

Statistical Characterization of Root Causes of Teacher Turnover in Public Secondary Schools in Lufwanyama District

Dr. Kango Maxwell

University of Africa; School of Education, box 35440, Lusaka, Zambia

Abstract: *Teacher attrition is a universal challenge and has a negative impact on global policies. A growing body of research around the world shows that most countries are experiencing a substantial decline in meeting their teacher demand. Therefore, the study sought to investigate factors that causes teacher turnover in rural public secondary schools in Lufwanyama district, Zambia. The population of the study was made up of secondary school teachers, education officers and head teachers in district respectively. The sample population was made up of 222 respondents. The Simple random sampling technique was used. Questionnaire and an interview guide were used as instruments for data collection. Further, a multiple regression model was fitted to determine teachers' demographic variables which were significantly associated with teacher turnover. Data was analyzed using SPSS 20. The findings revealed that poor road network, poor communication network system, poor and difficult working conditions, political interference, negative attitude towards rural district, marriage bonds and lack of accommodation were highlighted as the key factors of teacher turnover in Lufwanyama district. It was also revealed that teachers' demographic variables such as marital status and level of education significantly predicted their intentions to seek a transfer to other districts or quit the service. The study recommends that Government should allocate more resources to rural schools in order to improve the working conditions of teachers.*

Keywords: Teacher turnover, employee factors, external factors, employer factors

1. Introduction

The success and failure of any organization greatly depends on its human resource in order to achieve its goals such as providing quality education to the learners, increasing learners' access to education and providing life skills for the learners (Pitsoe, 2013). For the Ministry of Education in Zambia, human resource is considered to be the most important asset in community, primary and secondary schools. This is because the success of the school in achieving its goals generally depends on qualified and competent teachers (Amolo et al., 2016; Basich, 2018). In an education system, teachers play a major role in the delivery of quality education and in the fulfillment of educational goals. According to Orodho and Mutune (2014), many pupils are being taught by few teachers in secondary schools due to high teacher turnover rate especially in rural areas. Therefore, every educational system should strive to attract and retain qualified teachers and provide them with the best possible working conditions and incentives that will satisfy their needs. However, teachers leave their working stations for various reasons and this causes deficiency of teachers which affects the quality of education in public secondary schools.

Employers should take serious interest in their employee turnover because it is a costly part of doing business. According to Satcher, Darling-Hammond, and Carver (2018), the cost associated with teacher turnover is quite high and the process of replacement is time consuming. Therefore, high teacher turnover may be harmful to a school's productivity if skilled teachers are often leaving. Teacher turnover manifests itself in many ways and it is caused by many factors such as death, effects of HIV and AIDS, family responsibilities, teaching experience, poor working conditions, poor remuneration and transfer policies,

availability of job opportunities in other ministries and poor supervision among others (David et al., 2016; Orodho and Mutune, 2014). The working conditions and environment are relatively poor and not conducive for the best performance of teachers who happen to have trained in decent public colleges and universities where they were used to pleasant living conditions as most of these colleges and universities are located in urban areas, with good infrastructure (Mugo et al., 2018). Therefore, teacher turnover should be kept at minimal level as possible by analyzing the causes and initiating remedial measures to control it.

Within the education sector in Zambia, teacher turnover in public secondary schools has become a rising problem, creating a shortage of qualified teachers, which should be addressed if quality education is to be provided for all children (MOE, 2016). Lufwanyama rural district experienced the situations of teacher turnover in public secondary schools. Despite the efforts made by the Zambian government to train more teachers, the shortage of teachers remains a problem especially in rural secondary schools maybe due to poor infrastructure. In the period between 2014 and 2018 a total of 121 teachers left Lufwanyama district either through resignation or transfer to other districts. Numerous studies have been conducted on teacher turnover in Zambia but the focus of these studies was in urban districts and not rural district especially Lufwanyama (MOE, 2017). Therefore, it is due to this challenge in the teaching profession that the study sought to examine the factors that contributed to teacher turnover in public secondary schools in Lufwanyama district, Zambia.

The study was guided by the following research questions:

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- 1) What are the employer related factors of teacher turnover in public secondary schools in Lufwanyama district?
- 2) What are the employee related factors that causes teacher turnover in public secondary schools in Lufwanyama district?
- 3) Which external related factors contribute to teacher turnover in public secondary schools in Lufwanyama district?
- 4) To what extent does demographic factors influence teacher turnover in public secondary schools in Lufwanyama district?

The study also tested the hypothesis:

H_0 : Teachers demographic factors are not statistically significant predictors of their intentions to leave the district or quit the service.

Purpose of the Study

The purpose of this study was to quantitatively and qualitatively characterize the factors that underlie the dynamics of teacher turnover in rural public secondary schools in Lufwanyama district and suggest ways on how this study can be used to reduce the rate of rural teacher turnover.

2. Research Methodology

The study employed a descriptive research design. According to Colgan (2011) the descriptive survey design looks with intense accuracy at the phenomenon of the moment and then describes precisely what the researcher sees. The questionnaire was used as the instrument for collecting data. As Barkie (2013) observes, the questionnaire increases reliability because of its greater impersonality. However, as Anderson (2011) postulate, its major weakness is that it may invite people to lie and answer questions vaguely. This was mitigated through the pilot testing of the questionnaire. The researchers used a questionnaire which largely had close-ended questions and open-ended questions. Close-ended questions enabled the researchers to collect predetermined respondents opinion regarding the studied phenomena (Kumar, 2008). Face to face interview, which provided personal contact with the participants, was used. The sample size consisted of 222 respondents made of 213 teachers, 7 head teachers and 2 Educational Standard Officers (ESO). The study employed simple random sampling because as Blumberg (2008) argues, it permitted every respondent to have an equal chance of participating in the study. The researcher was able to obtain the actual perceptions of the respondents regarding the trend of teacher turnover in public secondary schools from the respondents' open-ended free responses.

Data collection and Analysis

As earlier alluded to, data was collected using the questionnaire which was made up of close-ended questions and open-ended questions. The researcher personally distributed the questionnaire to the respondents. Both primary data and secondary data were collected. After getting all questionnaires, the researcher reviewed all information in questionnaire to make sure that all information was filled correctly. Descriptive statistic like

frequency tables was used to present the data. The quantitative data collected were analyzed through SPSS 20. In the current study, Likert scale of (1= strongly disagree, 2 = disagree, 3 = not aware, 4 = agree, 5 = strongly agree) was used in which the participants were asked to indicate the extent to which the listed employer, employee and external related factors contributed to their decision to leave the district. Further, multiple linear regression model was fitted to assess significant demographic factors that contributes to teacher turnover in the district.

3. Results

3.1 Employer Related Factors of Teacher Turnover in Lufwanyama District

The first objective was to examine the employer related factors that would cause the participants to leave the teaching field in the district. All the listed factors had the mean of greater than four (4) as displayed in Table 1. The results revealed that teachers rated highest on poor and difficult working conditions (M = 4.70) as the most critical employer related factor that can influence their desire to leave the district than lack of motivation (M = 4.52) and lack of accommodation (M = 4.50). Other factors includes delay in salary upgrade (M = 4.46), lack of administration support (M = 4.42), low salaries (M = 4.41), lack or irregular promotions (M = 4.36) and work load/stress (M = 4.31) as shown in Table 1. These findings implied that poor and working environment was dominant as the cause of teacher turnover, followed by lack of motivation while low employee benefits was least prevalent factor that causes teacher turnover as perceived by teachers in the district.

Table 1: Descriptive statistics for the employer related factors of teacher turnover

Factors	N	Mean	Std. Deviation
Poor and difficult working conditions	213	4.70	.653
Lack of motivation	213	4.52	.979
Low employee benefits	213	4.04	1.124
Lack of teaching and learning materials	213	4.16	1.219
Low salaries	213	4.41	1.148
Lack of administration support	213	4.42	1.098
Lack/irregular promotion	213	4.36	1.176
Lack of accommodation	213	4.50	.935
Lack/inadequate incentives	213	4.27	1.064
Delay in salary upgrade	213	4.46	.827

Source: Survey data, 2020

The interview data in relation to the first research question asked the respondents to outline reasons that are likely to inform their decision to quit teaching. One of the teachers responded that:

My salary is a very de-motivating factor to my job as a teacher. My take home salary is not enough in the sense that at the end of the month if I take out the cost of utilities, rent and even transport fares from my salary, I would be left with nothing to even save for unforeseen challenges that may happen. I think the salaries would be one of the major reasons to stop teaching (Teacher #1).

Reacting to his view on the factors that will cause him to stop teaching, a teacher said:

Unacceptable classroom environment, heavy workload often resulting in stress inadequate instructional resources, unfriendly working relationships that exist in teaching, delayed promotions and a host of other factors are the reasons behind my decision to quit teaching if I had a better alternative. (Teacher #2).

3.2 Employee Factors of Teacher Turnover in Lufwanyama District

Employee related factors also contribute to teacher turnover in public secondary schools. Five (5) of the seven (07) had a mean greater than four (4) as indicated in Table 2.

Table 2: Descriptive statistics for the employee related factors of teacher turnover

Factors	N	Mean	Std. Deviation
Inadequate training	213	3.74	1.067
Negative attitude towards the district	213	4.66	.665
Marriage bond	213	4.61	.826
Lack of development opportunity	213	4.12	1.108
Lack of social services	213	4.46	1.053
Lack of cooperation among teachers	213	3.52	1.531
High expectations	213	4.16	1.164

Source: Survey data, 2020

It was established that some employee (teacher) related factors were ranked high while others low. Negative attitude towards the district (M = 4.66) was perceived to be the most important employee related factor of teacher turnover in the district than marriage bond (M = 4.61), lack of social services (M = 4.46), high expectations (M = 4.16) and lack of development opportunities (M = 4.12). On the other hand, the participants were not sure as whether factors such as inadequate training, social mobility, lack of social services and lack of cooperation among teachers could influence their decision to either leave the profession or get a transfer to other districts as indicated in Table 2.

Teacher interviewed said:

Sir marriage is a very important thing, when you get married you needs to be with your wife or husband. For example how people say they are married but the husband is in Lufwanyama district and the wife is in Livingstone that is not marriage. So sir for me I want to be staying with my wife in the same house so because of this I can get a transfer to go and join my wife especially if she is in town. I can't force my wife to come and join me because in rural areas we lack development opportunities such advancement in education because there are no universities. So sir I think this can influence me to leave the district to town districts. (Teacher #3).

Also another teacher commented:

You know sir I was employed as a diploma teacher, later on I obtained a degree so I expected much to come but unfortunate it is now 8 years without either salary upgrade or promotion. When you advance with education at the end you have high expectations such as maybe promotions but if nothing then you will be demoralized. . (Teacher #4).

3.3 External Factors of Teacher Turnover in Lufwanyama District

The third research objective was in regards to the external factors that could influence teachers' decision to leave the district. It was found that out of eight (8) external related factors of teacher turnover, seven (7) had a mean greater than four (4). The results are tabulated in Table 3.

Table 3: Descriptive statistics for the external related factors of teacher turnover

Factors	N	Mean	Variance	Std. Deviation
Over enrolment	213	4.11	1.380	1.175
Poor performance of pupils	213	4.29	1.498	1.224
Lack of parental support	213	4.12	1.372	1.171
Political interference	213	4.46	.787	.887
Witchcraft	213	4.42	.961	.980
Lack of health facilities	213	3.96	1.687	1.299
Poor road network	213	4.62	.396	.629
Poor communication system	213	4.38	.934	.966

Source: Survey data, 2020

According to Table 3, poor road network (M = 4.62) was rated as the most important external factor that causes teacher turnover than over enrolment (M = 4.11), poor performance of pupils (M = 4.29), lack of parental support (M = 4.12), political interference (M = 4.46), witchcraft (M = 4.42) and poor communication system (M = 4.38).

One of the teachers interviewed said:

Apart from our salary, I think I am likely to get a transfer because of the poor state of most of the classrooms. Our classrooms are mostly overpopulated with pupils whose performance is very poor coupled with the fact that there is no enough furniture to accommodate students. (Teacher #5)

3.4 Demographics factors on teachers' intention to leave or quit the service

To tests the hypothesis that teachers demographic factors such as age, sex, level of education, marital status and years of teaching experience were not significant predictors of teacher turnover, a multiple linear regression model was fitted. The results on multiple linear regression for demographic factors influencing teacher turnover are presented in Table 4.

Table 4: Model Summary of Multiple Regression Results for Demographic Factors Influencing Teacher Turnover

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.270 ^a	.073	.050	2.814	1.952

- a. Predictors: (Constant), years of teaching experience, sex, marital status, level of education, age
- b. Dependent Variable: intentions to leave

The multiple regression results in Table 4 revealed that teachers' demographic variables such as age of the respondents, sex and level of education collectively accounted for 27.0% to teacher turnover which was considered to be statistically significant [p = 0.008] as indicated in Table 5. This result implied that other factors not included in the model accounted for 73% influence for

teacher turnover in Lufwanyama district. In other words, R squared value of 0.270 implied that there were other factors that were contributing to teacher turnover among public secondary school teachers in the district. The results showed that it was evident enough that together, these factors were good predictors of teacher turnover in the public secondary school in Lufwanyama district on the Copperbelt province.

Table 5: ANOVA Results for Demographic Variables and Factors Influencing Teacher Turnover

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	128.603	5	25.721	3.248	.008 ^b
	Residual	1639.378	207	7.920		
	Total	1767.981	212			

- a. Dependent Variable: intention to leave
- b. Predictors: (Constant), years of teaching experience, sex, marital status, level of education, age

In addition, the study examined the influence of each predictor to teacher turnover in Lufwanyama district on the Copperbelt province and the results are shown in Table 6. The results in Table 6 showed that teachers’ marital status ($\beta = -0.157, t = -2.272, p = 0.024$) and level of education ($\beta = 0.178, t = 2.415, p = 0.017$) individually contributed significantly to teacher turnover in the district while the contribution of sex ($\beta = 0.005, t = 0.071, p = 0.943$), age ($\beta = 0.091, t = 1.162, p = 0.246$), and years of teaching experience ($\beta = -0.080, t = -1.034, p = 0.302$) were not significant factors of teacher turnover in district. In order of magnitude, it was revealed that level of education contributed most to teacher turnover, followed by marital status.

Table 6: Standardized and Unstandardized Coefficients for Factors Contributing to Teacher turnover in Lufwanyama district

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4.953	.609		8.129	.000
sex	.028	.395	.005	.071	.943
age	.586	.504	.091	1.162	.246
marital status	-.924	.407	-.157	-2.272	.024
level of education	1.047	.434	.178	2.415	.017
years of teaching experience	-.320	.310	-.080	-1.034	.302

Source: Field data, 2020

Based on these findings, it was concluded that marital status and level of education were the major factors that contributed to teacher turnover in public secondary schools in Lufwanyama district. The results showed that if these demographic characteristics needs of the teachers were improved then the rate of teacher turnover would reduce in the district. Therefore, the null hypothesis that teachers’ demographic factors were not significant predictors of teacher turnover was rejected in favor of the alternative hypothesis.

3.5 The Impact of Teacher Turnover on Academic Performance

The current performance as compared to three years ago was found to decline in different schools. This has been justified by the study in which the results are summarized in Table 7.

Table 7: Impact of Teacher Turnover on Academic Performance

Responses	Frequency	Percentage
Better	16	07.51%
Worse	123	57.75%
Same	74	34.74%
Total	213	100.0%

Source: Primary Field data, 2020

The distribution of data in Table 7 shows that teachers participated in the study varied in their responses.

Table 8: Performance of pupils at grade 12 examination at district level in Lufwanyama district

Year of examination	District performance (percentage)
2014	65.14
2015	61.56
2016	58.86

Source: Primary Field data, 2020

About 57.75% of the respondents said the results are worse if compared to the previous years and 32% argued that the current performance is the same whereas 24.5% reported that the performance was better.

The statistics obtained from the Educational Standard Officers in Lufwanyama district also revealed that the performance of pupils at grade 12 examinations was decreasing as showed in Table 8. The results from table 8 indicated that pupils’ performance was better in 2014 as compared to 2015 and 2016. In addition, pupils performance was better in 2015 than in 2016 as showed in Table 8.

4. Discussion

The study found that there were some factors related to employer, employee and external which significantly contributed to teacher turnover in public secondary schools in Lufwanyama district. Most of the respondents revealed that there was a positive relationship between employer’s related factors and teacher turnover. The factors to which teachers agreed to as predictors of teacher turnover includes: Poor and difficult working condition, lack or irregular promotion, lack of motivation, lack of teaching and learning materials, low salaries, lack of administration support, lack of accommodation, lack or inadequate incentives, and delay in salary upgrade. Such sediments were also echoed by Lemons et al (2015), Guyo (2018), Benoy (2018) and Maseda et al (2019). Oke et al. (2016) reported that teacher turnover was highly associated with low salaries and poor leadership management. The poor working environment can contribute to high teacher turnover (Mulei, 2016). In addition, factors such as poor working conditions, lack of motivation, delay in promotions and lack of training in professional development were also highlighted by Avalos and Valenzuela (2016), Beckwith (2018) and Okeke et al.

(2019) as factors that causes teacher turnover. Maseda et al. (2019) also found that poor working environment had a negative effect on job satisfaction resulting into teacher leaving the teaching profession. Therefore, employer related factors especially poor working environment, low wages and low salaries are potential de-motivation factors which cannot boost teachers' morale.

The study also noted that marriage bonds, high expectations, negative attitude towards the district, lack of development opportunity, lack of reliable social services like tap water and electricity, and high expectations of teachers were employee related factors of teacher turnover in public secondary schools in the district. Acheampong and Gyasi (2019) highlighted that lack of accommodation with adequate installation of lighting facility, potable drinking water, and transport facilities such as vehicles, motorbikes and bicycles were constraints to teachers who serve in rural areas. Marriage bond whereby most of female or male teachers tend to shift from one school to another in order to be close to their spouse can result into teacher turnover. According to Bentil et al. (2019), teachers' demographic variables such as marital status and teaching experience plays a role in influencing teachers to quit their profession. In addition, Benoy (2018) observed that family reasons contribute to teacher turnover. As noted by Mampane (2012) and Akindele (2019), teachers tend to move out of the profession in search for better working conditions due to factors such as lack of income generating activities other than teaching and inadequate infrastructure especially in rural areas.

Teachers leave teaching profession or get transfers because of public pressure which regards them as the poorest, disrespect them and devalue their teaching career. The results showed that over enrolment, poor performance of pupils, lack of parental support, political interference, witchcraft, poor road network and poor communication system were highlighted as the major external factors that causes teacher turnover in some selected secondary schools in the district as noted by Mugo and Guyo (2018), Akindele (2019) and Pitsoe (2013). Lack of co-operation between parents and teachers in teaching and learning process was one of the major factors that lead to teacher turnover.

Further, it was found that marital status and level of education were significant factors of teacher turnover. Bentil et al. (2019) and Pitsoe (2013) reported that marital status was the major factor that influenced teacher attrition in the public basic schools. However, this finding differs with Bentil et al. (2016) who found no significant statistically difference between teachers' level of education and their intention to quit. In addition, this study has established that sex, age, and years of teaching experience did not influence teacher turnover which is consistent with other studies (Bentil et al., 2019; Akindele, 2019).

5. Conclusion and Recommendations

The findings revealed that poor road network, poor communication network system, poor and difficult working conditions, political interference, negative attitude towards rural district, marriage bonds and lack of accommodation

were highlighted as the key factors of teacher turnover in Lufwanyama district. It was also revealed that teachers' demographic variables such as marital status and level of education significantly predicted teachers' intention to leave the district. If pupils' academic performance is to be excellent, then a stable experienced staff is vital, failure to maintain such, the rate of teacher turnover will continuously be high with its catastrophic effects. Therefore, it is imperative that public secondary schools in Lufwanyama district and other schools in general, employers, school administrators and all the stakeholders must improve on the welfare of teachers in order to reduce teacher turnover. The study recommends that Government should allocate more resources to rural schools in order to improve the working conditions of teachers.

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