



The Relationship Between Teacher Characteristics and Choice of Pedagogical Approach Adopted in Teaching Christian Religious Education in Secondary Schools, Kenya.

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ABSTRACT

Teacher education level and teacher experience, are two main attributes of teacher, however gender and age also plays a significant role in teaching. The study analyzed the relationship between teacher characteristics and the choice of pedagogy adopted when teaching Christian Religious Education. The study employed quantitative method and cross sectional research design. 357 participants were sampled using Krejcie and Morgan table. Data was collected using questionnaire and analyzed using SPSS. The findings indicated that teachers' level of education, age, teaching experience and status as an examiner has significant relationship with the choice of pedagogical approach adopted by CRE teachers. In all cases, p-values are greater than the level of significance of 0.05

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Introduction

In order for students to achieve academic success, teachers play a crucial role. The teacher's characteristics are such as gender, age, level of education and teaching experience. Even though Zhang (2008) affirms that teacher education level and teacher experience, are two main attributes of teacher, gender and age plays a significant role in teaching.

The teacher's level of education is a characteristic that has been researched in the past. In Kenya, Obonyo et al., (2018) conducted a study public secondary schools to find out if teacher education level and experience is impetus for student achievement. The study sought to establish whether advanced degrees and years of teaching experience are associated with student science achievement gains. According to the study, there was no difference in teacher qualification between high and low ranking secondary schools in terms of education level ($\chi^2 = 0.324$; $df=2$, $P=0.065$) and experience ($\chi^2 = 0.824$, $df=3$, $P=0.066$), but only a slight difference between low ranking and high ranking schools in terms of experience in grade 12 ($\chi^2 = 0.824$, $df=3$, $P=0.046$). With regards to teacher experience, teachers with more than two years of grade 12 experience improved student scores by 1.15 units while those teachers without such experience improved scores by 0.83. With regards to education level, a teacher with advanced degree chemistry or education improved student achievement gains by 0.085 units, while that with no advanced degree in any major will result to only 0.067 unit increase in student chemistry achievement. The study, recommended that the Teacher's Service Commission of Kenya acknowledge that advanced degrees currently acquired by teachers have significant effect to student and as such, teachers with such degrees and experience should be remunerated adequately.

In research, teacher experience is an observable characteristic that is commonly studied in order to find a

possible relationship between student performance and the number of years that has been teaching (Ladd & Vigdor 2010). Although many studies indicate that more experience a teacher has, the higher student achievement, there are studies that reveal this is not always the case. Some of the studies that research reviewed are;

Harris and Sass (2007) in their study, concluded that teacher's teaching experience is a strong evidence that teachers become more effective with more years on the job. Moreover, Rice (2010) writes that teachers' experience is most powerful during the first few years of teaching; after that, marginal returns diminish while Clotfelter, Ladd and Vigdor (2007) argue that more experienced teachers make better educators. Likewise, Putman (2012) demonstrated that the more teaching experience a teacher has, the more capable they are of engaging students and managing classrooms.

Further, Akinsolu (2010) concluded that teacher-student ratio, teacher experience, and teacher qualification significantly influence academic performance. Similarly, Ewetan and Ewetan (2015) found that the level of teacher experience significantly influenced students' performance in both English language and mathematics. According to them, schools with teachers who have more than ten years' experience outperform schools with teachers who have fewer than ten years' experience.

In Kenya, A study conducted by Kimani, Kara and Njagi (2013) on teacher factors influencing academic achievement found that teachers experience, age, gender, and professional qualification had no statistical significant relationship with academic performance of students.

According to Zafer and Aslihan (2012) study findings found that older teachers of age 41 years old and above are more effective in teaching and good in classroom management skills than younger teachers in high school. It is also strongly supported by Aloka and Bojuwoye (2013) who found that younger teachers often make riskier decisions and

do not analyze the context carefully when dealing with students' disciplinary problems due to the lack of experience and immaturity compared to the older teachers. It is not much different from the later study conducted by Nyagah and Gathumbi (2017) in a cross-sectional survey in Kenya, which found that older teachers were much more likely to increase students' learning than their middle-aged and young counterparts.

Methodology

In modern research a budding researcher has several options to choose from: one can choose the quantitative research, the qualitative research or take a middle road encompassing a mixture of the two methods. The choice of research methodology is a function of the research objectives formulated. Therefore the research methodology was quantitative because of the nature of the title of the study. The researcher utilized cross sectional survey design. According to Cohen, Manion and Morrison (2018), a cross-sectional study is one that produces a 'snapshot' of a population at one particular point in time. In his definition of cross-sectional studies, Stockemer (2019) refers to a survey that is used to gather information about a particular group of people at a given time. To collect data for this study the researcher distributed questionnaires to 357 CRE teachers. The researcher also used both descriptive and inferential statistics. Descriptive statistics involves the use of such measures as mean, range, standard deviation, and frequency to summarize the distribution of numeric data. Inferential statistics involves the use of a random sample of data from the study population to make inferences about that population (Lau, 2017). The inferences are made with parametric and non-parametric tests and multivariate methods. Pearson Product Moment Correlation, t-test and Analysis of Variance are examples of parametric tests. Sign test, Mann-Witney U test and Chi-Square are examples of non-parametric tests. Multiple regression, multivariate analysis of variance, and factor analysis are examples of multivariate methods (Forza, 2002). The researcher utilized the Statistical Package for Social science (SPSS) to calculate Chi-square data. The statistical test was subjected to a test of significance (alpha) level of 0.05. If the P-value was less than α , the researcher then rejected the null hypothesis and if the P-value was greater than α , then the researcher failed to reject the null hypothesis.

Results

The data presented summarizes chi-square values pertaining the teacher characteristics and pedagogical approaches adopted in class in teaching CRE.

Relationship between teacher characteristics and choice of role-play method

To determine if there is a relationship between the teacher characteristics and the choice of role play method adopted in class, the researcher conducted a chi square analysis. The Table below reveals that, level of education, and experience working as a national examiner has a significant relationship with the choice of role-play method adopted in teaching CRE. This conclusion is arrived at on inspection of the Asymptotic Value (P value) vis-a-vis the set level of significance where the P values for level of education and that for experience working as a national examiner are less than the selected level of significance (0.05). Therefore, we reject the null hypothesis and say there is an association between the level of education (0.001) and experience working as an examiner (0.004) on the one hand and the use of role play method on the other hand. On the contrary, the evidence shows that there is no relationship between teacher

experience (0.872), teacher gender (0.461) and age (0.510) and the choice of role play as a method of teaching CRE. This is because the P values are greater than the selected significance level of alpha 0.05 in all three instances. Therefore, we accept the null hypothesis and state there is no relationship between teacher experience, gender and age on the one hand, and the choice of role play method on the other hand.

Relationship between teacher characteristics and demonstration method

To determine if there is a relationship between the teacher characteristics and the choice of demonstration method adopted in class, the researcher conducted a chi square analysis. The table below demonstrates that all independent variables viz; level of education (0.68), teaching experience (0.60), gender (.0837), age (0.93) and as an examiner (0.195) have no significant relationship with the choice of demonstration as a method adopted in teaching CRE. This conclusion is arrived at from an inspection of the P values juxtaposed with the selected level of significance alpha = 0.05. Since the P values of the aforementioned teacher characteristics are all independently greater than the selected significance level, the null hypotheses are all accepted. Instead it is concluded that there is no significant relationship between the given teacher variables and the frequency of use of demonstration as a method. Therefore, we accept the null hypothesis and state that there is no relationship between the teacher level of education, teaching experience, gender, age, and examiner and the choice of demonstration method.

Relationship between teacher characteristics and choice of discovery method

To determine if there relationship between teacher characteristics and the choice of discovery method adopted to teach CRE, the researcher conducted a chi square analysis. The Table below demonstrates that, level of education (0.60), teaching experience (0.205), gender (0.223), and age (0.156) have no relationships with the choice of discovery method adopted in teaching CRE. This is because the P values calculated are in each instance greater than the selected significance level (0.05) in which case we accept the null hypotheses. There is no relationship between teacher characteristics such as level of education, teaching experience, gender, age, and the choice of discovery method to teach CRE.

On the contrary, experience working as an examiner gives the result of P value (0.004) which is less than the selected level of significance of alpha 0.05. For this reason, the null hypothesis is rejected. There could be an association between experience working as a national examiner and the choice of discovery as a method of teaching CRE.

Relationship between teacher characteristics and choice of question and answer method adopted

To determine if there is a relationship between the teacher characteristics and the choice of question and answer method adopted in class, the researcher conducted a chi square analysis. The table below illustrates variables such as teacher level of education (0.366), teaching experience (0.688), gender (0.841) and experience working as a national examiner (0.342) have no relationship with the choice of question and answer method adopted in teaching CRE. This is because the P values calculated on Chi square are greater than the selected level of significance. We therefore accept the null hypotheses stated for each case. There is no significant relationship between the mentioned teacher

characteristics and the frequency of use of question and answer as a method. On the contrary, the P value for age (0.017) is less than the selected significance level (0.05). Therefore, we reject the null hypothesis, state that there is a relationship between the teacher age and the choice of question, and answer method to teach CRE.

Relationship between teacher characteristics and lecture method adopted

To determine if there is relationship between teacher characteristics and the choice of lecture as a method adopted to teach CRE, the researcher conducted a chi square analysis. The table below demonstrates that all variables of interest, viz; level of education (0.512), teaching experience (0.340), gender (0.445), age (0.056), and experience working as an examiner (0.422) have no relationship with the choice of lecture method used for teaching CRE. An inspection of the table below indicates that in all five instances the P values calculated are greater than the chosen level of significance (0.05). When the calculated P value is greater than the selected level of significance, it is normal to accept the null hypothesis. In the case of use of lecture method, the conclusion is there is no significant relationship between the mentioned teacher characteristics and the frequency of use of lecture as a method. Teachers use the lecture method independent of their personal characteristics.

Relationship between teacher characteristics and flipped classroom method

To determine if there relationship between teacher characteristics and the choice of flipped classroom as a method adopted to teach CRE, the researcher conducted a chi square analysis. The table below reveals that, teaching experience (0.025) and age (0.001) have relationship with the choice of flipped classroom as a method adopted in teaching CRE. This is because the P values calculated for the two variables are less than the selected level of significance (0.05) and we reject the null hypotheses. The conclusion becomes, there is a significant relationship between teacher experience and age on the one hand, and the frequency of use of flipped classroom as a method for teaching CRE on the other hand.

On the contrary, the P values for the variables level of education (0.351), gender (0.158), and experience as examiner (0.354) are all greater than the set level of significance (0.05). In such cases, we accept the null hypotheses. Therefore, we conclude that there is no association between teacher characteristics such as level of education, gender, and experience as examiner and the choice of flipped classroom method.

Relationship between teacher characteristics and dictation method

To determine if there is relationship between teacher characteristics and the choice of dictation as a method adopted to teach CRE, the researcher conducted a chi square analysis. The table below demonstrates that, teaching experience (0.035), age (0.019) and working as an examiner (0.000) have association with the choice of dictation as a method adopted in teaching CRE. This is because the P value calculated for each variable is less than the selected significance level (0.05). This leads us to reject the null hypothesis and adopt the position that there is a significant

relationship between the mentioned teacher characteristics and the frequency of use of dictation as a method.

On the contrary, the P values calculated for level of education (0.059) and gender (0.760) are greater than the set level of significance (0.05). Therefore, we accept the null hypothesis and to agree that there is no relationship between the teacher characteristics viz; level of education and age and the choice of dictation as a method of teaching CRE.

Relationship between teacher characteristics and discussion method

To determine if there is a relationship between the teacher characteristics and the choice of discussion method adopted in class, the researcher conducted a chi square analysis. The table below demonstrates that only teaching experience (0.030) has an association with the choice of discussion as a method adopted in teaching CRE. This is because the calculated P value for teacher experience is less than the set significance level of 0.05. Therefore we reject the null hypothesis and say there is significant relationship between teaching experience and the choice of discussion method.

On the contrary the calculated P values for teacher level of education (0.927), gender (0.749), age (0.212) and experience working as a national examiner (0.450) are greater than the set level of significance (0.05) under those circumstances we accept the null hypotheses. The interpretation then becomes, there is no significant association between the three teacher characteristics and the frequency of use of discussion as a method.

In conclusion, this study revealed that the level of education, teaching experience, age and the role of being an examiner were all significant factors in the choice of pedagogical approach adopted in class. For example, the study found that the level of education and being an examiner influenced the decision to conduct role plays in class. Consequently, most of the teachers who preferred the discovery method were Kenya National Examination Council examiners. The choice for the flipped classroom method adopted in class was also influenced by the teaching experience and the role as an examiner. Another teacher characteristic that had a significant influence on the choice of note-taking and question and answer methods was age. Based on this, we can conclude that, in almost every CRE pedagogical approach adopted by teachers, the status of examiner plays a crucial role. Thus, KNEC should offer opportunities to different CRE teachers every year so that each teacher can serve as an examiner, hence all students can benefit from the expertise of examiners. The already trained examiners should also train other CRE teachers on what KNEC expects learners to do in the final examination

Based on the study results, it is recommended that older teachers and examiners team up with younger teachers, more so those who have recently been hired, in order to enhance the teaching of CRE and improve the learning outcomes. Furthermore, it is also recommended that those with many years of teaching experience ought to observe the way newly recruited teachers present their CRE lessons on a regular basis.

Table 1. Relationship between teacher characteristics and choice of role play

Teacher characteristics	Pearson chi-square statistic	P- value	Null hypothesis (H_0) verdict ($\alpha = 0.05$)
Level of education	23.989	.001	Reject
Teaching experience	4.552	.872	Accept
Gender	.461	.927	Accept
Age	8.244	.510	Accept
Examiner	13.537	.004	Reject

Table 2 .Relationship of teacher characteristics and choice demonstration method

Teacher characteristics	Pearson chi square statistic	P value	Null hypothesis (H ₀) verdict ($\alpha = 0.05$)
Level of education	11.739	.680	Accept
Teaching experience	16.361	.060	Accept
Gender	.850	.837	Accept
Age	14.940	.093	Accept
Examiner	5.088	.165	Accept

Table 3. Relationship between teacher characteristics and choice of discovery method

Teacher characteristics	Pearson chi square statistic	P- value	Null hypothesis (H ₀) Verdict ($\alpha=0.05$)
Level of education	4.418	.620	Accept
Teaching experience	12.145	.205	Accept [
Gender	4.379	.223	Accept
Age	13.143	.156	Accept
Examiner	13.276	.004	Reject

Table4 . Relationship between teacher characteristics, and choice of question and answer method

Teacher characteristics	Pearson chi square statistic	P- value	Null hypothesis (H ₀) verdict ($\alpha = 0.05$)
Level of education	2.001	.368	Accept
Teaching experience	1.476	.688	Accept
Gender	.040	.841	Accept
Age	10.193	.017	Reject
Examiner	.901	.342	Accept

Table 5.Relationship between teacher characteristic and choice of lecture method

Teacher characteristics	Pearson chi square statistic	P value	Null hypothesis (H ₀) verdict ($\alpha = 0.05$)
Level of education	5.250	.512	Accept
Teaching experience	10.125	.340	Accept
Gender	2.673	.445	Accept
Age	16.588	.056	Accept
Examiner	2.812	.422	Accept

Table 6.Relationship between teacher characteristic and choice of flipped classroom method

Teacher characteristics	Pearson chi square statistic	P- value	Null hypothesis (H ₀) verdict ($\alpha = 0.05$)
Level of education	6.689	.351	Accept
Teaching experience	19.177	.025	Reject
Gender	5.199	.158	Accept
Age	28.332	.001	Reject
Examiner	3.253	.354	Accept

Table 7 .Relationship between teacher characteristic and choice of dictation method

Teacher characteristics	Pearson chi square statistic	P- value	Null hypothesis (H ₀) verdict ($\alpha = 0.05$)
Level of education	12.148	.059	Accept
Teaching experience	18.050	.035	Reject
Gender	1.173	.760	Accept
Age	19.853	.019	Reject
Examiner	25.594	.000	Reject

Table 8 .Relationship between teacher characteristics and choice of discussion method

Teacher characteristics	Pearson chi square statistic	P value	Null hypothesis (H ₀) verdict ($\alpha = 0.05$)
Level of education	.884	.927	Accept
Teaching experience	13.938	.030	Reject
Gender	.566	.749	Accept
Age	8.366	.212	Accept
Examiner	1.599	.450	Accept

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