge is viewed as right or wrong and acquired through authoritative sources), multiplicity, relativism and commitment within relativism (knowledge is viewed as uncertain). Sing and Khine (2008, pp. 288, 289) indicate that it is important for teachers to develop an advanced, relativist epistemological belief as they need to promote better learning among learners and also cultivate sophisticated epistemological outlooks among learners. This advanced outlook among teachers will imply that they will be able to create learning environments which foster deep-learning and higher-order thinking. In this regard Brownlee and Berthelsen

Table 1
Linking teaching and learning with learning styles.

Teaching beliefs	Teaching style	Teaching and learning methods and strategies	Assessment activities	Learning style
Realist	Transmission and reception	Teacher-centred Lectures presentations, drill, practice, questions, demonstrations	Tests Exams	Converger/sensors/feelers Diverger/watchers
Contextualist	Facilitation	Group-centred Transactional Peer support Cooperative learning Research projects Assignments Crossword puzzles Discussions Problem-solving Surveys Design-and-make	Authentic assessment Self assessment Discovering Exploring Experimenting Practical applications Group discussions Action/moving around Research Investigations Presentations Performance	Accommodators/Doers
Relativist	Facilitation	Individual-centred Role play Simulations Autonomous Concept maps Case studies Debates Oral presentations Brain-storming worksheets	Analysing Synthesizing Assignments Graphs Diagrams Mind maps Planning	Assimilators/thinkers

(2008, p. 417) and Johnston et al. (2001) argue that learners take on a particular epistemological stance based on their experiences in the teaching and learning context. In the context of the study we also argue that different teaching approaches will in turn accommodate a variety of learning styles that will enhance pedagogical safety and security.

The consequent question now arises: to what extent do teaching styles, teaching methods and strategies and assessment activities comply with the learners' fundamental rights, in order to promote their pedagogical safety and security?

6. Research methodology

The researchers undertook a preliminary exploratory study which was quantitative in nature to gain practical knowledge of and insight into the choice of teaching styles, teaching methods and strategies and assessment activities, and how these aspects link to the variety of learning styles. Furthermore, the researchers also explored the importance of acknowledging the fundamental rights of learners.

6.1. Population and sample

The research was conducted in the Sedibeng-East (D7) district (Nigel, Vereeniging, Meyerton, Sharpeville and Heidelberg) of the Gauteng Department of Education, and involved all primary and secondary schools in the district ($N = 83$). Due to time and logistical constraints a systematic random sample was selected. Two separate name lists of all the primary and secondary schools were compiled. By systematically selecting each fourth school on the lists 9 primary and 9 secondary schools were ultimately selected. The sample comprised the following participants: schools ($n = 18$; 9 primary and 9 secondary schools); learners ($n = 520$); and teachers ($n = 244$). In the primary school the focus was on learners ($n = 235$) and educators ($n = 90$) teaching in the Intermediate Phase (Grades 4–6) and in the secondary school the focus was on teachers ($n = 154$) and learners ($n = 285$) in the Senior and Further

Education and Training Phases (Grades 7–12). The sample comprised Black and White male and female teachers and learners. The majority of teachers were in possession of a Bachelors degree and a post-graduate diploma in education with 16+ years of teaching experience.

6.2. Data collection instrument

The researchers developed a learner questionnaire which required of them to reflect critically on the teaching practice of their teachers, and a teacher questionnaire which required of the teachers to reflect critically on their own teaching practice. Section 7 of each questionnaire differed in content, in order to be relevant to the respondents. While the learner questionnaire comprised six of the sections in the teacher questionnaire, these sections were adapted to suit the responses requested from learners. All the questions in both questionnaires were closed questions. Likert scale questions with ordinal measuring scales (always, often, sometimes, never and strongly agree, agree, disagree, strongly disagree) were utilized to determine the perceptions of teachers and learners regarding the utilization of teaching methods, learning styles, emerging philosophies of teaching and learning (teachers only) and assessment strategies. Ranking questions with percentage and number scales were utilized for two sections of the questionnaire. Teachers and learners had to indicate on a percentage scale (10–100) how frequent the various learning styles are accommodated during teaching, and number ranking (1–15) was utilized in the section where teachers and learners had to indicate the importance of the fundamental rights of learners.

6.3. Pilot study

Before the questionnaires were administered, a pilot study was conducted with a selected number of respondents from the target population, regarding their qualities of measurement and appropriateness, and to review them for clarity. The group did not

experience any difficulties in understanding what the questions required of them.

A Cronbach alpha coefficient was calculated to determine the internal consistency of sections 3 and 5 before they were administered, as this is a reliability coefficient that calculates the extent to which items, such as those found in a questionnaire, are correlated positively to one another (Akbaba, 2006, p. 183). Sekaran (2000) points out that the internal consistency reliability becomes higher as the Cronbach alpha moves closer to 1. Sections 2 and 4 provided their own consistency, indicated as the ability of items to be assessed together without contradiction (Merriam-Webster, 1995, p. 280), because the participants had to evaluate themselves in terms of teaching styles and learning styles, based on grid questions which allowed more than one response simultaneously. Section 6 made use of weighted ranking, by determining the weighted sum of the participants' responses in order to point out their ranking of 15 statements in order of importance.

The calculated value (0.85) for the learner questionnaire and that of the teacher questionnaire (0.877), indicated that the questionnaires complied with reliability criteria. Validity was arrived at by considering both content validity and construct validity. The content validity is supported by the fact that the specific questionnaire items were constructed strictly according to the definition of each section. The construct validity is underpinned by the fact that although the questionnaire focuses on different sections, they all deal with aspects which are important in meeting the pedagogical needs and fundamental rights of learners.

The reliability coefficients calculated to test the internal consistency of the items in the actual study are revealed below (Tables 2 and 3).

Both the reliability coefficients were higher than 0.7, ranging between 0.73 and 0.78. The high values indicated sound internal consistency among the items. The interitem correlations revealed acceptable results (0.15–0.5).

The three reliability coefficients were higher than 0.7 and range from 0.78 to 0.84. The high values indicated sound internal consistency among the items. The interitem correlations revealed acceptable results (0.15–0.5).

6.4. Data analysis and interpretation

The biographical information indicated that a variety of learners from different cultural and age groups (ranging from 8 to 21 years of age) took part in the research. Furthermore, the biographical information indicated that the majority of the teachers were well qualified and experienced. One could assume that they would possess adequate knowledge regarding teaching and learning and the learners they teach. The disturbing fact emerged that a number of teachers (32.08%) were in possession of only a Grade 12 certificate. This could imply a lack of adequate knowledge and skills that could seriously impact on the quality of teaching and learning.

The data were analysed by means of descriptive statistics. Frequencies, means and percentages were calculated to guide our findings and conclusions. The data presented in all the tables reflect the average responses for the teacher and learner participants.

Table 2
Calculated values for the actual study – learner questionnaire.

Questionnaire section	Cronbach alpha	Interitem correlation
3	0.73088	0.15203
5	0.78219	0.1949

Table 3
Calculated values for the actual study – teacher questionnaire.

Questionnaire section	Cronbach alpha	Interitem correlation
3	0.78889	0.16060
5	0.81909	0.23980
7	0.83546	0.21189

6.4.1. Teaching styles and methods

While learners were requested to indicate the percentage of time which their teachers normally spend on the following teaching styles and methods, teachers were requested to indicate the percentage of time they normally spend using these styles and methods (Tables 4 and 5). In the case of the teaching methods, the responses reflect a combination of both the transmission/reception and the facilitation methods.

The learners' responses concerning the utilization of a particular teaching style in the classroom (Table 4) indicated that there was a strong focus (78.74% Always + Often) on the transmission–reception style. Facilitation style registered only 60.04% (Always + Often) in the learner responses. Against the background of accommodating all pedagogical needs, we argue that this does not indicate the ideal teaching and learning situation. Of greater benefit would be implementing the transmission–reception style of teaching underpinned by a realist epistemological belief to accommodate “sensors”, “feelers” and “watchers” and the facilitation style of teaching underpinned by a contextualist and relativist epistemological belief to accommodate “doers” and “thinkers” on a fairly equal basis during teaching. Although the nature of the contextualist belief, with its focus on interactive learning, would provide some degree of sensory involvement during learning as well, the focus is on promoting a more independent type of learning style that is favoured by the “doers” and “thinkers” and not by the “sensors”, “feelers” and “watchers”. Our assumption corroborates the argument of Brownlee and Berthelsen (2008, p. 417) and Johnston et al. (2001) that learners too take on a particular epistemological stance (preference for acquiring knowledge through a particular style namely, sensing, feeling, watching or thinking) based on their experiences in the teaching and learning context.

However, teachers who participated (Table 5) did not reflect the strong focus on the transmission–reception style (42.76% Always + Often) that the learners indicated (Table 4). Teachers' responses concerning the utilization of a particular teaching style indicated that they were trying to balance the transmission–reception style of teaching (15.9% Always) with the facilitation style of teaching (16.98% Always) on a fairly equal basis. Against the background of the new curriculum, this indicated the ideal teaching and learning situation. Furthermore, it implied that the entire spectrum of world-views regarding teaching and learning was represented and that the variety of learners' pedagogical needs was thus met.

Table 4
Teaching styles and methods in the classroom – learner responses.

	Always	Often	Sometimes	Never	Missing
Transmission and reception style – teacher talks mostly	36.22%	42.52%	20.28%	0.20%	0.08
Transmission and reception methods	35.95%	26.46%	27.7%	8.11%	1.78
Facilitation style – learners are involved, discover and inquire	26.77%	33.27%	37.40%	1.38%	1.18
Facilitation methods	13.75%	25.55%	44.82%	14.41%	1.47

Note: the responses of the teaching methods reflect a combination of the different methods.

Table 5
Percentage of time spent on combined teaching styles and methods – teacher responses.

	90–100%	70–80%	40–60%	10–30%	Missing
Transmission and reception style – teacher lectures, explains, demonstrates	15.09%	27.67%	51.57%	5.66%	0.01
Transmission and reception methods	28.3%	43.7%	19.12%	3.49%	5.39
Facilitation style – learner involvement, discovery, inquiry	16.98%	34.59%	42.14%	6.28%	0.01
Facilitation methods	7.82%	30.36%	41.86%	16.19%	3.77

Note: the responses of the teaching methods reflect a combination of the different methods.

Although it appears as if teachers were utilizing a variety of teaching methods during teaching, a closer examination of the learner/teacher responses concerning three specific teaching methods (Table 6) indicates a strong tendency to utilize methods that fit into the transmission and reception style of teaching. This tendency is noted when combining the Always/Often responses for questioning (89.77%/88.68%), presentations by teachers (68.90%/80.50%) and demonstrations by teachers (65.75%/75.48%). These responses correspond well with the previous responses of the learners (Table 4) that indicated a strong focus on the transmission–reception style of teaching, where learners were viewed as passive recipients of pre-established knowledge and there was an emphasis on deliberate practice. There was thus a tendency to accommodate learners who favour learning through sensing and watching, more than any of the other learning styles.

6.4.2. Learning styles

Learners were requested to indicate their learning style preferences and teachers were requested to indicate how frequently the four major learning styles were accommodated during teaching (Table 7).

Although all the learning styles are indicated as being accommodated during teaching, the responses to this section clearly support the facilitation style by the fact that, according to the always/often categories, the learning style preferred most during teaching, according to learners, is that of the thinker (76.38%), allowing the learners to learn by analysing things and creating understanding for themselves. This response contrasts strongly with the responses in Tables 4 and 5 where learners indicated a strong focus on the transmission and reception style and method of teaching in the classroom. Teachers, on the other hand, indicated a balance in this regard.

While learners indicated having specific and exclusive preferences for a particular learning style, the responses to this section also indicate a strong preference for a combination of styles. The

Table 6
Percentage of time spent on specific teaching methods – learner and teacher responses.

	Always% (N)	Often% (N)	Sometimes% (N)	Never% (N)	Missing
Questioning	69.49% (353)	20.28% (103)	9.25% (47)	0.20% (1)	0.78
	41.51% (66)	47.17% (75)	6.92% (11)	1.26% (2)	3.14
Presentations by teachers	33.66% (171)	35.24% (179)	25.39% (129)	3.74% (19)	1.97
	33.33% (53)	47.17% (75)	15.72% (25)	1.26% (2)	2.52
Demonstrations by teachers	35.63% (181)	30.12% (153)	29.53% (150)	2.56% (13)	2.16
	26.42% (42)	49.06% (78)	20.75% (33)	1.26% (2)	2.51

Note: learner responses concerning teachers' preferred teaching methods are cited in the top line of each category and the teacher responses concerning how frequently they use the teaching methods just below.

Table 7
Accommodating preferred learning styles of learners – learner and teacher responses.

	Always% (N)	Often% (N)	Sometimes% (N)	Never% (N)	Missing
Sensors/feelers	42.13% (214)	20.28% (103)	26.97% (137)	10.24% (52)	0.38
	22.64% (36)	44.03% (70)	27.67% (44)	5.66% (9)	
Watchers	27.95% (142)	36.81% (187)	26.18% (133)	8.66% (44)	0.04
	22.01% (35)	54.09% (86)	21.38% (34)	2.52% (4)	
Thinkers	48.23% (245)	28.15% (143)	21.65% (110)	1.57% (8)	0.04
	23.90% (38)	49.69% (79)	22.64% (36)	3.14% (5)	
Doers	28.94% (147)	34.25% (174)	31.10% (158)	5.31% (27)	0.04
	25.16% (40)	41.51% (66)	30.82% (49)	1.89% (3)	0.62

Note: learner responses concerning their preferred learning styles are cited in the top line of each category and the teacher responses concerning how the learning styles are accommodated just below.

learner responses contrasted strongly with the responses of the teachers. The learner responses indicated a strong focus on learning through sensing (62.41%) and watching (76.38%). The teacher responses indicated a strong focus on learning through watching (76.10%) and thinking (73.59%), while both sensing/feeling and doing were accommodated with 66.67% respectively. Although this response augers well with the strong cognitive focus placed on the learning outcomes learners have to achieve, as stipulated by the National Curriculum Statement (Department of Education; SA, 2004, p. 11), the responses could also point to the fact that the teachers who took part in the study need to put in more effort to become cognizant of the preferred learning styles of the learners they teach as indicated by the National Department of Education (SA, 2004, p. 39). Learners clearly do not have the same preferences regarding the way in which they learn, and teachers have to take cognizance of this.

6.4.3. Assessment strategies

Learners and teachers were requested to indicate how often the following variety of assessment opportunities occurs (Table 8).

In support of the dominance of the transmission and reception style of teaching in two of the previous sections, it was not surprising that the learner and teacher responses indicated that the most utilized methods of assessment fitted into this category (61.81% and 33.33%).

This implied that there was a stronger focus on assessment strategies favoured by learners who were convergers and divergers. Although teachers indicated strongly that a learner-centred teaching and learning environment is important, they often reverted to a more traditional transmission style of teaching. This is clearly indicated in the discrepancy between the responses concerning teaching styles versus teaching methods, learning styles and assessment strategies. While teachers mainly indicated that they balance transmission–reception teaching with student-centred teaching, their teaching methods, accommodation of learning

Table 8
Exposing learners to different assessment strategies/activities – learner and teacher responses.

	Always	Often	Sometimes	Never	Missing
Transmission and reception style activities – teacher-centred: tests and exams	61.81%	23.43%	13.39%	0.39%	0.08
	33.33%	50.94%	12.58%	0.63%	
Facilitation style strategies/activities – learner involvement, discovery, inquiry	21.33%	29.91%	39.09%	8.32%	2.52
	15.63%	44.34%	31.22%	4.49%	4.32

Note: learner responses are cited in the top line of each category and the teacher responses just below.

styles and assessment strategies indicated the opposite, that of a strong focus on transmission–reception teaching. Bearing in mind what literature reveals about the strong impact of epistemological beliefs and assumptions on classroom practice (Tabulawa, 1998, pp. 252, 264), it appears that the majority of teachers who took part in the study hold strong realist epistemological beliefs which influenced their choice of teaching methods and assessment strategies to be mainly teacher-centred and content-oriented.

This could also be ascribed to factors such as time limits which have to be adhered to, lack of experience or knowledge, lack of a supportive school structure and demands placed upon them by the school principals and the school district. Faced with demands for increased classroom control, teachers may begin to plan instruction to discourage misbehaviour, rather than to promote learning and meeting the needs and rights of learners (Kagan, 1992). This does not augur well for promoting the fundamental rights of learners concerning pedagogical safety and security.

6.4.4. The importance of the fundamental rights of learners

As reflected in Table 9, learners and teachers were requested to rate specific statements in order of priority in the classroom on a scale of 1 (the most important) to 15 (the least important). The researchers ranked the 15 statements in expected order of importance based on stipulations from legislation, indicated in the table as expected rating. The ranking process comprised sections from the Constitution as supreme law of the country (SA, 1996a, sect 29(1)(a) which relates to the right to basic education; sect 28(2) which refers to the best interests of the child as of paramount importance; SA), sections from the Schools Act as example of education legislation (SA, 1996c, sect 4(1) which refers to taking the best interests of the learner into consideration; sect 5(1) which refers to serving the educational requirements of learners without unfair discrimination; sect 8(2) which refers to the maintenance of the quality of the learning process; sect 8(7) which refers to never unfairly discriminating against learners; sect 20(1)(a) which refers to promoting the best interests of the school and ensuring its development by providing quality education to all the learners; SA), sections from the Education Policy Act as example of teacher

specific legislation (SA, 1996b, sect 4(a) which refers to advancing the fundamental rights of every learner in terms of the Constitution; sect 4(a)(i) and (ii) which refer to the right of every learner to be protected against unfair discrimination and the rights of every learner to basic education; sect 4(f) which refers to achieving an integrated approach to education; section 4(h) which refers to, among others, the need to recognize the aptitudes, abilities and interests of learners; SA; section 4(i) which refers to encouraging independent and critical thought; SA) and in the last instance the seven roles of teachers, taken from the Norms and Standards for Educators in the Education Policy Act (SA, 1996b, section 3; SA). While these roles have already been mentioned above, it would serve the aim of the article well if attention were drawn to the fact that the fourth role specifically refers to the teacher upholding the Constitution, while developing a supportive and empowering environment for the learner and responding to the educational needs of learners.

This table compares the researchers' expected ranking of the statements in order of importance, based on stipulations in current legislation, with the actual ranking of how frequently these statements occurred in the classroom, according to learners and teachers.

It was disconcerting to note from the responses that learners ranked the statements of adhering to practices that have been proven (24.61%) and coping with the work (21.26%) as the two aspects that occurred in the classroom most of the time. The expected rating was that these two statements would prove to be the least important. These two learner outcomes were supported by the fact that the choice of teaching methods and assessment strategies clearly favoured the needs and interests of only a particular group of learners.

Moreover, according to the learners, some of the most important aspects in dealing with the pedagogical needs of learners, namely protecting the best interest of the child, safeguarding the interests of learners, upholding the fundamental rights of learners, pacing learning according to different needs of learners and protecting learners' right to education, did not feature strongly in the classroom.

Table 9
The importance of learners' fundamental rights in the classroom.

Expected rating: based on stipulations		Actual learner rating	%	Actual teacher rating	%
2	Safeguarding the interests of the learner	5	5.51	4	7.55
6	Protecting the dignity of all learners	10	2.17	11	4.40
13	Enforcing school rules	8	3.56	4	7.55
14	Coping with the work	2	21.26	14	3.14
15	Adhering to practices that have been proven	1	24.61	6	6.29
10	Organizing the portfolios of all learners	10	2.17	15	2.52
11	Maintaining the workload efficiently	12	1.77	2	8.18
12	Managing personal stress levels	7	3.94	6	6.29
9	Advancing the diverse cultures of learners	13	1.57	2	8.18
4	Protecting learners' right to education	3	7.87	8	5.03
3	Upholding the fundamental rights of learners	4	7.28	13	3.77
5	Pacing learning according to different needs of learners	15	1.38	8	5.03
8	Responding to the educational needs of learners without discrimination	13	1.58	11	4.40
7	Using different approaches to teaching and learning appropriately	9	3.35	8	5.03
1	Protecting the best interest of the child	6	4.93	1	22.64

Table 10
Incidence of the three philosophies of teaching and learning – teacher responses.

Philosophy	Statements	Responses in %
Realist	1,6,7,8,12,16,17	95.03
Contextualist	5,10,13,14,15,18	78.92
Relativist	3,2,9,11,19	66.59
Realist, contextualist and relativist	4	94.97

It was also disconcerting to note from the teacher responses that aspects such as maintaining the workload efficiently (rated 2nd), enforcing school rules (rated 4th) and adhering to proven practices/managing personal stress levels (rated 6th) were rated higher than upholding learners' fundamental rights (rated 13th), responding to the educational needs of learners (rated 11th), and protecting learners' right to education/pacing learning according to learners' different needs/using different approaches to teaching and learning appropriately (rated 8th). This outcome was supported by the fact that the choice of teaching methods and assessment strategies clearly favoured the needs and interests of only a particular group of learners.

It is noteworthy to mention that although protecting the best interests of the child was ranked number one by the teachers, this was not reflected in the choice of methods and assessment strategies utilized during their teaching and learning.

6.4.5. Section relevant only to teacher questionnaire

The section that only teachers completed, involved statements regarding teaching and learning that could be classified according to the three main philosophies on teaching and learning, and which were clustered for the sake of this article (Table 10).

Although all the philosophies of teaching and learning were evident in the teaching practices of the teachers who took part in the research, the majority of teachers were inclined to favour the realist philosophy of teaching and learning (95.03%), with 78.92% in favour of the contextualist philosophy of teaching and learning and 66.59% in favour of the relativist philosophy of teaching and learning. This supported the findings where it was evident that teachers selected teaching methods and assessment strategies typical of the realist philosophy of teaching and learning, thus preferring the transmission–reception teaching style.

One of the statements in the teacher questionnaire combined the three philosophical approaches and requested teachers to determine the importance of teaching in order to develop learners holistically. Teachers had to agree or not agree to the fact that teaching practice needed to involve a variety of experiences in order to achieve learners' holistic development and meet the needs of a variety of learners. It was interesting to note that although 94.97% of the teachers supported this statement, their practice in the classroom proved the opposite.

Disturbing was the revelation of the fact that the relativist philosophy of teaching and learning was underestimated by teachers. Independent learning was viewed as successful by only 55.35% of the teachers. Furthermore, only 49.68% of the teachers indicated that learners needed to be given choices regarding what and how to learn, and only 10.31% indicated that learners could be trusted to define their own goals.

7. Conclusions

Although the study was exploratory in nature, and the addition of a qualitative dimension is needed to provide a deeper understanding of the problem and the contrasting responses received

from teachers and learners, this research voices a number of concerns from learners regarding classroom teaching and learning.

The first research question of this article was to determine the compatibility of teaching practices with the pedagogical needs and fundamental rights of learner. This research indicates that teaching practices are not yet compatible with the emerging needs and fundamental rights of learners. In the context of the research, it is the pedagogical needs of the converger/senser and the diverger/watcher in particular that are accommodated. The danger of teaching according to one strategy will result in a classroom situation where some learners will always enjoy lessons and do well, while others struggle and feel uncomfortable all the time. In time, some learners are seen as good, dedicated and talented, while others are labelled slow, bored or difficult. This does not augur well for pedagogical safety and security. By understanding how to cope with learning styles, teachers would be able to avoid the aforementioned problems, promote learner performance and competency, and enhance the pedagogical safety and security of learners. In this way, the fundamental rights of learners will be upheld.

The second research question of this article was to determine whether teachers are empowered to meet the pedagogical needs and fundamental rights of the learners in their classrooms. This research indicates that teachers are not empowered to do so. On the one hand, the strong focus on maintaining workloads, enforcing school rules, managing stress levels, adhering to practices that have been proven and coping with the work implies that the fundamental rights of learners are neglected in practice. On the other hand, a strong tendency to accommodate learners who favour learning through sensing and watching implies the same. The responses of learners indicating their preferred learning style also confirm this. Teachers' apparent disempowerment to accommodate the diverse pedagogical needs could also be attributed to the fact that epistemological advancement is required among the teachers in order to promote better learning environments to learners which foster deep-learning and higher-order learning. We therefore argue that epistemological enhancement would enable teachers to create advanced learning environments in which they utilize different approaches to teaching, learning and assessment which in turn could accommodate the diverse learning style needs of learners.

The third research question of this article was to determine whether learners have a preference for a certain learning style. This research indicates that it is indeed so. Learners have unique preferences when it comes to ways in which they learn best. However, teachers should accommodate all the different learning styles during their teaching, as this is not only necessary for the successful achievement of learning outcomes, but (as indicated by the responses of the learners) some favour a combination of styles. It is therefore important to expose learners to a variety of learning styles.

According to the data, the pacing of learning according to learners' different needs and using different approaches to teaching and learning appropriately are ranked lower than expected. These results sound a warning in that inclusive education might in time become an unrealized dream. By being trained concerning the importance of meeting the pedagogical needs and fundamental rights of all the learners and by practising this skill, teachers would be able to face this challenge successfully.

Pedagogical safety and security in education will not be enhanced if the strategies for teaching and learning are not balanced with the pedagogical needs and fundamental rights of learners.

8. Recommendations

Our research indicates that teachers need to be assisted in meeting the pedagogical needs and fundamental rights of the

learners in their classrooms. This implies firstly that teachers need to develop an own understanding of their philosophy of teaching and learning, to compare it with other philosophies, to discard those aspects that are unhelpful and to acquire new ones. Moreover, teachers need to understand philosophies of teaching and learning and their relation to classroom practice in greater detail. Secondly, the professional development of in-service teachers needs to deepen their understanding of the processes of teaching and learning and the learners they teach as well as how classroom practice is influenced by assumptions and beliefs about the nature of knowledge. Thirdly, teacher preset-training and in-service training need to focus on the importance of recognizing and enhancing the pedagogical needs and the fundamental rights of all the learners, specifically those concerning their learning.

In support of Tabulawa (1998, p. 266) who argues for the power of teachers and not merely injecting resources to effect change, we argue that meeting the challenges of inclusive teaching and learning is dependent upon the epistemological advancement of teachers in order to comply with the pedagogical needs and fundamental rights of learners, such as to learn according to their own style.

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