

# Developing Student Teachers' Professional Identities – An Exploratory Study

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## Abstract

Previous research has shown that while pre-service teachers' formation of their professional identity is shaped by their own teaching and learning experiences, pre-service programmes can make a difference. Our study examines pre-service teachers' professional identity development at the point of entry and exit of their 4-year undergraduate initial teacher preparation programme. Our study aims to establish a baseline understanding of their perceptions about teaching before they embark on the initial teacher preparation programme and to explore the changes in their perceptions (if any) at the point of graduation from the programme. The implications of the findings are discussed in terms of informing admission criteria into the programmes, how initial teacher preparation programmes can be enhanced and key areas of focus for beginning teacher induction programmes.

**Keywords:** Pre-service teacher education, Teacher professional identity, Teacher perceptions, Programme development and enhancement

## 1. Introduction

Forming a teaching identity is a complex and culturally-based process, which occurs within a specific context, time, and place within multiple learning institutions (Danielewicz, 2001 [12]). The process of becoming a teacher develops from the pre-service teacher's understanding and construction of personal knowledge, construction of self, and identity development (Connelly & Clandinin, 1999[11]). Research (Brouwer & Korthagen, 2005[7]; Alsup, 2005[1]) has indicated that although pre-service teachers' professional identity formation is quite personal, teacher preparation programmes can make a difference. This study examines pre-service teachers' professional teacher identity development as they enter and exit their initial teacher education programme. The purpose of this study is twofold. The first is to gain an understanding of pre-service teachers' perception of how they feel about teaching prior to starting their professional development programme. The second purpose of this study is to examine changes (if any) in perception upon completing the programme.

The study hopes to add to existing knowledge and current research concerning novice teacher development in three ways. First, the study can shed light on the process of beginning teacher identity formation within the cultural context of Singapore. Second, this research can also add to an existing body of knowledge concerning student teachers' beliefs about teaching and extending that knowledge to graduating teachers about to be posted to the schools. Finally, data gathered as part of this study may be useful in informing teacher educators as well as school induction programmes regarding areas of support for student teachers' career and identity exploration and development.

## 2. Review of literature

The process of becoming a teacher is a contextualised one (McLean, 1999[26]). Professional identity develops over time, and involves gaining insights of the professional practices and the values, skills, knowledge required and practiced within the profession. The student teachers' past and present experiences as well as their experiences with places of teaching and learning (i.e. their own educational experiences) influence the choices made by the student teacher in selecting to enter the teaching profession (Connelly & Clandinin, 1999 [11]; McLean, 1999 [26]). How one develops their teaching practices is personally rooted in beliefs and images of teaching and informed by their contexts of teaching and learning. The development then of personal professional knowledge is influenced by the experiences within the spaces of teacher learning (Clandinin & Connelly, 1995 [9]). In the context of pre-service teacher education, these spaces can be defined as the teacher preparation programmes that student teachers undergo.

Learning to teach is a long and protracted process that begins well before pre-service teachers enter their first teacher education course (Borko & Putnam, 1996 [3]). Pre-service teachers often arrive at initial teacher preparation

programmes with a clear set of beliefs about teaching (Feiman-Nemser & Remillard, 1996 [14]). Many entrants to pre-service teacher education courses feel that they already know what it means to be a teacher. One of the most significant experiences in the formation of self as a teacher is from early experiences as pupils in their classrooms with teachers (Schempp, Sparkes, & Templin, 1999 [31]). Pre-service teachers' experiences as pupils and years of experience observing the work of teachers are powerful factors influencing their existing beliefs. Lortie (1975 [24]) suggested it is through an "apprenticeship of observation":

There are many ways in which being a student is like having served an apprenticeship in teaching; students have protracted face-to-face and consequential interactions with established teachers (p.61).

Formed from early experiences, this apprenticeship is an important component of a beginning teacher's identity formation and influences their conceptions of teaching (Britzman, 1991 [5]; Danielewicz, 2001 [12]). Research indicates that prior beliefs and images frame pre-service teachers' perspectives about teaching and self and may be difficult to change during the course of their collegiate experiences (McAdams, 2001 [25]). Early childhood experiences and familial experiences also serve as the foundation for many pre-service teachers' thoughts and conceptions about teaching.

Pre-service teachers' earliest collective identity also emerges from societal and cultural images of teachers or teaching. Simplified teaching images and stereotypes emerge from a cumulative cultural text that also emerges in the collective societal identity of teachers (Mitchell & Weber, 1999 [27]). Often a pre-service teacher's images of and beliefs about teaching have been influenced by deeply imprinted images of teaching that pervade in the wider culture. As Britzman (1986) [4] indicated

Prospective teachers, then, bring to their teacher education more than their desire to teach. They bring their implicit institutional biographies - the cumulative experience of school lives ... which in turn, inform their knowledge of the student's world, of school structure, and of curriculum. All this contributes to well-worn and commonsense images of the teachers' work and serves as the frame of reference for prospective teachers' self-images. (p. 443)

The pre-service teacher's sense of identity and personal knowledge is continually challenged during teacher preparation (Danielewicz, 2001[12]; Knowles, 1992 [21]; Steffy, Wolfe, Pasch & Enz, 2000 [32]). Ideas and cognition about self as a teacher are based on available information and past and present experiences. As earlier mentioned, these ideas, concepts and beliefs may be difficult to change during their teacher preparation programmes (McAdams, 2001 [25]).

Pre-service teachers' memories of schooling tend to be autobiographical and self-referential. Self-referential refers to the tendency to view teaching based on one's own needs, concerns, and personal experiences versus the needs of the student learners in the classroom (Mitchell & Weber, 1999 [27]). Self-focus and concern with immediate learning and teaching classroom survival are hallmarks of this phase (Fuller & Bown, 1975 [16]).

Fuller and Bown (1975) [16] proposed that pre-service teachers develop a sequence of concerns. In this theory, pre-service teachers move through four stages of concerns. The first stage occurs when the pre-service teacher identifies more realistically with students but not with the role of a teacher. The teaching role in this stage is more fantasy rather than reality-based. Stage two occurs when the pre-service teacher initially enters the classroom. Concerns in stage two are with survival in the classroom primarily with personal mastery of content and classroom control. This stage is a stressful and conflicting period; and the teacher is very often torn between the theory they have been exposed to within the teacher preparation programme and the reality of classroom practice that confronts them. Teaching situation concerns, the third stage, reflects the pre-service teacher's frustrations and limitations in the teaching situations. The pre-service teacher is adjusting to the demands of the classroom while becoming more concerned with content knowledge and methods of teaching. In the fourth stage, pupil concerns, a hallmark of this stage is full focus on the pupils and their emotional and social needs. The teacher may be frustrated by the desire to fully focus on the pupils while being distracted by the time demands of teaching. Fuller and Bown [16] (1975) suggested that these four stages reflect a teacher's concerns, and not actual teaching accomplishments. Furthermore, the theory reflects the novice teacher's concerns moving from a stage of development where they begin with concerns that are self-centered to more student-centered concerns.

In these different teacher preparation contexts, the university and the settings of field experiences, pre-service teachers continue reconstructing images of the self-as-teacher while constructing and integrating an emergent sense of professional identity (Danielewicz, 2001 [12]; Steffy et al., 2000 [32]) Part of this process involves identification of self as a teacher then assimilating these ideas into a sense of self as professional during field experiences (Steffy et al., 2000 [32]). Each environment contributes uniquely to the pre-service teacher's construction of knowledge and identity formation. As Fuller and Bown (1975) [16] stated, "they feel stimulated, apprehensive, exposed, endangered, confused, discouraged, touched, proud, and lost – not necessarily in that order" (p. 47).

The context and setting of teaching practice in school (known in the literature also as clinical field experience and practicum) may be confusing and overwhelming (Knowles & Cole, 1996 [22]; Steffy et al., 2000 [32]). Student teachers want to fit into this new environment but may have problems reconciling university practices and the realities of the school and the classroom especially about instructional practices. This also represents a time in which the acquisition of pedagogical and content knowledge and professional standards of teaching are assimilated into the emerging sense of self as a teacher. The student teacher must acquire effective research-based pedagogical and classroom management skills, which will later be integrated into instructional practices during teaching practicum (Steffy et al., 2000 [32]). The development of self as a teacher is one of the hallmarks of a student teacher's professional identity development (Danielewicz, 2001 [12]; Schempp et al., 1999 [31]).

### 3. Aims of the study

The paper explores the National Institute of Education, Singapore (NIE)'s Bachelor of Arts (Education) and Bachelor of Science (Education) student teachers' attitudes towards the teaching profession and their understanding of teaching at two time points. Time point 1 is at the entry of their initial teacher preparation programme and at time point 2, exit of their initial teacher preparation programme. The aim is to understand how these undergraduate pre-service student teachers feel about teaching at different time points and to examine changes (if any) upon exiting the programme. In looking at identity formation and development issues, it is hoped that greater understanding of the complexities of student teachers' emerging professional identity is elucidated. The implications for future pre-service programme development and areas of pertinent need during teacher professional development will also be discussed.

### 4. Methodology

#### 4.1 Sample

There were altogether 166 student teachers enrolled in the 2005 intake of the BA (Ed) and BSc (Ed) degree programmes. At entry point of the programme, 148 student teachers participated in the entry survey. Four years later in May 2009, 119 graduating student teachers participated in the exit survey. After cleaning the data, the sample for this study comprised 105 teachers who participated in both the entry as well as the exit survey. The response rate of student teachers from both the entry and exit surveys was 63.25%. The sample shows the ratio of male to female to be about 1:4 i.e., 25 (23%) were male and 83 (77%) were female. At the exit point of the degree programme, the age range of the participants was as follows: 82 students (76%) were between 21 – 25 years old, 24 students (22%) were between 26 – 30 years old and 2 (2%) were above 30 years of age. There were 55 (51%) primary graduating teachers and 53 (49%) secondary graduating teachers. The demographics of the sample population are summarised in Table 1.

#### 4.1.1. BA (Ed) & BSC (Ed) Programmes at NIE

The 4-year undergraduate degree programme known as the Bachelor of Arts/ Science (Education) programme is one of the three main pre-service teacher preparation programmes offered at NIE, offering candidates the choice of teaching at either the primary or secondary levels. NIE is currently Singapore's only initial teacher education institute. In other words, all who wish to enter teaching must enrol in the pre-service programmes offered by the NIE. The other two pre-service programmes are the 1-year Postgraduate Diploma in Education programme for teaching at the primary and secondary schools for those who already possess at least a Bachelor's Degree and the 2-year Diploma in Education programme mainly for primary teaching with some teaching at the lower Secondary levels for specialised subjects like Art, Music and Home Economics.

The degree programme is offered as a university/campus-based programme with school-based practicum postings. The aim of our degree programmes is to prepare our student teachers with the depth of content knowledge coupled with pedagogical methodology. It is hoped that student teachers graduating from the programme will emerge with the requisite values, skills and knowledge for the teaching profession and if they so wish later on, in other education-related fields. The award of an Honours degree is based on student teachers' overall academic performance. There are 8 main areas of study within the programme:

Education Studies

Curriculum Studies

Subject Knowledge

Essential Module

Practicum

Language Enhancement and Academic Discourse Skills

## Group Endeavours in Service Learning

### General Elective

(More information on these areas of study can be found by looking up the BA/BSc Programme Handbook 2009 [28]).

#### 4.2 Data collection

Data for this study is from a longitudinal research project at NIE. The project's key objective is to provide baseline data that will inform and improve NIE's Initial Teacher Preparation (ITP) programmes and the planning of professional development programmes for beginning teachers. The project looks at student teachers in all NIE's pre-service programmes – 1-year Postgraduate Diploma in Education programmes - PGDE (Primary) & PGDE (Secondary), the two-year Diploma in Education and the 4-year BA/BSC (Education).

At the entry point of their programmes, student teachers were asked to fill in a survey consisting of three parts. Part A of the survey focused primarily on the collection of demographic data as well as reasons that motivated them to choose teaching as a career. Part B and Part C of the survey used rating scales for the collection of quantitative data. Part B contained statements about how they felt about teaching – perceptions and beliefs about the teaching profession. Part C contained statements that rated the respondents' perceptions of knowledge of and skills in teaching. Surveys Part B and Part C were conducted again during the exit point.

While the main study covers a much wider scope, this paper discusses and presents the data of the Part B of the entry and exit point of the degree of Bachelor of Arts (Education) or Bachelor of Science (Education) 2005 Intake. The entry survey was conducted in June 2005 during the programme's orientation sessions and the exit survey was conducted in May 2009 after their final teaching practice (practicum posting) in schools. The measures taken at the two different time points will indicate how perceptions towards teaching change over time, as student teachers go through their teacher preparation programmes.

#### 4.3 Instrument

22 statements from the survey instrument, *How I Feel about Teaching*, were used for this study. Each statement had a 5-point Likert rating scales to measure their perception of the teaching profession. The statements expressed opinions and beliefs about teaching and the teaching profession. The Likert scale used to assess these opinions and beliefs is given in Table 2.

#### 4.4 Factorial Analysis

A pool of items was generated which reflected the concepts of professional identity. An Exploratory Factor Analysis (EFA) using SPSS 17.0 was conducted. This procedure was used both to reduce a large data-set and to identify clustering items in the scale. After varimax rotation, the factor loadings for each item were examined. Items with loadings less than 0.4 were discarded. As a result of this process, 22 items were used to explore the theoretical constructs that might be represented by the set of professional identity items in the survey. Factor analysis using principal components extraction with varimax rotation was applied to the items and five factors were extracted. As this paper compares the differences between student teachers' perceptions of teaching and the teaching profession at entry and exit point of their initial teacher preparation programme, we looked at the entry and exit data separately at the beginning of the data analysis process. The rotated component matrixes from the entry and exit data were then compared carefully to identify common factors and common items in each factor.

### 5. Results of analysis

The factor analysis of the 22 statements reveals five factors for both the entry and exit data with Eigen values ranging from 11.94 to 1.01 for entry and from 11.53 to 1.12 for exit. Scrutiny of the clustered items in factors enabled hypothetical inferences to be made. The five factors extracted from both sets of data are: Factor One: Role of teaching and learning; Factor Two: Self as a role model; Factor Three: Sense of calling; Factor Four: Sense of Professional Identity; and Factor Five: Professional Growth as a teacher. Each factor consisted of four to five items from the survey. Table 3 lists the 5 factors and provides a sample item to illustrate each factor.

Measures of internal consistency (coefficient alpha) of factors and items were obtained using standard psychometric evaluation procedures. Cronbach alpha estimated the reliability of each factor extracted from the factor analyses. The loading values (See Table 4) for the items at both time points fit moderately well within the factors. At entry point, the Cronbach alpha values for the five factors are between 0.640 and 0.828. However, the Cronbach alpha values for the five factors are observed to be higher at Exit point than at entry point, between 0.654 and 0.840.

#### 5.1 Comparison of student teachers' perception at entry and exit points

The key purpose of this study is to understand how student teachers feel about teaching at different time points and to examine the differences in perceptions at the entry and the exit points of their ITP programme. The results show

that the mean levels ranged from 3.86 to 4.5 at the entry point of the programme but they decreased to a range from 3.62 to 4.48 at the exit point of the programme (See Table 5). Based on the factors, paired sample t-tests were conducted to compare the means of the data collected from the entry and exit points (See Table 6). The results showed that there were significant decreases in four factors. The factor with no significant difference is Factor One, Belief in the value of teaching and learning. The biggest decrease was found in Factor three: Sense of calling, from 3.86 to 3.62 and the smallest decrease was Factor five, Professional growth as a teacher, from 4.13 to 4.02.

## 6. Discussion

Student teachers bring with them a set of beliefs that constitutes their emerging sense of teacher identity which has been influenced and moulded by their prior experiences as pupils and their observations of their own teachers. Are these beliefs and sense of identity stable or do they change after exposure to academic discourse and practical experiences in the classroom during their teacher preparation years? In this study, the period of preparation was 4 years during which student teachers were exposed to many hours of teaching and learning contexts and theories as well as a series of four practicum postings (designed with a developmental approach in mind), the final one lasting 10 weeks just before they graduated from the degree programmes.

This study points to some significant changes between those two points. It is apparent that at both entry and exit points the factor means for all five factors are relatively high with none falling below 3.5 on a Likert scale of 1 to 5. The lowest value was 3.62 while the highest was 4.5. These high mean values suggest that student teachers in this programme have come in with a high regard for the profession and good attitude towards teaching. One explanation for this result is that student teachers in the programmes have been carefully and rigorously selected. They have to possess the basic academic qualifications that meet the university's admission criteria and they are also required to pass an interview process which gauged their professional attitude and dispositions towards teaching. This interview process is conducted by a panel and chaired by a school principal and eliminates a significant proportion of even academically qualified applicants.

In comparing the factor means at the two time points, it is noted there has been a significant decline in four factors while the first factor - Belief in the value of Teaching - remains significantly unchanged. This stability in the student teachers' belief about the value of teaching after four years in the teacher education programme is noteworthy and speaks well of their personal belief system and values about teaching and is essential if they are to stay in the profession they have chosen in the long run. That the student teachers were able to sustain this belief throughout their 4 year programme speaks well about the core reason why they were selected into the programme in the first place. It must be noted that for this factor the means at entry and exit were the highest, again reinforcing the conclusion that the student teachers are greatly persuaded by the value of teaching and that this was what motivated them to enter the profession in the first place.

However, for the other four factors, the decline was strongest in Factor three: Sense of calling, followed by Factor four, Sense of professional identity, Factor 2, Self as role model and finally Factor five, Professional growth as a teacher. All the four factors in some ways reflect their sense of personal efficacy as a teacher – how they perceive themselves in the role as a teacher (or role teacher identity) during the period of preparation, which is quite different from a personal belief in the value of teaching discussed earlier. That for all four factors there were statistically significant declines in their mean values is not surprising.

Student teachers come into teacher preparation with idealised images of teaching and teachers that they aspire to be and it is vital for such candidates to have a clear, positive image of self as teacher (Ross, 1987 [30]; Knowles, 1992 [21]). However, identity is not a fixed notion, it is an ongoing process subject to interpretation and self-evaluation (Feiman-Nemser, 2001 [15]). It is open and subject to change, very much affected by the enactment of those meanings in everyday situations (Kondo, 1990, p. 24 [23]). For the pre-service teachers, this aspect of identity is particularly vulnerable to change from one practicum experience to the next, as each school placement can differ widely, which demands of the pre-service teacher to exercise "fine judgments about contextual factors" (Coldron and Smith, 1999, p.716 [10]).

It would seem 'natural' to expect student teachers to mollify their sense of efficacy and identity after several practicum attachments as that is where the reality of the classroom situations and the real life of a teacher are experienced. Also, it may be true that during the practicum, their cooperating teachers, with more experience would have brought them down to earth and to the reality of the often unpredictable classroom situations.

Another salient point to note is that the Cronbach alpha values for the five factors were higher at the exit point than at entry. The Cronbach alpha is a measure of the internal consistency or reliability of a rating score for a sample population and is an unbiased estimate of generalisability. A higher cronbach alpha at the exit point of a four year programme may imply that the graduating students may have a clear/consistent/reliable view of the factor constructs

as compare to entry point. Despite the amelioration in the student teachers' sense of identity it would appear that the four year programme have helped them see their roles in terms of factor constructs more clearly.

## 6. Implications

From the above study several main implications for pre-service admission criteria, programme development and areas of focus for teacher professional development can be drawn. First in the area of intrinsic values of the pre-service student teachers as represented by Belief in the value of teaching, this factor remains high even after four years of teacher preparation. The sustainability of this intrinsic value seems to point to the quality of the crop of students in this programme with the right attitude towards teaching. It also points to the rigour of the admission criteria in helping to select the right candidates. It is thus not surprising that at NIE there have been very few who leave the course during the four years of study as the attrition rate is extremely low.

Second, while intrinsic beliefs remain durable, the reality of classroom especially during the practicum attachments would have an impact on their sense of efficacy as a teacher and in turn affects their sense of identity as well. The significant declines in the four areas that constitute their identity attest to this outcome. It is thus important that as a result of this research that teacher education programmes in general and at NIE in particular, deal more deliberately and effectively with the issue of identity. Very often during teaching practice much focus is directed to the delivery of lessons and feedback by supervisors deal with issues of knowledge and skills in teaching. But teachers' identity is not gauged purely by how well they do in the classroom. There is a growing literature that advocates a broadening of the pre-service teachers' experience and understanding of the teacher's work and professional role (Valli, 1997 [33]). Such a thorough understanding of the breadth and complexity of the teacher's role is a key element in identity formation, an idea shared by Connelly and Clandinin (1999) [11]. It is therefore pertinent for initial teacher preparation programmes to adequately prepare student teachers to deal with the realities of school culture so that the early years of teaching can be turned into a positive experience where teachers are enabled to grow and develop their skills (Gratch, 2001 [17]; Kelchtermans & Ballet, 2002 [20]). In fact, Ramsey (2000) [29] would like to use the term 'professional experience' instead of the word 'practicum' in pre-service attachments to schools for that best describes what student teachers need to be involved actively in the professional work of teaching.

Finally, the broadening of the student teachers' exposure during the practicum in the pre-service years would in a sense prepare them for the real world when they graduate as full-fledged teachers. Very often the first years of teaching are the 'survival stage' of teacher development, with beginning teachers developing along a continuum of professional sense, skills, knowledge, and abilities well into their first years of teaching (Kane & Russell, 2003 [19]). It is essential therefore for initial teacher preparation programmes to adequately prepare student teachers to deal with the realities of school culture so that the early years of teaching can be turned into a positive experience where teachers are enabled to grow and develop their skills (Gratch, 2001 [17]; Kelchtermans & Ballet, 2002 [20]). As Bezzina (2006) [2] described it, the 'transition shock' caused by the beginning teachers' realisation about the discrepancy of the real world of teaching and the feeling of lack of preparation for many of the demands that teaching brings can lead to a state of paralysis that renders teachers unable to transfer to the classroom the skills they learned during teacher education. As a result, many beginning teachers become disillusioned, frustrated, lost, and start doubting their career choice and choose even to leave the teaching profession early (Delgado, 1999 [13]). Halford (1998) [18] went as far to claim that teaching is a "...profession that eats its young" (p. 33). The challenge is how to induct beginning teachers into the real world of their work in a way that promotes a high level of professional practice and competencies. This therefore also has implications for areas of focus for the beginning teacher induction period where mentoring must take care of helping new graduates to assimilate to the realities of the school and the classroom settings and to help them to consciously bridge the perceived theory-practice gap. Schools need to be organised in ways that integrate teachers' learning from daily practice into a comprehensive change process that deals with impediments to and facilitators of student learning. Teachers who are formally initiated into the profession stand a better chance of developing norms that encourage self-perpetuating growth, are more likely to develop better commitment to teaching, and possibly resulting in a higher retention in the profession (Chong, Choy & Wong 2009 [8]).

## 7. Conclusion

Discussions on the teacher professional identity development point to individual maturation process that begin during the teacher preparation stage (Brott & Kajs, 2001 [6]). While much discourse on teacher identity has been focused on its formation during beginning teaching and throughout a teacher's career, much less has been researched on the subject during the early years of teacher preparation, and even less on the extent of the changes in teacher identity that occur between entry to exit points of pre-service preparation. It is therefore hoped that this paper serves as a useful contribution towards a greater understanding of this issue at the pre-service stage.

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Table 1. Demography of the Sample

Gender	Male= 25 (23%) Female = 83 (77%)
Age range	21 – 25 = 82 (76%) 26 – 30 = 24 (22%) > 30 = 2 (2%)
Programme	Primary = 55 (51%) Secondary = 53 (49%)

Table 2. The five-point Likert Scale of *How I feel about teaching*

How I feel about teaching
5. Strongly Agree
4. Agree
3. Neutral
2. Disagree
1. Strongly Disagree

Table 3. Sample items of factors

Factor	No. of Items	Example Statement
Role of teaching and learning	4	It will be a great joy for me if I can help a weak student do well.
Self as a role model	4	As a teacher I will have the opportunity to be a good role model for my students.
Sense of calling	5	Teaching is my first choice for a career.
Sense of Professional Identity	4	Teaching is a respectable profession.
Professional Growth as a teacher	5	I will make conscious efforts to pick up good teaching skills.



Table 4. Cronbach Alpha at entry and exit point

Factor label	Sample Items	Cronbach Alpha	
		Entry	Exit
Belief in the value of teaching and learning.	Being a teacher is meaningful as I'm contributing to students' development.	0.789	0.840
Self as role model	As a teacher, I will have the opportunity to be a good role model for my students.	0.640	0.717
Sense of calling	Teaching is my first choice for a career.	0.828	0.803
Sense of professional identity.	Teaching is a respectable profession.	0.599	0.654
Professional growth as a teacher.	I will continuously upgrade my skills to be an effective teacher.	0.722	0.771

Table 5: Factor means at entry and exit points

Factor	No. of items	Entry (T1)		Exit (T2)	
		Mean	Standard Deviation	Mean	Standard Deviation
Factor 1: Belief in the value of teaching and learning	4	4.50	0.423	4.48	0.460
Factor 2: Self as role model	4	4.27	0.415	4.15	0.486
Factor 3: Sense of calling	5	3.86	0.611	3.62	0.617
Factor 4: Sense of professional identity	4	3.95	0.408	3.75	0.507
Factor 5: Professional growth as a teacher	5	4.13	0.389	4.02	0.467

Table 6. T-Test

Factor	Mean of difference (T2 – T1)	Standard Dev	Std. Error Mean	t	df	Sig (2-tailed)
Factor 1: Belief in the value of teaching and learning	-0.019	0.577	0.055	-0.334	107	0.739
Factor 2: Self as role model	-0.120	0.571	0.055	-2.189	107	0.031*
Factor 3: Sense of calling	-0.235	0.626	0.060	-3.902	107	0.000*
Factor 4: Sense of professional identity	-0.206	0.515	0.050	-4.159	107	0.000*
Factor 5: Professional growth as a teacher	-0.109	0.513	0.049	-2.215	107	0.029*