

Examining Teacher Trainees' Attitude towards Teaching Profession and Teaching Subjects in Tanzania

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Abstract: *Teacher trainees' positive attitude on teaching is fast becoming a key instrument in teacher trainees' motivation to teaching. Thus, it is regarded as a central policy agenda that has recently captured the minds of academics and researchers. Based on those facts, we examined the extent to which teacher trainees hold positive attitude on two dimensions – attitude towards teaching profession and teaching subjects. Additionally, we investigated whether these dimensions of attitudes are significantly related to demographic variables such as gender, GPA, whether or not they had worked before joining teacher education university programme, years of work, future work preferences and subjects of specialization. Participants for this study constituted a sample of 901 final-year teacher trainees from one of the teacher education university college in Tanzania. Findings indicated that teacher trainees' attitude and GPA were not significantly related. Instead, a significant correlation was observed between the two dimensions of attitudes. Shockingly, findings indicated that more than 50% of teacher trainees had no preferences of working as teachers. Worse enough, the figures were similar even among science and mathematics majors who are highly demanded in the teaching career. Finally, the implications for policy and future research are put forth.*

Key words: Attitude; attitude towards teaching profession; attitude towards teaching subjects; teacher trainees; teaching

Introduction

Retaining quality teachers in the teaching profession remains to be a central policy agenda (Kavenuke, 2013; Nesje, Brandmo & Berger, 2018; Prasad, Showler, Ryan, Schmitt & Nye, 2017) for any country desiring to improve teaching. Nevertheless, having quality teaching goes hand in hand with teachers' positive attitude towards teaching profession and the teaching subjects. Teacher trainees' positive attitude towards teaching profession and the teaching subjects influence their choice to enter teaching. In that regard,

there are both intrinsic and extrinsic motives that influence an individual to choose to enter teaching. Scholars have mentioned social utility value attached to teaching (Eren & Vefa, 2010; Jugovic, Marušic, Ivanec & Vidovic, 2012; Lin, Shi, Wang, Zhang & Hui, 2012), time for family (Klassen, Al-dhafri, Hannok & Betts, 2011; Whitaker & Valtierra, 2018) and autonomy and opportunity for professional growth (Eren & Vefa, 2010; Whitaker & Valtierra, 2018) as factors that influence teacher trainees' choice to enter teaching.

Studies have indicated that, for teacher trainees to remain committed to teaching profession as they enter teaching, they need to have a positive attitude towards teaching itself (Moses, Admiraal & Berry, 2016; Moses, Berry, Saab & Admiraal, 2017). This is because attitude has been linked with positive outcomes such as future performance (Aksoy, 2016; Kim, Chiu, & Zou, 2010; Seema, Udam & Mattisen, 2016), retention (Nesje, Brandmo & Berger, 2018; Prasad, Showler, Ryan, Schmitt & Nye, 2017) and motivation to teach (Kim, Chiu & Zou, 2010). Given the importance attached to positive attitude, we realised the need to examine teacher trainees' attitude towards teaching profession and the teaching subjects in accordance with their demographic variables.

Studies of attitude among teacher trainees represent an under researched area in Tanzania. While Moses et al., (2016) investigated the relationship between gender and teacher trainees' commitment to teaching in Tanzania, we extended this study to cover other variables such as whether or not teacher trainees had worked before joining a pre-service teacher education university programme, years of work, future work preferences as well as subjects of specialization. In general, we focused on both, attitude towards teaching profession as well as attitude towards teaching subjects.

Furthermore, we extended this study because several studies conducted elsewhere have associated teacher trainees' attitude with factors such as gender, work experience, years of work, future work preferences and professional training, academic achievement, subjects of specialization and class level. Furthermore, Moses et al., (2017) conducted a study almost similar to this, but their study used a qualitative approach, whereas this study used a quantitative approach. Additionally, studies conducted in the context of Tanzania have indicated that teaching profession has been accorded low status and hence secondary school students (Moshia, 2016), teacher trainees (Moses et al., 2017; Moses, Admiraal, Berry & Saab, 2019) and full-fledged teachers in the teacher industry (Bennell & Mukyanuzi, 2005) have all tended to have a negative attitude towards teaching profession as a whole. Thus, this study become imperative in order to examine the extent to which teacher trainees hold positive attitude towards

the teaching profession and their teaching subjects; establish the relationship between teacher trainees' attitude and the demographic variables; as well as examining the correlation between teacher trainees' attitude and their GPA.

Research on the factors influencing teacher trainees' attitude towards the teaching profession as well as their teaching subjects has produced mixed results. Generally, teacher trainees' attitude has been associated with work experience, especially those who join teaching for upgrading purpose (Bullough & Kenyon, 2011; Shen & Hsieh, 1999), years of work (Aksoy, 2016; Ugras, Altunbas, Ay & Cil, 2012), future work preferences (Seema, Udam & Mattisen, 2016) and professional training (Saborit, Fernández-Río, Cecchini Estrada, Méndez-Giménez & Alonso, 2016). Other factors include gender (Güneyli & Aslan, 2009; Kartal, Kaya Hasan, Ozturk, & Ekici, 2012; Metin, Acisli & Kolomuc, 2012; Onen & Merve, 2012; Sener, 2015; Tutku, 2016), subject of specialization (Onen & Merve, 2012; Sülen, 2010; Sener, 2015), academic achievement (Kartal et al., 2012; Sülen, 2010) and grade level (Güneyli & Aslan, 2009; Metin et al., 2012; Sülen, 2010; Sener, 2015).

With respect to gender, research has also produced mixed results. For instance, Tutku (2016) studied teacher trainees' attitude towards language learning through social media and found no significant relationship between gender and attitude. Similarly, Metin et al. (2012) found no significant difference between male and female elementary teacher trainees with regard to their attitude towards science teaching. On the contrary, Güneyli and Aslan (2009) who also researched on teacher trainees, found a significant difference between men and women with regards to their attitude toward the teaching profession. A similar study was conducted by Sener (2015) and found a significant difference between men and women with respect to their attitude towards the teaching profession. Both studies concluded that female teacher trainees had significantly more positive attitude towards the teaching profession. Likewise, Guven and Aydogdu (2014) found that female teacher trainees had significantly more positive attitude towards computer assisted technology as compared to their male counterparts.

Moreover, teacher trainees' attitude has been associated with grade levels. For instance, while Tutku (2016) found that teacher trainees' attitude towards language learning with social media varied significantly with years of study, other scholars (Metin et al., 2012; Sülen, 2010; Sener, 2015) found no significant relationship between grade levels and teacher trainees' attitude. Nonetheless, given that teacher trainees who participated in this study were about to graduate, our study covered final-year teacher trainees only. The assumption was that they had already developed their future work preferences regarding working as teachers or not after graduation. Furthermore, studies that included academic achievement (Kartal et al.,

2012; Sülen, 2010) and subject of specialization (Onen & Merve, 2012; Sülen, 2010; Sener, 2015) found no significant difference between these demographic factors and teacher trainees' attitude towards teaching. On the contrary, Kartal et al. (2012) found that teacher trainees' attitude towards the teaching profession varied significantly across subjects of specialization.

Additionally, attitude also has been found to significantly influence teacher trainees' future intentions to persist in the teaching profession (Seema et al., 2016). Regarding experience, Ugras et al. (2012) found a significant relationship between experience with computer technology and teacher trainees' attitude towards the use of computer technology in teaching.

Given these mixed research results, we examined whether or not there is a significant difference in teacher trainees' attitude in relation to their Grade Point Average (GPA), gender, whether or not teacher trainees had worked before joining teacher education programme, years of work, future work preferences, and subject of specialization. Thus, this study addressed the following research questions and hypotheses.

1. To what extent do teacher trainees hold positive attitude towards the teaching profession and their teaching subjects?
2. What is the relationship between teacher trainees' attitude and their gender, years of work, future work preference, subject of specialization and whether or not they having worked before?

H1: Male and female teacher trainees will differ significantly with regard to their attitude towards the teaching profession and their teaching subjects

H2: Teacher trainees who worked before and those who had never worked as teachers will differ significantly with regard to their attitude towards the teaching profession and their teaching subjects

H3: There will be a significant relationship between years of work and teacher trainees' attitude towards the teaching profession and their teaching subjects

H4: There will be a significant relationship between subject of specialization and teacher trainees' attitude towards the teaching profession and their teaching subjects

H5: There will be a significant relationship between future work preferences and teacher trainees' attitude towards the teaching profession and their teaching subjects

3. What is the correlation between teacher trainees' attitude and their GPA?

H6: Teacher trainees' attitude towards the teaching profession, attitude towards teaching subjects and GPA will be significantly correlated.

The Concept of Attitude: A Theoretical Framework

There is an agreement among scholars regarding the importance of attitude. For instance, teacher trainees' attitude towards teaching profession are associated with teacher trainees' willingness to dedicate their efforts in accomplishing teaching tasks when they become full-fledged teachers (Güneyli & Aslan, 2009). Attitude is not only important as knowledge itself (Andronache, Bocos, Bocos & Macri, 2014), but also it significantly influences teacher trainees' teaching skills, thinking processes and professional changes as they undergo teacher learning (Huang, Lee & Yang, 2019; Janssen et al., 2019; Thibaut, Knipprath, Dehaene & Depaepe, 2018). Also, there is a possibility of transferring the benefits of positive attitude from teachers to students.

For instance, Metin et al. (2012) found that teacher trainees' attitude towards science subjects and science teaching is likely to influence students' attitude towards science when teacher trainees graduate and go to the world of work with that attitude. However, the question is: what are the features of attitude that make it so important to study? Andronache et al. (2014) described attitude as "an individual predisposition to evaluate a social element, considering it favourable or unfavourable, and thus showing a certain behaviour toward it" (p. 628). That is to say, attitude, as a mental state determined by one's experience (Andronache et al., 2014), exerts a significant influence on the individual, directing him/her to act in a specific manner. Moreover, there are three dimensions—cognitive, affective and behavioural—of attitude as defined by Wood (2000). The three dimensions provide a better understanding of attitude and how they work to influence individuals' behaviour.

According to these scholars, the cognitive dimension involves individual's assumptions, beliefs and perceptions of events and facts. The affective dimension is concerned with individual's emotional experiences and responses to various events and facts. Finally, the behavioural dimension is concerned with how an individual shows an intention to act in relation to an event or fact.

These dimensions, according to Wood (2000), interact together to influence individual's behaviours. For instance, an individual's intention to act in relation to an event or fact is influenced by his/her assumptions and perceptions about such an event or fact. Based on these dimensions, we view teacher trainees' attitude towards the teaching profession as well as towards the teaching subjects as constituting a combination of assumptions, beliefs and perceptions regarding their future work preferences (the cognitive) as well as the emotional attachments influenced by experiences (the affective). Such a combination, in turn, influences teacher trainees' preferences and

intentions to act in accordance with the professional requirements (the behavioural). In other words, if teacher trainees have a positive attitude towards teaching, they are more likely to enjoy the profession in future, believe the profession is important in society and act in ways that advance the profession.

Materials and Methods

Participants

Participants for this study constituted a random sample of 901 final-year teacher trainees from one of the teacher education university college. This sample was selected from a population of 1718 final year students. The group became our target given that these teacher trainees had lived experiences on the topic under study and were assumed to have had formed clear career placement. We planned to collect data from about 1100 students.

Nonetheless, only 901 participants completed and returned the questionnaires, yielding a response rate of 81.9%. Table 1 below summarises the demographic characteristics of sample.

Table 1: Demographic characteristics of sample (n=901)

Characteristics	No	%
Gender		
Male	625	69.4
Female	276	30.6
Worked or not worked before joining teacher education programmes		
Yes	236	26.3
No	661	73.7
Years of work		
Less than 2 years	176	74.6
2 to 5 years	48	20.3
6 to 9 years	8	3.4
10 years and above	4	1.7
Subject of specialization		
Science and Mathematics	284	35.8
Social Sciences	509	64.2
Future work preferences		
Self-employment	413	47.5
Employment in public schools	299	34.4

Employment in private schools	83	9.6
Employment in non-teaching sector	74	8.5

Instruments

Attitude Scale Towards Teaching Profession and Teaching Subjects

To measure teacher trainees' attitude towards teaching profession, we used a four-point scale (1=strongly disagree, 4=strongly agree). We used four items to measure their attitude towards teaching profession (e.g. "All in all, I enjoy working as a teacher"). Moreover, four items were used to measure their attitude towards teaching specific subjects of specialization using a seven-point scale (1=strongly disagree, 7=strongly agree). For instance, one of the items used was "I prefer teaching my subject (s) of specialization than other subjects". These items measuring attitude towards teaching were customised from Senler (2016) who measured pre-service teachers' attitude towards science teaching using a five-point Likert scale format. The reliability in terms of Cronbach's alpha in Senler's study was .82. The Cronbach's alpha values for this present study were .70 and .61 for attitude towards teaching profession and attitude towards teaching subjects respectively.

Demographic Characteristics of Survey

In this study, we included independent measures such as gender, having worked before joining teacher education university programme or not, years of work, teaching subjects of specialization, and future work preferences. We asked participants to indicate their gender by ticking the options provided to them. Similarly, participants were asked to tick whether or not they had worked before joining teacher education university programme. If they had worked before, they were asked to indicate the number of years they had worked. The years of work ranged from less than 2 years, 2-5 years, 6-9 years, to 10 years and above. In the context of Tanzania, some teachers, particularly, primary and lower secondary teachers are officially employed as teachers after attending two-years in teacher education programme. To qualify to teach to high school level, they are obliged to register in a pre-service programme leading to a bachelor degree. Thus, these teacher trainees who participated in this study joined the pre-service programme with some years of work experience.

Also, participants were asked to indicate their subjects of specialization. For the purpose of analysis, we classified these subjects into two categories namely science and mathematics and social sciences. Further, participants were requested to indicate their future work preferences. Thus, they were urged to select one among the following options: self-employment, employment in public schools, employment in private schools, and employment in non-teaching sector. Finally, in order to assess whether

teacher trainees' academic achievement (GPA) is related with teacher trainees' attitude towards teaching profession and their teaching subjects, participants were asked to indicate their GPA.

Data Analysis

The Statistical Package for the Social Sciences (SPSS) version 22 was used to analyse the data. Several data analyses were computed in order to respond to the three research questions delineated earlier. Firstly, we conducted the reliability tests and reported the Cronbach's alpha value for each dimension, that is, attitude towards teaching profession and attitude towards teaching subjects. To respond to the first research questions, we computed mean and standard deviation for the two dimensions as well as the mean and standard deviations for the individual items. Moreover, we conducted an Independent Samples *t*-test and Analysis of Variance (ANOVA) to respond to the second research question. Finally, we computed correlations in order to address the third research question.

Results

The study aimed at examining whether or not there are differences in teacher trainees' attitude towards the teaching profession as well as towards their teaching subjects with respect to their gender, whether or not teacher trainees had worked before joining teacher education university programme, years of work, future work preferences, and subject of specialization. Additionally, the study investigated the relationship between attitude and academic achievement, measured using GPA.

Teacher trainees' attitude towards the teaching profession and their teaching subjects

As shown in Table 2, results indicated that teacher trainees had moderate levels of attitude towards the teaching profession as well as towards the teaching subject.

Table 2: Mean and standard deviations

	Min	Max	M	SD
Attitude towards teaching profession	1	4	2.98	.851
Attitude towards teaching subjects	1	7	5.69	.665

In order to gain a deeper understanding of teacher trainees' attitude towards the teaching profession and their teaching subjects, we extended our analysis to individual items (see Table 3).

Table 3: Mean and Standard Deviations of Individual Items

	Min	Max	M	SD
I find the advantages of being a teacher outweigh the disadvantages	1	4	2.71	.941
Working with students makes me interested in teaching	1	4	3.41	.858
All in all, I enjoy working as a teacher	1	4	3.16	.864
If I could decide again, I would still choose the teaching profession	1	4	2.79	1.067
I find my teaching subject interesting to teach	1	7	5.41	1.073
My subject (s) of specialization should be a core component of the curriculum	1	7	5.80	.887
I prefer teaching my subject (s) of specialization than other subjects	1	7	5.73	.900
I believe I can teach my subject of specialization competently	1	7	5.52	1.119

Results have shown that, generally, teacher trainees had lowest mean scores on items that measured their inclination toward the teaching profession. For example, results indicated that if teacher trainees involved in this study could be given a second chance to choose a profession of their choice, they almost favoured choosing other professions.

The relationship between teacher trainees' attitude and the demographic variables

The study investigated the relationship between teacher trainees' attitude and the demographic characteristics of gender, years of work, future work preferences, subject of specialization and whether or not they had worked before joining teacher education university programmes.

Table 4: T-test and ANOVA results

	Gender	Worked or not before joining teacher education university programme?	Years of work	Future work preferences	Subjects of specialization
Attitude towards teaching profession	.361	.107	.382	.000**	.218
Attitude towards teaching subjects	.001**	.275	.170	.003**	.241

**p<.01, *p<.05

With respect to gender, a significant difference (p<.01) was observed between males and females with regard to their attitude towards their teaching subjects. In this case, as shown in Table 5, females outperformed their male counterparts. On the other end, there was no any significant relationship between gender and teacher trainees' attitude towards the teaching profession. Thus, we accepted our hypothesis (H1) on the aspect of

teacher trainees' attitude towards the teaching subject while we reject the same hypothesis on the aspect of attitude towards teaching profession.

Table 5: Mean scores attitude towards teaching subjects by gender

		Gender	M	SD
Attitude towards teaching subjects	Male		5.60	.722
	Female		5.73	.509

With respect to whether or not teacher trainees had worked before joining teacher education university programmes, *t*-test results (Table 4) indicated that, for all teacher trainees, having worked before joining a pre-service teacher education university programme and subsequent years of work were not significantly related to their attitude towards teaching profession and attitude towards teaching subject. Similarly, for those who had worked before, their years of work, as ANOVA results indicated (Table 4), were not significantly related to any aspect of attitudes. Therefore, we reject hypotheses (H2 and H3) altogether.

Turning to subjects of specialization, contrary to our hypothesis, ANOVA results indicated that subjects of specialization were not significantly related to all aspects attitude for all teacher trainees (see Table 4). Thus, we also reject our hypothesis (H4). Regarding future work preferences, a significant relationship was observed between teacher trainees' future work preferences and their attitude towards the teaching profession and teaching subjects (Table 4).

Table 6: Mean Scores for Attitude Towards Teaching Profession and Teaching Subjects by Future work preferences

Future work preferences		Attitude towards teaching profession	Attitude towards teaching subjects
Self-employment	<i>M</i>	2.8943	5.5769
	<i>SD</i>	.84873	.66442
Employment in public schools	<i>M</i>	3.1288	5.7392
	<i>SD</i>	.80225	.59741
Employment in private schools	<i>M</i>	3.2469	5.6327
	<i>SD</i>	.91898	.65202
Employment in non-teaching sector	<i>M</i>	2.4792	5.4722
	<i>SD</i>	.78470	.87568

Descriptive statistics (Table 6) indicated that teacher trainees who intended to work in non-teaching sector had the lowest mean scores on both aspects of attitude, implying a negative attitude towards both the teaching profession and the teaching subjects. Also, while teacher trainees who intended to work in private schools had the highest mean scores on attitude

towards the teaching profession, the highest mean score on attitude towards the teaching subject was observed among teacher trainees who intended to work in public schools. This implies that teacher trainees desiring to teach in both public and private schools had positive attitude towards both teaching profession and teaching subjects.

Correlations among teacher trainees' attitude and their GPA

Finally, the study intended to establish whether or not teacher trainees' attitude and GPA were significantly correlated. To achieve this, we performed Pearson correlations.

Table 7: Correlations among Attitude and GPA

	1	2	3
1. GPA	—		
2. Attitude towards teaching profession	-.047	—	
3. Attitude towards teaching subjects	.053	.108**	—

As shown in Table 7, results, have shown that only attitude towards teaching profession and attitude towards teaching subjects were positively and significantly related ($r = .108, p < .01$). Thus we accept out hypothesis (H6) for these two variables only. That is to say, GPA was not significantly correlated with any of the variables.

Discussion and Conclusion

Demographic data indicated that the proportion of female teacher trainees was 30.6% which appear to reflect less continued proportion of women in higher education in Tanzania (Masanja, 2010). Also, the percentage (26.3%) of teacher trainees who had worked before joining teacher education university programme is not surprising given that a majority of students tend to join higher education through direct entry from high school. In other words, these teacher trainees who had worked before teacher education university programme constituted those who came to higher education for the purpose of upgrading their education.

Besides, the proportion of teacher trainees majoring in science and mathematics was low (35.8%) compared to those in social sciences. Moreover, the proportion of female students majoring in science and mathematics was low (27.5%) compared to their male counterparts. Such findings are similar to many other studies (Bottia, Stearns, Mickelson, Moller & Valentino, 2015; Buschor, Berweger, Frei & Kappler, 2014; Kasembe & Mashauri, 2011; Kier, Blanchard, Osborne & Albert, 2014; Price, 2010) which have been conducted on the topic under scrutiny. Surprisingly the number

of teacher trainees who plan to continue working as teachers after graduation constitutes only 44%. Given the costs of training these teacher trainees, the findings have implications in the government's expectations of combating teacher shortage, in particular, science and mathematics teachers. Additionally, after splitting data set by subjects, it was astonishing that even teacher trainees majoring in science and mathematics who are highly employable and demanded in teaching career, still they (55%) do not want to teach after graduation. Overall, these teacher trainees do not only want to teach but also the findings have indicated that they had significantly low attitude towards both teaching profession and their teaching subjects of specialization, implying negative attitude towards both teaching profession and the teaching subjects.

On the other hand, the results communicate good news that only those with positive attitude towards teaching intend to join teaching after graduation. On the other hand, losing more than 50% of teacher trainees calls for a special attention. Thus, in relation to our theoretical framework, further research is needed to investigate the intersection among the cognitive, affective and behavioural dimension of attitude among teacher trainees in Tanzania in relation to their attitude.

Understanding that intersection and its nature is key to designing relevant mitigation strategies. Furthermore, in this study, we identified significant gender differences with respect to attitude towards teaching subjects. Further, female teacher trainees outperformed their male counterparts on this aspect. These findings appear to support earlier studies (Güneyli & Aslan, 2009; Guven & Aydogdu, 2014; Sener, 2015). Overall, these findings add to the existing mixed research results on gender and attitude towards teaching profession and teaching subjects. Therefore, further research is needed to investigate the matter. For instance, one possibility might be to investigate how social and constructions of gender are related to teaching profession. This is important because gender constructions around masculinity and femininity have been associated with occupational choices (Pozzebon, Visser & Bogaert, 2015; Simon, Wagner & Killion, 2017).

With regard to the relationship between teacher trainees attitude and academic achievement, our results support earlier findings (Kartal et al., 2012; Sülen, 2010) that found no significant relationship between teacher trainees attitude and academic achievement (GPA). These findings imply that while academic achievement and positive attitude are theoretically supposed to work together in producing an ideal professional (Sülen, 2010), the correlation between them might not automatically exist. Thus, policy and practice must emphasize on improving both teacher trainees' attitude and

academic achievement. To this end, with regard to teacher trainees' attitude towards teaching profession, it may be concluded that, teacher trainees' lack of intentions to work as teachers has more to do with their negative attitude towards teaching profession and their teaching subjects. In other words, this has less to do with the hypothesized recent stoppage of immediate placement after training in Tanzania.

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