

Effects of Experience on Teachers' Self-Efficacy in Secondary Schools

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The present study investigated the effects of teaching experience on teachers' self-efficacy in Kenyan secondary schools. The study used a sequential explanatory design and the Teacher Self-Efficacy Scale. This scale consisted of a total of 24 items with eight items measuring each of the three domains of teacher self-efficacy: student engagement, instructional strategies, and classroom management. The face and content validities of the modified Teacher Self-Efficacy Scale were ascertained by two experts in Educational Psychology from a Kenyan university. The sample size of the study comprised 327 teachers obtained using stratified random sampling technique. The quantitative data was analyzed using Multivariate Analysis of Variance (MANOVA) but qualitative data from interviews was analyzed thematically. The MANOVA results demonstrate that the effects of experience on teachers' self-efficacy was significant, Wilk's λ (7, 319 = 0.945, $p = 0.019$). The article concludes that Kenyan Teachers' Service Commission should utilize experienced teachers as resource persons who are attached to several schools.

La présente étude a examiné les effets de l'expérience d'enseignement sur l'auto-efficacité des enseignants dans les écoles secondaires du Kenya. L'étude a utilisé un plan explicatif séquentiel et l'échelle d'auto-efficacité des enseignants. Cette échelle comprend un total de 24 éléments, dont huit mesurent chacun des trois domaines d'auto-efficacité des enseignants : l'engagement des élèves, les stratégies d'enseignement et la gestion de la classe. Les validités de face et de contenu de l'échelle modifiée d'auto-efficacité de l'enseignant ont été vérifiées par deux experts en psychologie de l'éducation d'une université kenyane. L'échantillon de 327 enseignants a été obtenu par la technique d'échantillonnage aléatoire stratifié. Les données quantitatives ont été analysées à l'aide de l'analyse multivariée de la variance (MANOVA), mais les données qualitatives issues des entretiens ont été analysées de manière thématique. Les résultats du MANOVA démontrent que les effets de l'expérience sur l'auto-efficacité des enseignants étaient significatifs, Wilk's λ (7, 319 = 0.945, $p = 0.019$). L'article conclut que la Kenyan Teachers' Service Commission devrait utiliser des enseignants expérimentés comme personnes ressources qui sont attachés à plusieurs écoles.

Educational research has long been focused on attempting to investigate factors that affect and improve teacher effectiveness. Most research to date has focused on teachers' personal factors, personality traits, and self-esteem. Self-efficacy is a very important psychological construct among teachers because it affects their effectiveness at work. This paper investigates *self-efficacy*, which is the confidence or belief of an individual in their capacity to achieve their behavioral goals in a specific field by their own efforts (Cheng, 2020; Xiong et al., 2020). Therefore, we define

teacher's self-efficacy as the teacher's confidence in their ability to successfully carry out activities that result in effective teaching and learning (Savolainen et al., 2020). According to Gavora, (2010), teacher self-efficacy is a strong self-regulatory characteristic that enables teachers to use their potentials to enhance pupils' learning. Teachers' self-efficacy is an important concept because it is related to teachers' effectiveness, classroom quality, and students' performance (Zee, 2016; Zee & Koomen, 2016). Similarly, teacher self-efficacy is a strong indicator of how teachers perceive their ability to influence positive learning and behavior outcomes. Several studies have indicated that teachers' sense of efficacy makes a considerable contribution towards education improvements as efficacious teachers are more committed, enthusiastic, and persistent in the face of adversity, in addition to being willing to devote more effort to teaching (Zee & Koomen, 2016). Therefore, teachers with higher self-efficacy are perceived to have a stronger ability to influence students' learning outcomes (Dybowski et al., 2017), and they are more ambitious when setting challenging standards on student learning progress for themselves (Jumani & Malik, 2017). Similarly, Mahipalan et al. (2019) reiterated that teachers with high self-efficacy believe that they have the skills to perform their teaching duties and are more likely to take part in non-rewarded roles at school.

Teacher self-efficacy is a psychological paradigm developed within the context of Bandura's (1998) social cognitive theory; it informed the present study and provided the construct of teachers' self-efficacy. The theory posits that people intentionally influence their own behaviour through self-directed goal setting in order to achieve self-development (Bandura, 2005). The present study sought to investigate the influence of teaching experience on teachers' self-efficacy because, according to Rice (2010), teachers' experience enhances their productivity, and is a key factor in compensation and promotion decisions. Thus, self-efficacy comprises an individual's expectation of efficacy, which is the conviction that one has the ability, knowledge, and skills to successfully execute the behaviour or actions required to produce the desired outcome (Gavora, 2010). In turn, the anticipated outcome represents a person's estimate of the likely consequences of performing a task at the self-expected level of performance (Gavora, 2010).

Literature Review

Studies on the self-efficacy of teachers have yielded multiple findings. For example, Berg and Smith (2016) found that teacher self-efficacy has a positive relationship with teachers' experience. Similarly, in Germany, König and Kramer (2016) determined that teacher classroom management increases with experience. Lentfer and Franks (2016), on the other hand, indicated that the differences in teacher self-efficacy in classroom management are significant in favor of the teachers who had training in classroom management. In another study, Hunley (2016) established that educators reported a positive experience when teaching in flipped classrooms with the purpose of enhancing student engagement. With respect to teacher self-efficacy in classroom management in Taiwan, Yang (2016) found that classroom management effectiveness of high school teachers varied, though those who had been teaching longer tended to be more successful. In the United States, Schlupp (2016) determined that student engagement increased with teacher technology proficiency. In another study, Powers et al. (2016) concluded that there were differences in self-efficacy among the teachers in their study based on their levels of experience.

In Turkey, Dikmenli and Çifçi (2016) observed that there is a negative significant relationship between a teacher's years of experience in teaching and classroom management. On the other

hand, Cakmak (2019) established that there is no significant difference in classroom management between teachers based on their levels of experience. In agreement, Akin et al. (2016) as well as Sotoudehnama and Fakhari (2016) concluded that there is no link between the years an individual had taught and their self-efficacy in classroom management. However, Powers et al. (2016) found no significant influence on self-efficacy by the amount of time spent teaching.

Subsequently, Gkolia et al. (2016) found that the number of years an educator had taught affect their self-efficacy factors. In another study from Nigeria, Gede and Lawanson (2011) showed that there is significant relationship between experience and job performance. Moreover, Kosgei et al.'s (2013) study in Kenya revealed that there is a statistically significant relationship between teacher experience levels and student academic achievement. Another Kenyan study by Ambuko and Odera (2013) determined that teachers' efficacy in student engagement increased with experience in using instructional media. Contrary to the findings of Ambuko and Odera (2013), Kinai (2011), also in Kenya, established that there is no significant difference in instructional strategy among teachers based on their years of teaching experience. Furthermore, in a study about 12 countries in sub-Saharan Africa, Hein and Allen (2013) observed that there is no consistent relationship between teacher experience and teacher quality.

In Kenya there have been reported cases of low self-efficacy among teachers in secondary schools. The Teachers Service Commission (TSC) of Kenya is expected to provide work environments for the teachers to enhance high levels of self-efficacy in their ability to carry out teaching and learning activities (Smith, 2016). This is because teachers are employed after undergoing training in institutions of higher learning and induction programs in schools. Studies carried out by Ullah (2010) and Smith (2016) revealed that it is expected of teachers in Kenya to have high levels of self-efficacy. However, Odongo (2011) and Oginga et al. (2014) determined that teachers' self-efficacy has been relatively low within the Kisumu East Sub-County of Kenya. According to Bandura (1989), self-efficacy is influenced by personal factors that include demographic characteristics such as gender, marital status, school category, age, and years of teaching experience. However, the research gaps that emanate from this review of the literature indicated that most of the studies were content-specific and did not consider teacher self-efficacy in all content areas. Moreover, the literature reveals that whereas much research has been conducted on teachers' self-efficacy, little analytic attention has been given to the influence of teaching experience on teachers' self-efficacy and its domains of classroom management, instructional strategies, and student engagement. Hence, the present study investigated the effects of experience on teachers' self-efficacy in Kenyan secondary schools.

The Present Study

The study investigated the effects of experience on teachers' self-efficacy in Kenyan secondary schools. In order to achieve this aim, the null hypothesis was thus stated as follows:

Ho: There is no significant effect of experience on teachers' self-efficacy in Kenyan secondary schools.

Methods

Research Design

The study adopted the sequential explanatory design within the mixed methods approach. The

mixed methods approach involves using both the quantitative and qualitative designs in research (Alavi & Hąbek, 2016). Although it raises the question of which findings to adopt when the findings contradict each other, the strength of the mixed method approach is that it provides better inferences and minimizes biases arising from using only one of either the quantitative or qualitative method (Subedi, 2016). According to Subedi (2016), the sequential explanatory design involves first collecting quantitative data, and then collecting qualitative data to further extend the findings. The quantitative phase of this study was the primary focus, but the qualitative phase provided a supportive role for corroboration during the follow up session. This design helped in triangulation of quantitative results from questionnaires with qualitative data from interview schedules. The trustworthiness of the qualitative data was ensured using several methods. First, credibility was attained by researcher familiarity with the culture of informants, triangulation in using different types of informants, and the assurance of confidentiality. In addition, reliability in the present study was attained by an in-depth methodological description, which allows the study to be repeated. Moreover, confirmability was attained through triangulation by using different types of informants while also acknowledging the limitations of the study within methods section. This was captured in the demographic profile sections of the questionnaire and interview schedules.

Research Sample

The population of the study consisted of 1,790 secondary school teachers in public secondary schools in the Kisumu County of Kenya. The sample size of the quantitative phase of the study comprised 327 teachers obtained using both stratified and random sampling techniques. There were 208 ($n = 63.6\%$) male teachers and 119 ($n = 36.4\%$) female teachers.

The current study generated the quantitative sample using Israel's (2013) formula

$$n = \frac{N}{1 + N (e^2)}$$

where n = sample size, N = population size and e = level of precision ($p = 0.05$).

Therefore, $n = \frac{1790}{1 + 1790 (.05^2)} = 326.94 \approx 327$ teachers.

For the qualitative phase of the study, 12 teachers were purposively selected for interviews. This sample size of 12 interviewees is between the recommended 6 and 20 used by Mason (2010).

Research Tools

The study adopted the Teacher Self-Efficacy Scale (TSES) developed by Tschannen-Moran and Hoy (2001) to collect quantitative data on teachers' self-efficacy and its domains. The TSES consists of a total of 24 items with eight items measuring each of the three areas of teacher self-efficacy in student engagement, instructional strategies, and classroom management. The TSES uses a 5-point Likert Scale (*strongly agree*: 5, *agree*: 4, *neutral*: 3, *disagree*: 2, and *strongly disagree*: 1), where the response participants selected indicated their self-efficacy. The responses on Items 4 and 5 in the Likert Scale implied high self-efficacy, but responses of 1 or 2 suggested low self-efficacies among teachers. In addition, semi-structured interviews were used to collect qualitative data. Face and content validities of the modified Teacher Self-Efficacy Scale was

ascertained by two experts in Educational Psychology from a Kenyan university. Cronbach's reliability coefficient, alpha (α) was used to establish questionnaire internal reliability by testing how closely related the set of TSES items were (Johnson & Christensen, 2004). The reliability coefficients for the TSES questionnaire was reported to be $\alpha = 0.996$. This was considered to be highly reliable since a reliability coefficient above $\alpha = 0.7$ is acceptable in educational research (Gliem & Gliem, 2003). Trustworthiness of a qualitative data was ensured by triangulation of different findings.

Ethical clearance to conduct the study was obtained from the National Council for Science, Technology, and Innovation in Kenya. Permission to access the selected secondary schools was sought from the respective principals. The researcher then personally visited the schools, met the principals, and informed them of the nature and purpose of the research. Dates for data collection were then set. Finally, on the dates agreed, the researcher visited the concerned schools to collect data from the sampled teachers. The quantitative data was collected through self-report questionnaire that consisted of two sections of demographic variables and the teacher self-efficacy scale. The researcher administered the questionnaire personally to the respondents and waited as the respondents filled them out. Each questionnaire took about 20 minutes to administer. The completed questionnaires were then screened and filed. The researcher then conducted the interviews, each of which lasted about 35 minutes.

Data Analysis

Quantitative data on teachers' self-efficacy was determined by computing the unweighted means of the scores from the Teachers' Self-Efficacy Scale (TSES) items. Data analysis for inferential and descriptive statistics used both Statistical Package for Social Sciences (SPSS; Version 22), and Microsoft Excel. The hypotheses were tested at the 95% level of confidence (Hirpara et al., 2015). The null hypotheses were tested and if the p-value obtained was less than 0.05, then the null hypothesis was rejected. However, if the p-value obtained was greater than 0.05, then the null hypothesis was accepted (Hirpara et al., 2015).

The hypotheses were tested using Multivariate Analysis of Variance (MANOVA), which was used because it tested multiple dependent variables at once by testing for the difference in two or more vectors of means, which were linear combinations of the measured dependent variables (French et al., 2008; Harland, 2015). MANOVA accomplishes testing the multiple dependent variables by creating new dependent variables that are linear combinations of the measured dependent variables to maximize group differences (French et al., 2008). MANOVA provides the following test statistics: Pillai's Trace, Wilk's λ , Hotelling's Trace, and Roy's Largest Root (Lund & Lund, 2013; Garson, 2015). Wilk's λ was used to determine the effects of experience on teachers' self-efficacy because Tavakoli (2013) and French et al. (2008) posited that Wilk's λ should be used when dealing with multivariate effects of more than two groups, such as the seven categories of teacher experience.

The use of MANOVA assumes normal distribution of the dependent variable, linear relationships among all pairs of dependent variables, and homogeneity of variances (Lund & Lund, 2013). It also assumes that (a) the dependent variables are at interval or ratio level of measurement, (b) the independent variable consists of two or more categorical groups, and (c) that there are more cases in each group than the number of dependent variables (Lund & Lund, 2013). The current study used MANOVA because it can measure multiple dependent variables, while ANOVA only allows for one dependent variable (Harland, 2015). In addition, MANOVA

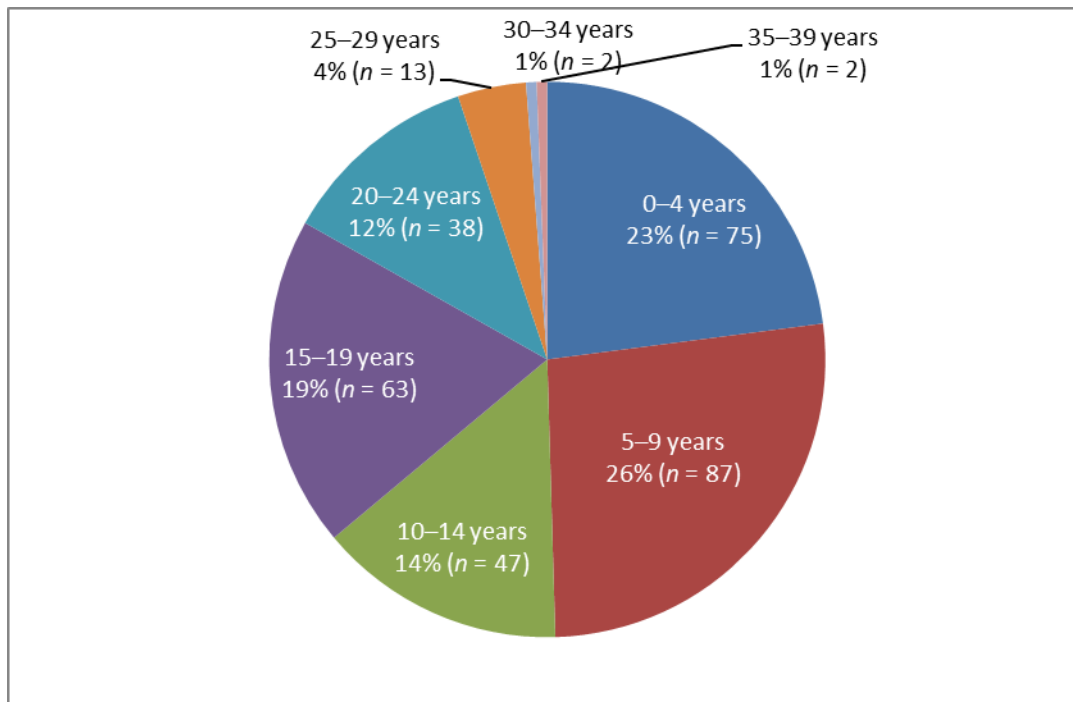
decreases the risk of Type I errors, where a true null hypothesis is rejected, which would be increased by repeated ANOVAs (Frost, 2014; Harland, 2015). Furthermore, MANOVA increases the chance of finding an influence that an independent variable has a dependent variable because it has more power of detection than ANOVA (Frost, 2014; Harland, 2015). This, however, increases the risk of making a Type II error, where a false null hypothesis is accepted. The hypothesis was tested by computing MANOVA for the difference across experience on teachers' self-efficacy and its domains. The categories for experience were 0–4, 5–9, 10–14, 15–19, 20–24, 25–29, 30–34, and 35–39.

Qualitative data were analyzed using a thematic analysis, which is a method for identifying, analyzing, and reporting patterns, called themes, within data by organizing and describing the data set in rich detail (Braun & Clarke, 2006). Thematic analyses are used to detect, interpret, and report patterns within the data in order to organize and describe the data set in rich detail to interpret the issue under study (Braun & Clarke, 2006). A thematic analysis was performed using the five phases of analysis provided by Braun and Clarke (2006), which were verbatim transcription, initial coding, searching for themes, reviewing themes, and defining and naming the themes.

Results

The study investigated teachers' experience in groups of five years starting from zero years of teaching experience. The descriptive results, shown in Figure 1, demonstrate that almost half the respondents had less than 10 years of teaching experience. The sample distribution for the experience groups had class sizes of five years starting from zero. Among the sample of teachers, 23% ($n = 75$) had 0–4 years of experience, 26% ($n = 87$) had 5–9 years of experience, and 14% ($n = 47$) had 10–14 years of experience.

Figure 1
Proportions of Teachers According to Experience



= 47) had 10–14 years of experience. In addition, 19% ($n = 63$) had 15–19 years of experience, 12% ($n = 38$) had 20–24 years of experience, and 4% ($n = 13$) had 25–29 years of experience. Lastly, 1% ($n = 2$) had 30–34 years of experience, while 1% ($n = 2$) had 35–39 years of experience. This means that the vast majority of the respondents had not been in the teaching profession for more than 20 years.

The study sought to determine the effects of years of teaching experience on teachers' self-efficacy and its domains of self-efficacy in student engagement, classroom management, and instructional strategy. It was hypothesized that years of teaching experience would not be systematically related to teachers' self-efficacy. Years of teaching experience were put in groups of five years beginning with zero years of teaching experience. Table 1 shows the descriptive statistics of the influence of years of teaching experience on teachers' self-efficacy.

The results presented in Table 1 depict the means, standard deviations, and sample sizes of the domains of teachers' self-efficacy across the groups of years in teaching experience. The Table shows that the 30–34 and 35–39 experience categories had the fewest number of participants, at two each, while the 5–9 years of experience categories had the greatest number of respondents at 87. The table also gives the totals of the descriptive statistics for the domains of teachers' self-efficacy, that is, student engagement ($M = 33.70$; $SD = 2.880$); classroom management ($M = 33.91$; $SD = 3.263$); and instructional strategies ($M = 34.21$; $SD = 2.988$). Furthermore, Table 1 shows that the 30–34 experience category had the lowest standard deviations in teachers' self-efficacies in student engagement, classroom management, and instructional strategies ($SD = 33.00$; $SD = 31.00$; $SD = 31.00$ respectively). In addition, the 35–39 experience category had the highest standard deviations in teachers' self-efficacies in student engagement, classroom management, and instructional strategies ($SD = 35.50$; $SD = 38.50$; $SD = 37.00$ respectively).

These descriptive differences on years of teaching experience and teachers' self-efficacy were tested using MANOVA to determine the influence of years of teaching experience on teachers' self-efficacy. The result of the multivariate analysis is presented in Table 2.

The results listed in Table 2 show the values of each multivariate test, their F-scores, degrees of freedom, significance levels, and observed power. Furthermore, it shows results of MANOVA that demonstrate that the influence of experience on teachers' self-efficacy was significant. Wilk's $\lambda (7, 319) = 0.945$, $p = 0.019$ and the null hypothesis that there is no statistically significant influence of experience on teachers' self-efficacy in secondary schools in Kisumu County, was, therefore, was rejected.

Univariate tests were performed to determine between-subjects influence of years of teaching experience on the domains of teachers' self-efficacy, which were, self-efficacy in student engagement, instructional strategies, and classroom management. The results of the univariate tests are captured in Table 3.

The results in Table 3 show the degrees of freedom, F-score, and significance levels for the tests of between-subjects effects of years of teaching experience on the domains of teachers' self-efficacy. Furthermore, the results show that the influence of experience on teachers' self-efficacy in student engagement, $F(7, 319) = .781$, $p = 0.604$, instructional strategy, $F(7, 319) = 1.420$, $p = 0.196$, and classroom management, $F(7, 319) = 1.061$, $p = 0.389$, were all not statistically significant.

From interview results, the themes reported include increased content mastery, better content delivery in the classroom, and finally, reduced energy levels among older teachers.

Table 1

Descriptive Statistics for Experience and Teachers' Self- Efficacy

	Experience (Years)	N	Mean	S.D.
Teachers' Self-Efficacy in Student Engagement	0-4	75	33.91	2.829
	5-9	87	33.45	3.049
	10-14	47	33.21	2.293
	15-19	63	33.67	2.957
	20-24	38	34.26	2.708
	25-29	13	34.38	3.754
	30-34	2	33.00	1.414
	35-39	2	35.50	6.364
	Total	327	33.70	2.880
Teachers' Self-Efficacy in Classroom Management	0-4	75	33.49	3.318
	5-9	87	33.99	3.208
	10-14	47	33.87	2.578
	15-19	63	34.06	2.735
	20-24	38	34.13	3.947
	25-29	13	34.38	4.976
	30-34	2	31.00	7.071
	35-39	2	38.50	.707
	Total	327	33.91	3.263
Teachers' Self-Efficacy in Instructional Strategy	0-4	75	34.12	3.036
	5-9	87	34.33	2.752
	10-14	47	33.40	2.659
	15-19	63	34.25	2.676
	20-24	38	34.82	3.344
	25-29	13	34.85	5.014
	30-34	2	31.00	1.414
	35-39	2	37.00	1.414
	Total	327	34.21	2.988

Table 2

MANOVA Tests for Experience and Teachers' Self- Efficacy

Effect	Value	F	Hypothesis df	Error df	Sig	Partial eta squared	Noncent. parameter	Observed Power	
Age	Pillai's Trace	.056	.864	21.000	957.000	.019	.019	18.134	.700
	Wilk's λ	.945	.862	21.000	910.803	.019	.019	17.321	.673
	Hotelling's Trace	.057	.861	21.000	947.000	.019	.019	18.074	.698
	Roy's Largest Root	.034	1.572	7.000	319.000	.033	.033	11.005	.653

Computed using alpha = 0.05

Table 3

Between-Subjects Effects of Experience on Teachers' Self- Efficacy

Source	Dependent variable	df	F	Sig	Observed Power
Experience	Teachers' Self-Efficacy in Student Engagement	7	.781	.604	.336
	Teachers' Self-Efficacy in Instructional Strategy	7	1.420	.196	.600
	Teachers' Self-Efficacy in Classroom Management	7	1.061	.389	.457

Computed using alpha = 0.05

Teachers with more years of experience reported increased content mastery due to their high self-efficacies. The majority of the respondents reported that experience increases a teachers' level of self-efficacy because of greater content mastery and the ability to predict what is set in the national examinations. One teacher respondent said, "It can only make somebody better because you have more content" (Teacher 3). In addition, another teacher said that with "Some of the old teachers their self-efficacy improves because they are consulted a lot in setting exams, counselling, and motivation speaking" (Teacher 2). The quotations from Teachers 2 and 3 might be interpreted to mean that teacher self-efficacy rises as they spend more time teaching. This is because more experienced teachers have better subject mastery and are consulted more on academic issues than the less experienced teachers are.

Theme 2: Better Content Delivery

Teachers who have more teaching experience have better approaches to content delivery, thereby increasing their self-efficacies. The findings indicated that on teachers' self-efficacy in student engagement, experience makes a teacher improve their skills. For example, a teacher respondent said, "Experience makes the teacher better especially in engaging students due to better content delivery" (Teacher 7). The quotation from Teacher 7 might be interpreted to mean that the more experienced teachers have higher self-efficacy in student engagement than the less experienced teachers do. Moreover, on classroom management, another teacher indicated that "There is better student management with experience" (Teacher 11). The quote from Teacher 11 also suggests that more experienced teachers have higher self-efficacy in classroom management than novice teachers. This is because experience leads to more content mastery from repeated interaction with the subject and better classroom management from interaction with more students over a long time.

Theme 3: Reduced Energy Levels

Even though older teachers have high self-efficacies, they developed reduced energy levels, and this limited their extent to which they could handle students at school. The findings indicated that the respondents felt that teachers' self-efficacy in instructional strategies improved or changed up until to a certain point and then no adjustments would be made. For instance, one teacher reported that "Their self-efficacy in instructional strategies increases and then gets to a plateau stage when you do not want new things" (Teacher 9). In addition, another teacher said, "The old teachers may not be effective in classroom instruction because of loss of energy levels" (Teacher

5). The opinions of Teacher 5 and Teacher 9 might be interpreted to mean that the self-efficacy in instructional strategies of experienced teachers declines because of loss of energy levels and inertia that prevents them from trying new instructional strategies.

Discussion

The present study investigated the effects of experience on teachers' self-efficacy and its domains among in secondary schools in Kisumu County in Kenya. Quantitative results indicated that the effect of teachers' experience on teachers' self-efficacy at the $p < .05$ level was not significant in domains such as student engagement, instructional strategy, and classroom management. However, qualitative results reported that experience increases a teacher's level of self-efficacy because of increased content mastery. Thus, it can be concluded that teacher self-efficacy increases as they spend more years teaching. This is because the more experienced teachers have better mastery of the subject content and are consulted more on academic issues than the less experienced teachers are. This finding agrees with Ambuko and Odera's (2013) study, which found that teachers' efficacy in student engagement increased with experience in using instructional media. The finding is also similar to those of Powers et al. (2016), Rice (2010), and Gkolia et al. (2016), who reported a significant influence of teaching experience on teachers' self-efficacy.

The findings of the current study were, however, contrary to Keys (2016) and Schwartz (2010), whose work took place in the United States, who reported that there is no significant relationship between teaching experience and self-efficacy. Likewise, Alidosti et al. (2016), Yoo (2016), as well as Sotoudehnama and Fakhari (2016)—whose research was conducted in Iran, the U.S., and Iran, respectively—concluded that there is no significant relationship between teaching experience and teachers' self-efficacy. Relatedly, Vidwans (2016), Keys (2016), and Hein and Allen (2013) all reported that there is no significant influence of teaching experience on teachers' self-efficacy. Equally, Hein and Allen (2013) also found that there is no consistent relationship between teacher experience and teacher quality among the surveyed 12 countries in sub-Saharan Africa. This study determines that there is both a decrease and an increase in the influence of experience on the domains of teacher self-efficacy. This is because teacher self-efficacy in student engagement and classroom management increased as their years of teaching experience increased. On the other hand, their levels of self-efficacy in instructional strategies decreased as the teachers became more experienced and convinced of their ability to deliver effective teaching and learning. In fact, these teachers believed that they were able to do so without elaborately creative teaching methodologies. Furthermore, teachers with more classroom experience have higher self-efficacy in student engagement and classroom management even when their use of innovative teaching and learning materials declines with age.

The study reported that the number of years of teaching experience affects the teacher self-efficacy and that more experienced teachers have higher self-efficacies as compared to the less experienced teachers. As such, the findings of the study have implications for teachers, principals, and the Teachers Service Commission of Kenya. We suggest that the Teachers Service Commission in Kenya should utilize experienced teachers as resource persons who are attached to several schools rather than as a teacher in a particular school. The implementation of this recommendation might help in achieving effective teaching and learning among the students with minimal additional resources. Further studies could investigate school variables influencing teachers' self-efficacy.

One of the limitations of the study was that the correlation method of analysis could not determine causality between the variables. Conversely, determining causality was not necessary because this was not an experimental study; rather, it was a correlational study. Similarly, the questionnaires used could not elicit in-depth information from participants; however, interview schedules were also used to collect data on experiences of teachers. Future studies could study factors affecting teachers' self-efficacy in secondary schools.

References

- Akın, S., Yıldırım, A., & Goodwin, A. L. (2016). Classroom management through the eyes of elementary teachers in Turkey: A phenomenological study. *Educational Sciences: Theory & Practice*, 16(3), 771–797. <https://jestp.com/index.php/estp/article/view/560>
- Alavi, H., & Hąbek, P. (2016). Addressing research design problem in mixed methods research. *Management Systems in Production Engineering*, 1(21), 62–66. <https://doi.org/10.2478/mspe-10-01-2016>
- Alidosti, M., Delaram, M., Dehgani, L., & Moghadam, M. M. (2016). Relationship between self-efficacy and burnout among nurses in Behbahan City, Iran. *Women's Health Bulletin*, 3(4), 1–5. https://womenshealthbulletin.sums.ac.ir/article_45240.html
- Ambuko, B., & Odera, F. (2013). Selection and use of media in teaching Kiswahili language in secondary schools in Kenya. *International Journal of Information and Communication Technology Research*, 3(1), 12–18.
- Bandura, A. (1989). Human agency in social cognitive theory. *American Psychologist*, 44(9), 1175–1184. <https://doi.org/10.1037/0003-066X.44.9.1175>
- Bandura, A. (2005). Evolution of social cognitive theory. In K. G. Smith & M. A. Hitt (Eds.), *Great minds in management* (pp. 9–35). Oxford University Press.
- Berg, D. A. G., & Smith, L. F. (2016). Preservice teacher self-efficacy beliefs. In S. Garvis & D. Pendergast (Eds.), *Asia-Pacific perspectives on teacher self-efficacy*, (pp. 1–17). Springer. https://link.springer.com/chapter/10.1007/978-94-6300-521-0_1
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Cakmak, F. (2019). The relationship between teaching experience level and the classroom management orientations of English language teachers. *The Journal of Social Sciences Institute*, 22(41), 75–88. <https://doi.org/10.31795/baunsobed.581904>
- Cheng, Y. (2020). Academic self-efficacy and assessment. *Educational Psychology*, 40(4), 389–391. <https://doi.org/10.1080/01443410.2019.1618441>
- Dikmenli, Y., & Çifçi, T. (2016). Geography teachers' attitudes and beliefs regarding classroom management. *International Journal of Higher Education*, 5(2), 283–291. <https://doi.org/10.5430/ijhe.v5n2p283>
- Dybowski, C., Sehner, S., & Harendza, S. (2017). Influence of motivation, self-efficacy and situational factors on the teaching quality of clinical educators. *BMC Medical Education*, 17(84), 1–8. <https://doi.org/10.1186/s12909-017-0923-2>
- French, A., Macedo, M., Poulsen, J., Waterson, T., & Yu, A. (2008). *Multivariate analysis of variance*. San Francisco State University. <http://userwww.sfsu.edu/efc/classes/biol710/manova/manovanewest.htm>
- Frost, J. (2014). *The power of multivariate analysis of variance*. Minitab. <http://blog.minitab.com/blog/adventures-in-statistics/the-power-of-multivariate-anova-manova>
- Garson, J. (2015). *The Biological Mind: A Philosophical Introduction*. London: Routledge.
- Gavora, P. (2010). Slovak pre-service teacher self-efficacy: theoretical and research considerations. *The New Educational Review*, 21(2), 17–30. <http://www.educationalrev.us.edu.pl/e21/a1.pdf>

- Gede, N. T., & Lawanson, O. A. (2011). Employees' characteristics and job performance of staff of the Bayelsa State Ministry of Education in Nigeria. *Mediterranean Journal of Social Sciences*, 2(4), 33–42. <https://www.richtmann.org/journal/index.php/mjss/article/view/10878>
- Gkolia, A., Dimitrios, B. A., & Koustelios, A. (2016). Background characteristics as predictors of Greek teachers' self-efficacy. *International Journal of Educational Management*, 30(3), 460–472. <https://eric.ed.gov/?id=EJ1095518>
- Gliem, J. A., & Gliem, R. R. (2003). *Calculating, interpreting, and reporting Cronbach's alpha reliability coefficient for Likert-type scales*. In 2003 Midwest Research to Practice Conference in Adult, Continuing, and Community Education (pp. 82–88). <https://scholarworks.iupui.edu/handle/1805/344>
- Harland, B. (2015). *The advantages of MANOVA over ANOVA*. Sciencing. http://www.ehow.com/info_8291160_advantages-manova-over-anova.html
- Hein, C., & Allen, R. (2013). *Teacher quality in sub-Saharan Africa: Pupil fixed effects estimates for twelve countries*. DoQSS Working Papers 13-08, Quantitative Social Science—UCL Social Research Institute, University College London. <https://ideas.repec.org/p/qss/dqsswp/1308.html>
- Hirpara, N., Jain, S., Gupta, A., & Dubey, S. (2015). Interpreting research findings with confidence interval. *Journal of Orthodontics and Endodontics*, 1(1), 8–11. <https://orthodontics-endodontics.imedpub.com/interpreting-research-findings-with-confidence-interval.php?aid=7224>
- Hunley, R. C. (2016). *Teacher and student perceptions on high school science flipped classrooms: Educational breakthrough or media hype?* (Paper 3052) [Doctoral dissertation, East Tennessee State University]. <http://dc.etsu.edu/etd/3052>
- Israel, G. D. (2013). *Determining sample size*. Agricultural Education and Communication Department, University of Florida. https://www.gjimt.ac.in/wp-content/uploads/2017/10/2_Glenn-D.-Israel_Determining-Sample-Size.pdf
- Johnson, R. B., & Christensen, L. B. (2004). *Educational research: Quantitative, qualitative, and mixed approaches*. <https://doi.org/10.3102/0013189X033007014>
- Jumani, N. B., & Malik, S. (2017). Promoting teachers' leadership through autonomy and accountability. In I. H. Amzat, and N. P. Valdez, (Eds.), *Teacher empowerment toward professional development and practices* (pp. 21-41). https://link.springer.com/chapter/10.1007%2F978-981-10-4151-8_2
- Keys, A. N. (2016). *High school teachers' perceived self-efficacy in teaching literacy across the curriculum in Tennessee First Core Region 1 high schools*. (Paper 3110) [Doctoral dissertation, East Tennessee State University]. <http://dc.etsu.edu/etd/3110>
- Kinai, T. K. (2011). *Assessment of creativity and its relationship with gender, age, and teaching experience of postgraduate guidance and counselling student teachers*. Kenyatta University Institutional Repository. <https://ir-library.ku.ac.ke/handle/123456789/1405/discover>
- König, J., & Kramer, C. (2016). Teacher professional knowledge and classroom management: On the relation of general pedagogical knowledge (GPK) and classroom management expertise (CME). *Zentralblatt für Didaktik der Mathematik (ZDM) International Reviews on Mathematical Education*, 48(1), 139–151. <https://eric.ed.gov/?id=EJ1096680>
- Kosgei, A., Mise, J. K., Odera, O., & Ayugi, M. E. (2013). Influence of teacher characteristics on students' academic achievement among secondary schools. *Journal of Education and Practice*, 4(3), 76–82. <https://eprints.usq.edu.au/23286/1/Kosgei.pdf>
- Lentfer, V., & Franks, B. A. (2016). The Redirect Behavior Model and the effects on pre-service teachers' self-efficacy. *Journal of Curriculum, Teaching, Learning and Leadership in Education*, 1(1), 79–87. <https://digitalcommons.unomaha.edu/ctlle/vol1/iss1/2/>
- Lund, A., & Lund, M. (2013). *One-way MANOVA in SPSS*. Laerd Statistics. <https://statistics.laerd.com/spss-tutorials/one-way-manova-using-spss-statistics.php>
- Mahipalan, M., & Muhammed, S. (2019). Examining the role of workplace spirituality and teacher self-efficacy on organizational citizenship behaviour of secondary school teachers: An Indian scenario.

- Vision*, 23(1), 80–90. <https://doi.org/10.1521/jscp.1986.4.3.359>
- Mason, M. (2010). Sample size and saturation in PhD studies using qualitative interviews. *Qualitative Social Research*, 11(3), 1–13. <https://doi.org/10.17169/fqs-11.3.1428>
- Odongo, G. (2011, July). *Teacher perceptions of their readiness to educate children with sensory disabilities in Kisumu Local Education Authority-Kenya* [Paper presentation]. American Council on Rural Special Education (ACRES) Conference. Albuquerque.
- Oginga, E., Muola, J., & Mwanja, J. (2014). The factors influencing the teaching of HIV/AIDS education in public primary schools in Kisumu East district, Kenya. *International Journal of Education and Research*, 2(1), 1–14. <https://ijern.com/journal/January-2014/41.pdf>
- Powers, S., Kaniuka, T., Phillips, B., & Cain, B. (2016). The impact of teacher-lead professional development programs on the self-efficacy of veteran teachers. *Journal of Research Initiatives*, 2(1), 1–21. <http://digitalcommons.uncfsu.edu/jri/vol2/iss1/16>
- Rice, J. K. (2010). *The impact of teacher experience examining the evidence and policy implications*. National Center for Analysis of Longitudinal Data in Education Research. The Urban Institute.
- Savolainen, H., Malinen, O., & Schwab, S. (2020). Teacher efficacy predicts teachers' attitudes towards inclusion—a longitudinal cross-lagged analysis. *International Journal of Inclusive Education*. <https://doi.org/10.1080/13603116.2020.1752826>
- Schlupp, A. M. (2016). *The effect of new literacies and technology on student engagement and transforming the literacy block* (Paper 589) [Master's thesis, Rowan University]. <http://rdw.rowan.edu/etd/589>
- Schwartz, K. A. (2010). *Dynamics of teacher self-efficacy: Middle school reading and language arts teacher responses on a teacher sense of efficacy scale* [Doctoral dissertation, University of South Florida]. <https://www.usf.edu/education/areas-of-study/literacy-studies/documents/alumni-dissertations/schwartz-dissertation.pdf>
- Smith, S. C. (2016). *The effect of behavioral skills training on teachers conducting the recess-to-classroom transition* (Paper 4948) [Master's thesis, Utah State University]. <http://digitalcommons.usu.edu/etd/4948>
- Sotoudehnama, E., & Fakhari, M. (2016). The impact of MA TEFL curriculum on student teachers' self-efficacy. *Journal of English Language Teaching and Learning*, 8(17), 115–146. https://elt.tabrizu.ac.ir/article_4963.html
- Subedi, D. (2016). Explanatory sequential mixed method design as the third research community of knowledge claim. *American Journal of Educational Research*, 4(7), 570–577.
- Tavakoli, H. A. (2013). *Dictionary of research methodology and statistics in applied linguistics*. Rahnama Press.
- Tschannen-Moran, M., & Hoy, W. A. (2001). *Teacher efficacy scales*. Ohio State University. <http://people.ehe.osu.edu/ahoy/files/2009/02/tses.pdf>
- Ullah, M. M. (2010). A systematic approach of conducting employee selection interview. *International Journal of Business and Management*, 5(6), 106–112. <https://ccsenet.org/journal/index.php/ijbm/article/view/5644>
- Vidwans, M. (2016). *Exploring science teachers' self-efficacy perceptions to teach in Ontario's diverse classrooms: A mixed-methods investigation* (Paper 3893) [Doctoral dissertation, Western University]. <https://ir.lib.uwo.ca/etd/3893/>
- Xiong, Y., Sun X-Y, Liu X-Q, Wang, P., & Zheng, B. (2020). The influence of self-efficacy and work input on physical education teachers' creative teaching. *Frontiers in Psychology*. <https://doi.org/10.3389/fpsyg.2019.02856>
- Yang, M. F. (2016). *A study on the relationship among social support, emotional management and classroom management effectiveness of junior high teachers in Kaohsiung* [Masters thesis, National Sun Yat-sen University] http://etd.lib.nsysu.edu.tw/ETD-db/ETD-search/view_etd?URN=etd-0504116-200651

- Yoo, J. H. (2016). The effect of professional development on teacher efficacy and teachers' self-analysis of their efficacy change. *Journal of Teacher Education for Sustainability*, 18(1), 84–94.
<https://doi.org/10.1515/jtes-2016-0007>
- Zee, M. (2016). *From general to student-specific teacher self-efficacy* [Doctoral dissertation, University of Amsterdam]. <http://dare.uva.nl/search?identifier=532251>
- Zee, M., & Koomen, H. M. Y. (2016). Teacher self-efficacy and its effects on classroom processes, student academic adjustment, and teacher well-being: a synthesis of 40 years of research. *Review of Educational Research*, 86(4), 981–1015. <https://doi.org/10.3102/0034654315626801>

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