

## **A comparative study of preferences by uncertified graduate teachers in Zimbabwe to acquire professional teaching qualifications**

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**Abstract:** *There is a prevalent shortage of experienced and qualified high school teachers in Zimbabwe particularly for sciences, mathematics and to lesser extent commercial subjects. Even though, there is a perceived general unwillingness among uncertified graduate teachers to become professional teachers. The objective of the study was to establish whether gender differences and the possession of certain types of academic degrees influence preferences by uncertified graduate teachers to train as professional teachers. Data was collected from a cross-sectional survey of 87 uncertified graduate teachers drawn from high schools in Harare province. Chi-Square tests of association and mean difference tests were used in the analysis of data. The study concluded that women and art degree holders are more willing to become professional teachers compared to men and science and commercial degree holders respectively. The study also established that the shortage of science (including mathematics) and commercial subjects teachers is gender sensitive.*

**Keywords:** *uncertified graduate teacher, professional teaching qualification, pedagogical skills, gender differences, non-parametric statistical tests*

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### **I. Introduction**

There is a prevalent shortage of experienced and qualified high school teachers in Zimbabwe particularly for sciences, mathematics and to lesser extent commercial subjects. To make up for the shortage, untrained teachers are recruited on a temporary basis. However, the practice has been that those temporary teachers with academic degrees in relevant subjects would be appointed for indefinite periods. Such teachers, who are holders of mostly undergraduate degrees but lack professional teaching qualifications, are called uncertified graduate teachers. Educationists are concerned that uncertified graduate teachers are deficient in pedagogical skills despite possessing a deeper understanding of subject content. Moreover, their commitment to the profession is doubtful given most of these teachers eventually leave the profession for greener pastures.

There is a perceived general unwillingness among uncertified graduate teachers in Zimbabwe to acquire professional teaching qualifications. For example, Makuva and Gora (2014) noted a declining trend in the number of college and university graduates enrolling for the Bachelor of Education (B.Ed.) and Post-graduate Diploma in Education (PGDE) at the University of Zimbabwe which they attributed to a general unwillingness to join the profession. Makuva and Gora argue that most practising untrained teachers view teaching as merely a stepping stone to other more rewarding professions. They castigated such teachers as 'mercenary teachers' who temporarily join the profession as a 'last resort' and are always looking elsewhere for greener pastures.

The reasons why the teaching profession is often shunned by career aspirants are understandable. In their study, Chiresha and Shumba (2010) assert that the teaching profession in Zimbabwe is unattractive due to poor salaries, poor working conditions, poor accommodation, and lack of respect for the profession. Makuva and Gora (2014) blame the apparent low status accorded to teachers by society while Salifu & Agbenyega (2013) also lay blame on the low remuneration of teachers which they say is not comparable to that of other professionals like doctors, bankers or engineers. Bennell (2004) observes that teachers in most developing countries are considered as "semi-professionals" commanding less respect in society because they are considered relatively a larger group, have lower professional standards, allow easy entry into their profession and have weak and many trade unions. In Zimbabwe, for example, a number of associations have cropped up purporting to represent the interest of teachers. These include the Zimbabwe Teachers Association (ZIMTA), Progressive Teachers Union of Zimbabwe (PTUZ) and Teachers Union of Zimbabwe (TUZ). The bargaining power of teachers for better remuneration and improved conditions of service has been weakened due to antagonism and lack of cooperation between these teacher associations.

Although the reasons why the teaching profession is often shunned are well documented, it is not clear why teacher shortage is prevalent in some subjects and not others. Is it the case that science and commercial degree holders are more unwilling to become professional teachers compared to art degree holders? Some men

perceive teaching as a profession for women (Kelleher, 2011; Griffiths, 2006), hence the need to investigate whether men and women are similarly attracted to the profession. Given the general dislike or phobia of mathematics and science by women (Bharadwaj et al, 2013; Ongiti, 2014), is the prevalent shortage of qualified mathematics and science teachers in schools gender sensitive?

The main objective of this study was to establish whether gender differences and the possession of certain types of academic degrees influence preferences by uncertified graduate teachers to train as professional teachers.

### Research Hypotheses

The study sought to test the following hypotheses:

**H1:** There is an association between gender and willingness to acquire professional teaching qualifications among uncertified graduate teachers.

**H2:** There is a significant difference in willingness to attain professional teaching qualifications between holders of arts, science (including mathematics) and commercial degrees.

**H3:** There is an association between gender and academic degree type.

## II. Methodology

A survey was conducted to collect data from a random sample of 87 uncertified graduate teachers drawn from selected high schools in Harare Province. The province has 7 education districts and 82 high schools. Education districts were treated as clusters. Five districts were randomly selected and within the selected districts, 30 high schools were then selected using simple random sampling. A structured questionnaire was then used to collect data from every uncertified graduate teacher in the selected schools. Table 1 shows the description of the variables used in the study.

**Table 1: Description of variables**

Variable	Range of possible values	Measurement scale	Values and labels
Willingness	0 to 1	Nominal	0 = not willing 1 = willing
Gender	0 to 1	Nominal	0 = female 1 = male
Degree Type	1 to 3	Nominal	1 = science degree 2 = commercial degree 3 = art degree

The analysis of the data was based on nonparametric statistical tests since the data was measured on the nominal scale. The use of parametric tests require that data be normally distributed and be measured on at least the interval scale. The Chi-Square test of association was conducted to test whether there is an association between gender and willingness to acquire professional teaching qualifications; between gender and degree type; and also between degree type and willingness to acquire professional teaching qualifications. The Mann-Whitney U test was conducted to determine whether there is a statistically significant difference in willingness to acquire professional teaching qualifications between male and female uncertified graduate teachers. To test whether holders of different academic degrees are equally willing to become professional teachers, the Kruskal-Wallis H Test was conducted on the three categories of teachers.

## III. Results And Discussion

Table 2 shows the distribution of respondents classified according to their stated willingness to acquire professional teaching qualifications and their gender.

**Table 2: Classification of respondents by gender and willingness to train as teachers**

		Gender		Total
		Female	Male	
Willingness to acquire	No	18	35	53
teaching qualifications	Yes	24	10	34
Total		42	45	87

Only 39% (n = 34) of the respondents stated that they were willing to attain professional teaching qualifications and of these only 10 (29%) were males while the rest were women. The results suggest that the majority of uncertified graduate teachers (61%) are unwilling to become professional teachers. Results of the Chi-Square and mean difference tests concerning gender and willingness to become professional teachers are presented in Table 3 (a) and Table 3 (b) respectively.

**Table 3 (a): Association between gender and willingness to train as a professional teacher**

Chi-Square Tests					
	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	11.127 <sup>b</sup>	1	.001		
Continuity Correction <sup>a</sup>	9.709	1	.002		
Likelihood Ratio	11.387	1	.001		
Fisher's Exact Test				.001	.001
Linear-by-Linear Association	10.999	1	.001		
N of Valid Cases	87				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 16.41.

**Table 3 (b): Mean difference tests for gender**

Test Statistics <sup>a</sup>	
	Willingness to acquire teaching qualifications
Mann-Whitney U	615.000
Wilcoxon W	1650.000
Z	-3.317
Asymp. Sig. (2-tailed)	.001

a. Grouping Variable: Gender

As shown in Table 3 (a), the null hypothesis of no association between gender and willingness to acquire teaching qualifications was rejected at 1% level of significance (Pearson Chi-Square = 11.127;  $p = 0.001$ ). This result implies that there are differences in the manner that women and men identify with the teaching profession. The Mann –Whitney Test (Table 3 b) showed that there is a statistically significant difference in willingness to acquire teaching qualifications between men and women ( $z = -3.317$ ;  $p = 0.001$ ). If these results are read in conjunction with the results shown in Table 2, then it can be deduced that women are more willing to attain professional teaching qualifications compared to men. Table 4 shows the distribution of respondents classified according to their stated willingness to acquire teaching qualifications and the type of academic degree qualification that they hold.

**Table 4: Classification of respondents by degree type and willingness to train as teachers**

		Type of academic degree qualification			Total
		Science degree	Arts degree	Commercial degree	
Willingness to acquire teaching qualifications	No	23	10	20	53
	Yes	9	18	7	34
Total		32	28	27	87

Out of 34 respondents who indicated that they were willing to acquire professional teaching qualifications, the majority (53%) were art degree holders. Seventy two percent of science degree holders and 74% of commercial degree holders indicated that they were unwilling to acquire professional teaching qualifications. The results show that art degree holders are more willing to acquire professional teaching qualifications compared to science and commercial degree holders. Table 5 (a) and Table 5 (b) show the results of the Chi-Square and mean difference tests respectively.

**Table 5 (a): Association between type of academic degree and willingness to acquire teaching qualifications**

**Chi-Square Tests**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	11.047 <sup>a</sup>	2	.004
Likelihood Ratio	10.999	2	.004
Linear-by-Linear Association	.000	1	.990
N of Valid Cases	87		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 10.55.

**Table 5 (b): Mean difference test for type of academic degree**

**Test Statistics<sup>a,b</sup>**

	Willingness to acquire teaching qualifications
Chi-Square	10.920
df	2
Asymp. Sig.	.004

a. Kruskal Wallis Test

b. Grouping Variable: Type of academic degree qualification

The Chi-Square test yielded a statistically significant association between type of academic degree and willingness to train as a professional teacher (Pearson Chi-Square = 11.127;  $p = 0.004$ ). The null hypothesis of no association between the variables was therefore rejected. The result shows that the decisions of uncertified graduate teachers to become professional teachers are influenced by the type of academic degrees they hold.

The Kruskal Wallis test revealed that there is a statistically significant difference in willingness to train as professional teachers between arts, science, and commercial degree holders (Chi-Square = 10.920;  $p = 0.004$ ). If this result is considered in conjunction with the result of Table 4, it can be inferred that science and commercial degree holders are more unwilling to become professional teachers compared to art degree holders. The result can help to explain the prevalent shortage of qualified science and commercial subject teachers in the country's high schools.

Table 6a shows the classification of respondents by gender and type of academic degree.

**Table 6a: Gender \* Type of academic degree qualification**

		Type of academic degree qualification			Total
		Science degree	Arts degree	Commercial degree	
Gender	Female	14	19	9	42
	Male	18	9	18	45
Total		32	28	27	87

The results in Table 6a show that 56% of science degree holders and 67% of commercial degree holders are male while only 32% of art degree holders are male. The results show that more men than women are holders of science and commercial degree holders.

**Table 6b: Association between gender and type of academic degree**

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.976(a)	2	.031
Likelihood Ratio	7.108	2	.029
Linear-by-Linear Association	.451	1	.502
N of Valid Cases	87		

a 0 cells (.0%) have expected count less than 5. The minimum expected count is 13.03.

As shown by the results in Table 6b, there is a statistically significant association (Chi-Square = 6.976;  $p = 0.031$ ) between gender and type of academic degree at 5% level of significance. This result, if read in conjunction with the results of Table 6a, implies that men are associated with science and commercial degrees while women are more associated with art degrees.

#### **IV. Conclusion And Recommendations**

The study concluded that gender and type of academic degree are influential factors affecting preferences of uncertified graduate teachers to attain professional teaching qualifications. More specifically, it was concluded that females are more willing to become professional teachers than men; that art degree holders are more willing to attain professional teaching qualifications than science and commercial degree holders; and that men are associated with science and commercial degrees while women are more associated with art degrees. Therefore, it can be concluded that the prevalent shortage of qualified science and commercial subjects teachers is gender sensitive.

It is recommended that gender stereotypes in the teaching profession be demystified so that both men and women would equally identify with the profession. It is also recommended that retention allowances be awarded to qualified teachers who are holders of science and commercial academic degrees to alleviate the shortage of teachers for these subjects.

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