

## Exploring the Perceptions of Pre-service Teachers' Experiences of Autonomy in Transformational Teaching

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**ABSTRACT** Over the past two decades, researchers in the humanities and social sciences have shown a growing interest in exploring teaching for transformation. The aim of this study is to explore the perceptions of pre-service teachers' experiences on autonomy for transformational teaching during teaching practice sessions. The researchers adopted a positivistic methodology during our quantitative investigation. Questionnaires were used to collect data. Four factors: emotions; classroom management; motivation; and transformation were extracted from the rotated matrix. The results revealed that pre-service teachers appear to be aware of what autonomy implies and gear their teaching in this direction, and it appears that the University where the research was conducted prepares their students to function autonomously.

### INTRODUCTION AND ORIENTATION

Over the past two decades, researchers in the humanities and social sciences have shown a growing interest in exploring teaching for transformation.

#### Pre-service Teachers Teaching for Transformation

The researchers locate their discussion on education within the broader framework of transformation. Teacher training imperatives for a transformative South African educational system will be discussed. In addition, the conceptualisation of autonomy to teach for transformation as reflected in the teacher training practices of a faculty will be analysed. In relation to this, the researchers present the reflections of pre-service teachers in the faculty regarding their views and experiences of autonomy in teaching for transformation.

Alexander et al. (2009) are of the opinion that the purpose of education involves the development of human capital towards meeting and achieving the individual and psycho-social needs of learners and communities. For Enslin and Pendlebury (1998), the transformation of education is imperative within the transformation of the broader society. Botha (2002) asserts that educational change is required to provide equity in terms of educational provision and to

promote a more balanced view of South African society. It stands to reason that pre-service teachers should assume a new role. Preparing pre-service teachers to teach necessitates building capacity and enhancing their capabilities to smooth the process of interaction between their ideas about teaching for transformation and their experiences of, and exposure to, the teaching realities in South African schools.

Therefore, this study advocates a transformed state for the individual before teaching for transformation can take place. Whitcomb et al. (2007) emphasise that teacher education should be guided by a goal for transformation. For the authors, a transformative education offers alternative narratives that challenge pre-service educators' perceived views and enlarges or directs their circle of meaning. It does so in a manner that engages feeling and intellect, and relies in some way on an inner eye, an inner self (Whitcomb et al. 2007).

Important considerations underlie the pre-service educators' capabilities in engaging in transformational teaching. In doing so, the background of the individual educator needs to be considered and how he/she conceptualises his/her role as a transformational teacher. Beck (1993) refers to a *working understanding* of the reality of life in which the individual is no longer seeking to uncover a pre-existing reality but rather, being actively involved in an interactive process of knowledge creation.

Whitcomb et al. (2007) posit that in preparing pre-service teachers, they should be asked what kind of teachers they wish to become and what view of teaching allows them to live and teach better. Dyson (2003) contends that pre-service teachers need to be free from habitual thinking and habitual judgment and that they need to have the ability to stand back and take a holistic view of the programmes they operate and then be willing, in a mindful way, to participate in their preparation to be thinkers and judges who are better equipped.

The educational climate in South Africa, characterised by many writers as volatile, challenging and unstable, necessitates that institutions of higher learning rethink what knowledge and skills pre-service educators should acquire. One of the major considerations regarding how teacher education evolves in South Africa interrogates the question of how pre-service teachers are prepared in our higher learning institutions. What pedagogies inform or guide our institutions which are commissioned with the responsibility of preparing teachers, especially in the pervasive climate of transformation in schools and in society?

### **Teaching for Transformation and Teacher Autonomy**

Vieira (2007) contends that teachers in transformational teaching need to be prepared to face more obstacles and dilemmas than they do in the more traditional ways of teaching. This means that they need to develop themselves as reflective practitioners and critical intellectuals, struggling for autonomy as a collective interest. In this regard, the author states that teachers, as principal agents of teaching, need to be part of the building environment in which teams of teachers, administrators and education experts collegially work to improve the school, redesign the curriculum, and increase the power of teaching. This view is concurrent with that of the South African Department of Education (South Africa 2000) which stipulates that:

*teacher education programmes are required to shift from a content to a competence approach. In terms of this policy, teacher education curricula must ensure that theory and practice are integrated, and that teachers demonstrate not only foundational competence (knowledge of the subject/learning area and*

*ways of teaching it) and practical teaching competence, but also reflexive competence (Section 3).*

These competencies provide for the possibilities, in an authentic context, for action, for the making of considered decisions and the ability to adapt to change and unforeseen circumstances, as well as being able to explain the reason behind these actions. If teacher education is to be designed and delivered for the attainment of educator competencies, teacher education would be guided by a goal for transformation.

Mezirow (1991) offers a starting point for thinking about transformation as:

*the process of becoming critically aware of how and why our assumptions have come to constrain the way we perceive, understand, and feel about our world; changing these structures of habitual expectations to make possible a more inclusive, discriminating, and integrative perspective; and finally making choices or otherwise acting upon these new understandings (p.167).*

From Mezirow's view it can be deduced that transformational teaching holds that teachers acquire knowledge and skills through organising their own ideas by presenting their own practices. In presenting a teaching activity, teachers would not only improve their teaching through practice, but they would also learn to say new things about their educational activities; thus, framing their activities differently. If teachers are to be guided regarding transformational teaching, says Mezirow (1991): "they acquire something new, a new stance from which to think about and talk about their slice of their work."

### **The Autonomous and Emotionally Intelligent Pre-service Teacher**

In the event of exploring, amongst other things, transformational teaching, there is evidence that EI (Emotional Intelligence) is a significant predictor of an individual's social and personal functioning (Extremera and Fernández-Berrocá 2005; Schutte et al. 2001). In a study carried out on secondary teachers in England, it was observed that a teacher's EI can predict levels of burnout. Palomera et al. (2008) confirm a recent study where a teacher's ability to regulate emotions was related to his/her perceived levels of depersonalisation, self-realisation and

emotional wear (Mendes 2003). At the same time, teachers with high EI use more positive, well-adapted coping strategies when dealing with different sources of stress at school and feel greater satisfaction in their work (Palomera et al. 2008).

The researchers argue that it is essential for pre-service educators to acquire emotional managerial skills specifically, in order to be able to respond to the educational setting's emotional displays and particularly, to ensure that change initiatives succeed. In so doing, the educator is then equipped to meet personal expectations and goals better and be able to align these with the goals of the school. Emotionally intelligent teachers would thus be aware of the reason, the time, the place and the way they acquire skills and updated knowledge as part of their teaching practice (Ramos 2006).

When teachers are ready and strong enough to identify their educational needs and goals, we can assist them in developing autonomy and their own awareness of their teaching practices. Jiménez Raya et al. (2007) explain:

*...the competence to develop as a self-determined, socially responsible and critically aware participant in (and beyond) educational environments within a vision of education as (inter)personal empowerment and social transformation (p.34).*

Within such view autonomous pre-service teachers would be able to reflect on their job and preparation, and carry out actions that represent the betterment of their teaching practices. By becoming autonomous, pre-service teachers will be able to explore, change and grow, and develop positive attitudes towards self-regulated and independent teaching practices. The development of autonomy would give pre-service teachers what Breen and Mann (1997) call: "a position from which to engage with the world, a way of being in it". This could assist pre-service teachers to feel in control of their educational engagements, help them to experience different things in different areas of their teaching practices and enable them to carry themselves with a different, more positive attitude through their careers.

The researchers contend that for this study, it is pertinent to show whether pre-service teachers, on their path to discovering and sharing knowledge and while experiencing feelings of uncertainty and being exposed to a multiplicity

of viewpoints, to exercise autonomy in schools. The many roles that are required of teachers impel us to reconsider pre-service teacher training, which has traditionally focused on teaching specific knowledge and processes, but not on basic personal and interpersonal competencies which provide the future teacher with sufficient autonomy to address his/her own ongoing learning, to solve problems common to the profession and to meet the imposed educational objectives. In this study, the researchers advance the proposition that transformation is an inherently emotional process; therefore, the concept of Emotional Intelligence (EI) and how it can complement the pre-service ability to manage the process of transformation and teach for transformation, are explored.

#### **Applying a Capabilities Approach to Autonomy in Teaching for Transformation**

In order for pre-service teachers to use autonomy to teach for transformation, the researchers contest that higher education institutions assist students in becoming autonomous, as well as strengthening their abilities to teach for transformation. In this regard, Maarman (2009) asserts that education institutions should help a person to develop the ability to think critically and creatively; solve problems; make informed decisions; cope with and manage new situations; and communicate effectively, thus helping him/her to become autonomous.

This study therefore aims to explore the perceptions of pre-service teachers' experiences of autonomy and to teach for transformation during teaching practice sessions at a South African university. To achieve their aim, the researchers asked pre-service teachers to complete structured questionnaires focusing on issues such as autonomy, emotional intelligence and teaching for transformation.

The concept of autonomy requires that pre-service teachers should be aware of the reason, time, place and way in which they can acquire skills and knowledge as part of their teaching practices. According to Ramos (2006), this concept reflects that autonomy involves negotiation skills; a capacity for reflection on teaching processes and the teaching environment; a capacity to create a classroom culture; and a readiness to engage in lifelong learning. The basic premise here is that if pre-service teachers are

empowered through sound institutional support to experience independent teaching practices, they will be able to improve their own practices, as well as the learning experiences of their learners. In this regard, the researchers assert that autonomous pre-service teachers would be capable of sharing in decision making; be involved in changing aspects of teaching practices; be reflective practitioners; and sufficiently emotionally intelligent to cope with the demands of the entire education system.

To be emotionally intelligent, people should be able to understand and express themselves; to understand and relate well to others; and have the ability to be aware of their emotions and of themselves in general (Bar-On 2007). In this regard, people should be able to establish and maintain cooperative, constructive and mutually satisfying relationships. The importance of emotional intelligence involves the ability to monitor one's own and others' feelings and emotions; to discriminate among them and to use the information to guide one's thinking and actions (Palomera et al. 2008). To guide pre-service teachers regarding the way they think and act, higher education institutions need to provide adequate and ongoing teacher training to encourage pre-service teachers to be effective teachers who will be able to teach for transformation.

One of the overall goals of transformation (South Africa 2001) is to build new institutional and organisational forms and new institutional identities through regional collaboration between institutions. In this regard, Waghid (2002) asserts that transformation involves a process of knowledge production and reflexive action, which means that people should be empowered to approach educational practices in new and autonomous ways. In the educational realm to which this refers, it does not imply simply adding to a pre-service teacher's knowledge, skills and abilities, but to the way pre-service teachers are enabled to apply independent teaching practices. According to Van Wyk (2003), the transformation process should encompass every aspect of the education institution, including its mission, its financial structuring, organisation and governance. As such, higher education institutions should build capacity, energy, excitement and commitment in pre-service teachers so as to empower them to become autonomous.

In summary, higher education institutions should aim to develop pre-service teachers' autonomy to allow them to teach for transformation through the creation of new and original ideas, rather than simply recycling old ones. Moreover, autonomy suggests a type of experiential learning, allowing teachers to forge links between their own classroom practice and the experience that resides in the territory between theory and practice; between idea and experience; and between the normative ideal and the achievable real (Shulman 2004).

## RESEARCH METHODOLOGY

### Research Paradigm

This research has been undertaken from a positivistic stance. Positivism holds the belief that the social world can be studied in the same way as the natural world; that there is a method for studying the social world that is value-free, and that explanations of an informal nature can be provided (Facione and Giancarlo 1995). Within this positivistic view, the researchers contest that they are able to describe constant relationships between variables while exploring the perceptions of pre-service teachers' experiences of autonomy in transformational teaching. They therefore assert that the knowledge they have gained from pre-service teachers can be considered to be objective, valid, certain and accurate. This claim is supported by the fact that pre-service teachers' experiences are a reality that exists; a reality they intend to reveal in order to offer perspectives of the situation in which pre-service teachers frequently find themselves, and thus provide insight into the way they make sense of their experiences.

### Research Design

An exploratory, descriptive, contextual research design was used and implemented for this study. A closed structured questionnaire was designed to collect data for the purpose of this study. The researchers reported the findings of student teachers' attitudes towards using autonomy in teaching for transformation. As such, they collected and analysed primary data from the questionnaires (Teddlie and Tashakkori 2009; Creswell 2009).

### Sampling

Sixty-eight (n=68) B.Ed. student teachers who were registered for the module, *Education for Transformation* (EFT 122), were selected as the proportionally stratified sample for the study. The sample consisted of fifty-seven point one percent (57.1%) Black and forty-two point nine percent (42.9%) White students. Furthermore, 47.7% of the students were females and 52.3% were males. Both groups were taught by the researchers over a 12-week period of two contact sessions of 55 minutes per week for the second semester. This research was conducted at the School of Education Studies in the Faculty of Education, at a university in South Africa.

### Research Instrument and Procedure

A descriptive approach using quantitative research methods was considered suitable because it involves an external and objective approach, suitable for examining the objective perceptions of research participants regarding their experience. Therefore, the real-life experiences of pre-service teachers regarding autonomy in teaching for transformation were captured. A questionnaire with 25 structured questions based on pre-service teachers' autonomy to teach for transformation was used to obtain the data. The questionnaire included 25 items relating to the topic of study. Structured items requested participants to give quantitative responses by selecting the item response options of their choice. All the questionnaires were collected for analysis. The following data collection instrument was designed and used for the purpose of this study. The researchers describe the substantive considerations that directed the development of the 25-item questionnaire and provide indicators of the reliability and validity of the proposed instrument. The outcome of this research instrument, an *Autonomy in Teaching for Transformation Tool* (ATT-scale) was used and is recommended as an effective measuring instrument for investigating the changes in autonomy in teaching for transformation of student teachers at the faculty. The statistical tool, Cronbach's alpha coefficient computed items in the questionnaire which indicate a measure of internal consistency of these items (Cohen et al. 2009). Furthermore, Starborn (2006) mentions that Cronbach's alpha is an appropriate test to use

to assess the internal consistency of scales that are computed from a 4-point Likert scale. To test the reliability of the research results, Cronbach's alpha coefficient was calculated for the items in question 1 (0.850 > p); question 4 (0.918 > p); and question 11 (0.733 > p). The total average was 0.816 > p for items in the questionnaire.

### The Rationale for Applying the Exploratory Factor Analysis (EFA) Statistical Analysis

Exploratory Factor Analysis EFA was selected because it does not impose a specific pattern on the data in an *a priori* manner. Instead, it provides an opportunity to identify a factor's inclusion substantially (Costello and Osborne 2005). EFA was warranted in this study as no previous research has examined the factor structure to measure students' perceptions of autonomy in teaching for transformation by using an exploratory factor analysis and a reliability analysis. The EFA was conducted to identify and interpret the underlying and common factors of the respondents' reasons that influence the perceptions of autonomy in teaching for transformation. Gorsuch (1997) and Creswell (2009) mention that EFA explains the variation in the observed variables in terms of the underlying latent factors. The first step required to perform a factor analysis is to determine whether it is actually necessary to perform it on the data. This is done by testing the adequacy with which the data could be sampled. The measuring of sampling adequacy involves determining the suitability of individual variables for use in the factor analysis and this was evaluated using the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (Berghaus et al. 2005; Cohen et al. 2009; Leedy and Ormrod 2001).

### Ethical Considerations

The study under scrutiny met the standards of trustworthiness which encompass notions of validity, reliability, anonymity and conformability. The pre-service teachers were consulted in the planning of the research and the definition of the research objectives. Before the researchers could begin with the study, they obtained consent from the students and explained the purpose and confidentiality of the study to the students. The students agreed that we could use their information for purpose of the study.

The potential benefits of the study were articulated clearly and unambiguously (Beylefeld et al. 2005). They also ensured them that they would adhere meticulously to the original goals of the research and obey the rules of anonymity. Participants were also afforded the opportunity to articulate their quantitative views on the interpretation of their responses. Furthermore, we read widely to compare our analysis (*cf.* Flick 1999; Green and Thorogood 2005) with research conducted into pre-service teachers' autonomy to teach for transformation and found that a paucity of research has been done, in which students of the School of Education Studies have participated, in a study of this kind.

## RESULTS

### Autonomy in Teaching for Transformation - Analysis

In Table 1, a descriptive analysis of pre-service teachers' responses to the ATT survey is reported and analysed.

Referring to Table 1, the pre-service teachers tended to agree with or responded positively to their autonomy in teaching for transformation in their future careers and in everyday life (given the mean of 3.91 which is better than 2 (neutral) on the 4-point Likert scale). The same observation is valid for knowledge and skills, where students tended to agree with the perception that they should possess the transformation skills needed in terms of teaching. Moreover, these students tended to agree that autonomy in teaching for transformation motivates them in their learning and agreed that they enjoyed learning about transformation issues during their initial teacher training. These results revealed that pre-service teachers who participated in the study were positive about teaching for transformation. An independent sample t-test was performed on the mean score for each of the four factors in order to compare the perceptions (attitudes) of autonomy in teaching for transformation.

**Table 1: Summary descriptive analysis of mean and SD scores (N=68)**

Question number	Statements regarding experiences of autonomy in teaching for transformation.	Mean scores	SD
5.	Expressing emotions is a sign of weakness.	3.43	1.39
6.	I am able to express my personal emotions.	3.51	1.23
7.	I easily adapt to unfamiliar and unpredictable circumstances.	2.35	0.89
8.	I have the ability to motivate myself and others with empathy.	3.18	1.52
9.	The relationship between my learners and me is generally positive.	3.29	1.10
10.	I am able to cope successfully with daily demands and pressures at school.	2.90	1.39
11.	The leadership of the schools creates the right conditions for pre-service teachers to motivate and empower themselves.	3.43	1.25
12.	The leadership of the schools builds a strong level of trust among pre-service teachers in the schools.	3.07	1.22
13.	I am motivated to assist with transformation at the school.	3.91	1.17
14.	I am allowed to contribute to the school in ways which are meaningful to me.	3.68	1.28
15.	I am encouraged to bring my personal, as well as my professional self to the classroom.	3.58	1.31
16.	I experience shared responsibility for learning that takes place in the classroom.	3.12	1.17
17.	I am allowed to use my creativity in teaching my learners.	3.13	1.22
18.	I have a choice of selecting the school (s) where I want to do practice teaching.	2.81	1.09
19.	I am allowed to choose topics and themes for classroom presentation and evaluation purposes.	2.78	1.49
20.	I use my own initiative when deciding on teaching methods to use in my classroom.	3.28	1.20
21.	I am able to manage any restraint placed on my autonomy at school.	2.34	1.26
22.	I have the freedom to apply democratic principles of education in my classroom.	3.61	1.07
23.	Pre-service teachers are empowered to engage in activities that promote transformation at schools.	2.19	.89
24.	I am able to exercise leadership in transforming classroom practice at school.	2.95	1.55
25.	The leadership leads pre-service teachers to achieve desired outcomes, rather than restricting them.	3.39	1.04

Mean\*: 4 = Strongly agree 3 = Agree 2 = Disagree 1 = Strongly disagree

### Measuring the Sampling Adequacy

The measuring of sampling adequacy, involving determining the suitability of individual variables for use in the factor analysis, was evaluated using the Kaiser-Meyer-Olkin (KMO) model. The aim was to measure the sampling adequacy of 25 items in the ATTE-questionnaire. A KMO-value which is greater than 0.5, indicates that the variable is significant at that level (Sekaran 2003). The KMO values relating to the pre-service teachers' experiences of autonomy in teaching for transformation that were included in the factor analysis are presented in Table 2 (this KMO value scale was used: 0.90 to 1.00 = marvelous or 0.80 to 0.89 = meritorious or 0.70 to 0.79 = middling or 0.60 to 0.69 = mediocre or 0.50 to 0.59 = miserable and 0.000 to .0.49 = do not factor). Based on the data obtained in Table 3, it is clear that eleven of the variables scored a KMO value that is well over 0.5 with the highest being 0.98 = marvellous, 'I am able to express my personal emotions.'

Based on the results in Table 2, the KMO value scores of ten (10) variables were well over the 0.5 level. This indicates that the data qualify

as *marvelous* and *highly significant* when measuring the importance of the pre-service teachers' experiences of autonomy in teaching for transformation during their teaching practice periods at different schools in the demarcated area of investigation. In conclusion, the KMO sampling adequacy measurement of the ten variables is *marvellous* to *meritorious* (ranging from 0.69 to 0.98) and the factor analysis is thus appropriate for this study.

### Rotated Factor Matrix and Reliability Analysis of Pre-Service Teachers' Experiences of Autonomy in Teaching for Transformation

As a statistical technique, a principle component analysis (PCA) was conducted to determine the number of factors that should be included in the factor analysis (Cohen et al. 2009). Research shows that PCA is used frequently in all forms of analysis, from neuroscience to computer graphics, because it is a simple, non-parametric method of extracting relevant information from confusing data sets. With minimal additional effort, PCA provides a roadmap for the reduction of a complex data set to a lower di-

**Table 2: Kaiser-Meyer-Olkin measurement of autonomy in teaching for transformation (N=68)**

	<i>Changing the habits of teaching: Pre-service teachers' experiences of autonomy in teaching for transformation.</i>	<i>KMO-values</i>
5.	Expressing emotions is a sign of weakness.	0.87**
6.	I am able to express my personal emotions.	0.98**
7.	I easily adapt to unfamiliar and unpredictable circumstances.	0.41
8.	I have the ability to motivate myself and others with empathy.	0.89**
9.	The relationship between my learners and me is generally positive.	0.86**
10.	I am able to cope successfully with daily demands and pressures at school.	0.83**
11.	The leadership of the schools creates the right conditions for pre-service teachers to motivate and empower themselves.	0.27
12.	The leadership of the schools builds a strong level of trust among pre-service teachers in the schools.	0.47
13.	I am motivated to assist with transformation at the school.	0.84**
14.	I am allowed to contribute to the school in ways which are meaningful to me.	0.94**
15.	I am encouraged to bring my personal, as well as my professional self into the classroom.	0.40
16.	I experience shared responsibility for learning that takes place in the classroom.	0.93**
17.	I am allowed to use my creativity in teaching my learners.	0.43
18.	I have a choice of selecting the school (s) where I want to do practice teaching.	0.42
19.	I am allowed to choose topics and themes for classroom presentation and evaluation purposes.	0.37
20.	I use my own initiative when deciding on teaching methods to use in my classroom.	0.96**
21.	I am able to manage any restraint placed on my autonomy at schools.	0.87**
22.	I have the freedom to apply democratic principles of education in my classroom.	0.44
23.	Pre-service teachers are empowered to engage in activities that promote transformation at schools.	0.41
24.	I am able to exercise leadership in transforming classroom practice at school.	0.69**
25.	The leadership leads pre-service teachers to achieve desired outcomes, rather than restricting them.	0.34

\*\*KMO > 0.5 of a factor analysis is significant

mension, in order to reveal the sometimes hidden, simplified structure that often underlies it (Shlens 2005). The Eigen-value criteria were used to determine the number of factors that had to be specified in the factor analysis. Using the Eigen-value criteria, an Eigen value of 1 was used as the cut-off value. Based on the data obtained in Table 3, *four principle components* had Eigen values greater than 1 and explained 69.56 per-

cent of the variance in all the respondents' choices regarding their experiences of autonomy in teaching for transformation during teaching practice.

Referring to Table 3, a reliability analysis was carried out on the four extracted factors. Reliability which describes the internal consistency of a set of items was measured by Cronbach's alpha and item-total correlations. In general, re-

**Table 3: Rotated factor matrix and reliability analysis - pre-service teachers' experiences of autonomy in teaching for transformation**

<i>Statement</i>	<i>F1</i>	<i>F2</i>	<i>F3</i>	<i>F4</i>
<i>Changing the habits of teaching: Pre-service teachers' experiences of autonomy in teaching for transformation.</i>				
<i>Factor 1: Emotions (Cronbach's alpha = 0.852)</i>				
The relationship between my learners and me is generally positive.	0.905			
I easily adapt to unfamiliar and unpredictable circumstances. Expressing emotions is a sign of weakness.	0.871			
I am able to express my personal emotions.	0.871			
	0.841			
<i>Factor 2: Motivation (Cronbach's alpha = 0.859)</i>				
I have the ability to motivate myself and others with empathy.		0.925		
I am able to cope successfully with daily demands and pressures at school.		0.901		
The leadership of the schools creates the right conditions for pre-service teachers to motivate and empower themselves.		0.870		
I am motivated to assist with transformation at the school.		0.818		
		0.781		
<i>Factor 3: Classroom Management (Cronbach's alpha = 0.798)</i>				
I am encouraged to bring my personal, as well as my professional self into the classroom.			0.895	
I experience shared responsibility for learning that takes place in the classroom. I am allowed to use my creativity in teaching my learners.			0.831	
I am allowed to choose topics and themes for classroom presentation and evaluation purposes.			0.810	
I use my own initiative when deciding on teaching methods to use in my classroom.			0.789	
I am able to manage any restraint placed on my autonomy at school.			0.780	
I have the freedom to apply democratic principles of education in my classroom.			0.761	
			0.722	
<i>Factor 4: Transformation (Cronbach's alpha = 0.786)</i>				
I am allowed to contribute to the school in ways which are meaningful to me.				0.895
I have a choice of selecting the school (s) where I want to do practice teaching.				0.821
Pre-service teachers are empowered to engage in activities that promote transformation at schools.				0.807
I am able to exercise leadership in transforming classroom practice at school.				0.790
The leadership leads pre-service teachers to achieve desired outcomes, rather than restricting them.				0.619

\*\*KMO > 0.5 of a factor analysis is significant

liabilities lower than 0.60 are considered to be poor; those in the 0.70 range, acceptable; and those over 0.80, good to excellent. The measure of sampling adequacy, Kaiser-Meyer-Olkin (KMO), was 0.824 which is greater than the recommended minimum of 0.50. KMO values between 0.80 and 0.90 are considered to be good (Cohen *et al.* 2009). The correlation matrix is not an identity matrix since the Bartlett's Test of Sphericity is statistically significant (Chi-Square = 3406.457,  $df=359$ ,  $p<0.000$ ). These tests imply that factor analysis was appropriate.

All the values are well above the bare minimum level of 0.5. Factors were extracted using the principal axis factoring method. An orthogonal rotation using Varimax with Kaiser Normalisation was applied on the initial factors, since there is no theoretical basis for the fact that the factors were correlated. The fit of the model is considered good, since the Reproduced Correlations indicated that only 55 (16%) residuals were greater than 0.05. Four interpretable factors were obtained from the analysis using Kaiser's criterion of retaining factors with Eigen values greater than one.

The rotated factor matrix which is a matrix of the factor loadings for each variable onto each factor is shown in Table 3. The four interpretable factors accounted for 35.9%, 6.04%, 4.69% and 3.62% of the variance in the data for a total of 59.25% (before rotation) and 25.09%, 19.84%, 14.84% and 10.49% respectively (after rotation). Factor 1 is labelled *Emotions* (Cronbach's  $\alpha = 0.852$ ) with loadings varying between 0.905 to 0.791. It includes *four* variables from the highest to lowest scores, such as: 'The relationship between my learners and me is generally positive' (0.905); 'I am able to express my personal emotions' (0.871); 'I easily adapt to unfamiliar and unpredictable circumstances' (0.840); and 'Expressing emotions is a sign of weakness' (0.791). The first variable which has the highest percentage of explained variance implies that student teachers regard knowledge of effective teaching methods and strategies as essential in their teaching practice, in lesson presentations and in everyday life.

Factor 2 is labeled *Motivation* (Cronbach's  $\alpha = 0.859$ ) with loadings which varied between 0.925 to 0.781. It includes *four* variables from the highest to the lowest scores such as: 'I have the ability to motivate myself and others with empathy' (0.925); 'I am able to cope suc-

cessfully with daily demands and pressures at school' (0.870); 'The leadership of the school creates the right conditions for pre-service teachers to motivate and empower themselves' (0.815); and 'I am motivated to assist with transformation at the school' (0.781). This factor shows that pre-service teachers regard motivation and encouragement as important driving forces for effective teaching strategies for teaching transformation. Factor 3 is labeled *Classroom management* (Cronbach's  $\alpha = 0.798$ ) with loadings ranging from 0.895 to 0.722. It includes *seven* variables such as: 'I am encouraged to bring my personal, as well as my professional self into the classroom' (0.895); 'My experience is that of shared responsibility for learning that takes place in the classroom' (0.831); 'I am allowed to use my creativity in teaching my learners' (0.810); 'I am allowed to choose topics and themes for classroom presentation and evaluation purposes' (0.789); 'I use my own initiative when deciding on teaching methods to use in my classroom' (0.780); 'I am able to manage any restraint placed on my autonomy at school' (0.761); and 'I have the freedom to apply democratic principles of education in my classroom' (0.722). This factor indicates the pre-service teachers' experiences of autonomy in teaching for transformation and how they structure their classrooms to accommodate all learners in their teaching at schools.

Factor 4 is labeled *Transformation* (Cronbach's  $\alpha = 0.786$ ), with loadings between 0.895 and 0.790. It includes *four* items such as: 'I am allowed to contribute to the school in ways which are meaningful to me' (0.895); 'I have the choice of selecting the school (s) where I want to do practice teaching' (0.821); 'Pre-service teachers are empowered to engage in activities that promote transformation at schools' (0.807); and 'I am able to exercise leadership in transforming classroom practice at school' (0.790). Van Wyk *et al.* (2010) conclude that education for transformation is critical for the enhancement of discourse on teacher preparedness and training as contextualisation within a democratic South Africa. Congruent to the authors' views, it is interesting to note that pre-service teachers convey the perception that they have information about teaching for transformation, but that they were cautious about knowing how to teach for transformation.

## DISCUSSION

Pre-service teachers at a university were engaged to determine whether they exercise autonomy while on teaching practice. Responses gleaned from participants in this research encapsulate the fact that pre-service teachers view autonomy as an activity which includes thinking and acting responsibly; finding self-fulfilment and creating independent teaching practices; as well as embracing opportunities to develop optimally. Despite these views, respondents indicated that they are limited in their efforts to implement their own teaching methods, and that they are confused about how to act; how they should work; and what learners should be taught. Furthermore, they are not allowed to conduct activities where traditional ways of knowing and doing can be replaced by new approaches regarding teaching and learning. The latter, according to the students, is an indication that schools underestimate their abilities to apply different ways of teaching in the classroom. They felt that they are not regarded as professional individuals who can use their autonomy to bring about changes in teaching practices to the schools, thus teaching for transformation. Conversely, pre-service teachers admitted that they do not know how to apply teacher autonomy and were unsure as to how to teach for transformation in schools.

Furthermore, the statistical analysis of the sampling adequacy of the Kaiser-Meyer-Olkin (KMO) model was significant at 0.824. Bartlett's Test Sphericity was also significant at  $\chi^2$  (N=128 = 3406.457, df = 359,  $p < 0.000$ ) which indicates that the sample and correlation matrix was appropriate for the purpose of this study. The reliability test shows that the internal consistency of the four factors was excellent ( $\alpha = 0.859$ ) and acceptable ( $\alpha = 0.786$ ). In a study, in which they describe a four-branch model to include emotional identification, emotional facilitation, emotional understanding and emotion management, Mayer et al. (1999) cited in Moss (2005) found management of emotions as the highest skill and identification of emotions as the lowest level skill. In fact, the authors cite research that indicates a direct relationship between the ability to assess emotion in oneself and the ability to assess it in others (Mayer et al. 2002). A growing body of evidence indicates that emotional in-

telligence is positively associated with work performance (*cf.* Slaski 2001).

However, a study undertaken by Donaldson-Feilder and Bond (2004) indicates that the very act of controlling or regulating emotions diminishes mental well-being, performance and job satisfaction. By contrast, a willingness and capacity to experience emotions, as opposed to disavowing or repressing them, can be healing (Harris 2007:142).

Motivation is that which provides a motive and in order for teachers to motivate their learners and activate the emotions of love, preservation, recognition, self-expression and freedom, they need to act inspirationally and enthusiastically; be aware of their own emotions and those of the learners; display a positive mental attitude toward life; and believe that their learners have untapped potential to cope with and solve their emotional problems. For example, they may have a smile on their faces; thus, the learner can detect emotional wellness and strive to emulate it (Palmer and Kocks-de Waal 2010; Calitz et al. 2002).

Bar-On et al. (2007) report on the educational support system in South Africa and note that it is not uncommon to see 70+ learners crammed into a single classroom, with learner support material often non-existent. In in-depth interviews conducted with principals, the authors state that they often sensed their obvious lack of motivation. It seems that many teachers do not have the ability to, or understandably, the motivation to deal with these issues. As one teacher bluntly put it: "*Ge re na tshepo!*" (We do not have any hope), let alone the motivation to teach (Bar-On et al. 2007). Educators face many challenges related to learners' social and emotional needs in their classrooms.

Zins et al. (cited in Salovey and Sluyter 1997) state that the degree of success these professionals have in addressing issues such as low academic achievement, drug abuse, teenage pregnancy and violence depends on how well they can identify the most salient aspects of the situation and the subsequent decisions they make based on these judgments. Accordingly, pre-service teachers need to develop a framework to guide their daily decision-making within the real world of the school, based on reflection and enquiry. Transformational leadership has become of particular interest to Emotional Intelligence (EI) enthusiasts, probably because trans-

formational leaders have historically been personified as embodying qualities now appropriated by the various models of EI. When referring to transformational leaders, Dasborough and Ashkanasy (2002) stress that such leaders may have an unquestionable willingness to obey their leaders' instructions. They understand transformational leadership as a process of social interaction in which leaders and followers are intimately connected, with inspirational, motivational and emotional elements. Classroom management has emerged as an important factor indicated by pre-service teachers to teach for transformation in their respective classrooms during teaching practice sessions at identified schools. For these students personal growth, as well as their professional development, is critical in developing a teacher identity. They also value highly a shared responsibility for their own learning that had taken place at school level. Some students indicated that they used their creativity in providing effective teaching modes by reflecting on their experiences with other learners. This further supports their stance when they were allowed to choose topics and themes for classroom presentation and evaluation purposes by their respective subject or learning area mentors during teaching practice. Most of them also indicated that they managed any restraint placed on their autonomy at school and they could, in some instances, apply the democratic principles of education in their classrooms.

### CONCLUSION

The aim of this study was to measure the sampling adequacy of twenty-five items in the ATTE questionnaire by exploring pre-service teachers' views regarding autonomy to teach for transformation during teaching practice. Four factors, *emotions*, *classroom management*, *motivation* and *transformation* were extracted from the rotated matrix. Based on the results obtained from this study, it appears that indeed, the faculty trained pre-service teachers to function autonomously; that they are aware of what autonomy implies and are also teaching in that direction. It implies that the Faculty of Education through its initial teacher training programmes does prepare students adequately to be autonomous through a specific module, entitled: Education for Transformation (EFT122). This particular module's learning objectives clearly indi-

cate what and how students should demonstrate their competence to teach in a sustainable and autonomous manner, thus creating transformational learning during their teaching practice. This also implies that these pre-service teachers experienced 'real' autonomy in teaching for transformation and how they experienced the process during their initial teacher training practice at the faculty. As such, we advocate that higher education institutions in the South African context should consider empowering pre-service teachers with reference to issues such as: *fostering positive emotions*, *motivation*, *capabilities*, *autonomy* and *how to teach for transformation*, amongst other things.

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## APPENDIX

### QUESTIONNAIRE: PRE-SERVICE TEACHERS

#### Exploring the Perceptions of Pre-Service Teachers' Experiences of Autonomy in Transformational Teaching

##### Instructions

1. Kindly complete the questionnaire on your own.
  2. Please mark your answers with an X in the appropriate block.
- Your participation is greatly appreciated.

##### SECTION A: BIOGRAPHICAL INFORMATION

1.	Gender	Male	Female			
2.	Culture	African	Coloured	Indian	White	Other
3.	Course currently completing	B.Ed.	PGCE			
4.	What grades do you teach?					

##### SECTION B: EMOTIONAL INTELLIGENCE, AUTONOMY AND TRANSFORMATION

Indicate to what extent you agree/disagree with each of the following statements:

		Strongly agree	Agree	Disagree	Strongly disagree
5.	Expressing emotions is a sign of weakness.	1	2	3	4
6.	I am able to express my personal emotions.	1	2	3	4
7.	I easily adapt to unfamiliar and unpredictable circumstances.	1	2	3	4
8.	I have the ability to motivate myself and others with empathy.	1	2	3	4
9.	The relationship between my learners and me is generally positive.	1	2	3	4
10.	I am able to cope successfully with daily demands and pressures at school.	1	2	3	4
11.	The leadership of the schools creates the right conditions for pre-service teachers to motivate and empower themselves.	1	2	3	4
12.	The leadership of the schools builds a strong level of trust among pre-service teachers in the school.	1	2	3	4
13.	I am motivated to assist with transformation at the schools.	1	2	3	4
14.	I am allowed to contribute to the school in ways which are meaningful to me.	1	2	3	4
15.	I am encouraged to bring my personal as well as my professional self into the classroom.	1	2	3	4
16.	I experience shared responsibility for learning that takes place in the classroom.	1	2	3	4
17.	I am allowed to use my creativity in teaching my learners.	1	2	3	4
18.	I have a choice to select the school (s) where I want to do practice teaching.	1	2	3	4
19.	I am allowed to choose topics and themes for classroom presentation and evaluation purposes.	1	2	3	4
20.	I use my own initiative when deciding on teaching methods to use in my classrooms.	1	2	3	4
21.	I am able to manage any restraint placed on my autonomy at schools.	1	2	3	4
22.	I have the freedom to apply democratic principles of education in my classrooms.	1	2	3	4
23.	Pre-service teachers are empowered to engage in activities that promote transformation at schools.	1	2	3	4
24.	I am able to exercise leadership in transforming classroom practice at schools.	1	2	3	4
25.	The leadership leads pre-service teachers to achieve desired outcomes, rather than restricting them.	1	2	3	4