

THE INFLUENCE OF EMIGRATION POTENTIAL (JAPA SYNDROME) ON THE TEACHING MOTIVATION AND TEACHING EFFICACY OF PRE-SERVICE SCIENCE TEACHERS

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ABSTRACT

This study explored the influence of emigration potential on the teaching motivation and efficacy of pre-service science education teachers at Obafemi Awolowo University, Ile-Ife, Osun State. It assessed the prevalence of emigration potential among these pre-service teachers, evaluated their levels of teaching motivation and efficacy, and examined how emigration potential impacts these aspects. The research adopted a descriptive survey design, sampling 100 pre-service teachers from the Science and Technology Education department. Data were collected using a structured questionnaire. Analysis of the data revealed a high prevalence of emigration potential, as shown by 40% of the respondents. Despite this, the majority exhibited high levels of teaching motivation (51%) and low teaching efficacy (42%). Chi-square analysis confirmed significant associations between emigration potential and both teaching motivation and efficacy as MANOVA reveals that Pre-service teachers programmes and Emigration potential jointly affects teaching efficacy and motivation ($P < 0.05$). The study concluded that while pre-service teachers are confident in their teaching abilities, their motivation and efficacy are affected by worries about their future prospects. Addressing these concerns through improved teacher welfare, supportive educational environments, and clear career development pathways is essential for fostering commitment to the teaching profession amidst aspirations for emigration.

Keywords: Emigration Potential (JAPA), Teaching Motivation, Teaching Efficacy, Pre-service Science Teachers.

Introduction

Despite the horrors of the past, there persists a notable inclination among many Nigerians, spanning generations, to seek emigration abroad, often with the aspiration of permanently leaving Nigerian shores (Emelike, 2023). This inclination, deeply rooted in socioeconomic factors and perceptions of opportunity, has manifested in what is now commonly referred to as the JAPA, a term that has gained currency in Nigerian discourse to encapsulate the mass exodus of individuals from the country in search of perceived greener pastures elsewhere. This JAPA phenomenon is addressed in this study as Emigration potential (EP). The Africa Polling Institute (2022) has provided statistical evidence shedding light on the magnitude of this phenomenon. Their report indicates that a staggering 69% of Nigerians express a willingness to migrate with their families at the slightest opportunity, a figure that surged to nearly 80% in 2023 compared to a relatively modest 39% in 2019. This exponential increase underscores the intensification of aspirations for emigration among Nigerians and reflects a broader societal sentiment regarding the pursuit of better opportunities beyond national borders.

It is however, imperative to understand the underlying motivations driving this trend. While the desire for economic advancement and improved living standards is undoubtedly a central factor, the emigration potential is also intricately linked to perceptions of political instability, insecurity, and limited prospects for personal and professional fulfilment within Nigeria. More so, the educational route has been the most susceptible to emigration, as many Nigerians pursue opportunities abroad through academic pathways.

Thus, for many Nigerians, the decision to leave the country represents a quest for security, opportunity, and a better quality of life, even if it necessitates significant sacrifices and risks associated with migration (Okunade&Awosusi, 2023). The emigration Potential originally denoted the act of fleeing for safety. However, its contemporary usage among Nigerians has evolved to encompass a broader spectrum of aspirations, including the pursuit of educational and career opportunities, escape from economic hardship, and the quest for personal freedom and fulfilment.

Consequently, the Emigration Potential has emerged as a multifaceted phenomenon with far-reaching implications for individuals, families, and the Nigerian society at large. The emigration Potential has significant implications for the education sector, where the exodus of teachers and educators undermines efforts to improve educational outcomes and build human capital.

In recent years, there has been a notable increase in the number of Nigerian teachers seeking opportunities abroad, driven by factors such as low job satisfaction, inadequate remuneration, and limited opportunities for professional growth and advancement (Adesina, 2022; Ogwo, 2022a; Uwandu, 2019; Olufemi, 2022). This trend has also negatively affected the teaching motivation and teaching efficacy of pre-service teachers, as they witness the exodus of experienced educators and become increasingly discouraged about their future in the profession. The departure of seasoned teachers not only deprives the education system of valuable expertise but also dampens the enthusiasm and confidence of those entering the field.

This trend not only exacerbates existing challenges within the Nigerian education system but also perpetuates a cycle of underinvestment and decline in educational quality and outcomes. In a country like Nigeria where educational challenges abound, including limited resources, overcrowded classrooms, and societal pressures, exploring teacher motivation and teaching efficacy becomes even more critical. Pre-service science education teachers face unique challenges in their professional lives, including the pressure to keep pace with advances in their field, adapt teaching strategies to diverse student needs, and navigate bureaucratic hurdles within the education system. Thus, making it seem like the fastest route to career advancement is seeking recourse to greener pastures. The preservice teachers who are mostly taught to engage in efficient dissemination of knowledge are being trained to teach the Nigerian child but as the desire among many youth stems around seeking greener pastures beyond the shores of Nigeria, challenges abound as regards the efficacy as well as the motivation of the teachers to develop further the potentials of the Nigerian education system. Emigration Potential represents a complex and multifaceted phenomenon with profound implications for individuals, families, and Nigerian society at large. While rooted in aspirations for economic advancement and personal fulfillment, the mass emigration of skilled professionals in the teaching sector undermines efforts to build human capital, improve educational outcomes, and drive national development. Addressing the underlying causes of the Emigration Potential requires a concerted and multifaceted approach that tackles socio-economic inequality, political instability, and limited access to opportunities for personal and professional growth.

Given the critical nature of these issues, there is a pressing need to carry out this study to better understand the dynamics driving emigration, particularly among preservice teachers. This research will not only provide insights into the factors influencing emigration decisions but also offer policy recommendations to mitigate the negative impacts on Nigeria's development, especially as it affects the motivation of teachers as well as their teaching efficacy. By exploring these dimensions in depth, the study aims to contribute to the formulation of strategies that can help Nigeria retain its teaching talents and potentials, strengthen its educational system, and ultimately realize its full potential as a vibrant and prosperous nation.

Purpose of the Study

The main aim of the study is to determine the influence of Emigration Potential on the teaching motivation and teaching efficacy of Science Education Students,

The specific purposes are to:

1. determine the prevalence level of the Emigration Potential among Pre-service Science teachers in the study area;
2. assess the level of Teaching motivation and teaching efficacy of Pre-service Science teachers in the study area;
3. examine the influence of Emigration Potential on the Teaching motivation and teaching efficacy of Pre-service Science teachers in the study area;
4. examine the joint influence of the science programme of study (Biology, Chemistry, Physics) and Emigration potential on teaching motivation and teaching efficacy of preservice teachers.

Research Questions

In light of the objectives, the following research questions were raised to guide the study:

1. What is the prevalence level of the Emigration Potential among Pre-service Science teachers at Obafemi Awolowo University Ile-Ife Osun State?
2. What is the level of teaching motivation of Pre-service Science teachers at Obafemi Awolowo University Ile-Ife Osun State?
3. What is the level of teaching efficacy of Pre-service Science teachers in Obafemi Awolowo University Ile-Ife Osun State?

Research Hypotheses

HO₁: There is no significance relationship between emigration potential and teachers' motivation of Pre-service Science teachers at Obafemi Awolowo University Ile-Ife Osun State

HO₂: There's no significance relationship between emigration potential and teachers' efficacy of Pre-service Science teachers at Obafemi Awolowo University Ile-Ife Osun State.

HO₃: There's no significance joint influence of the science programme of study (Biology, Chemistry, Physics) and Emigration potential on teaching motivation and teaching efficacy of preservice teachers

Materials and Method

The research design adopted in this study was descriptive survey research design. According to Cohen and Manion (1994), this design determines and reports things the way they are, and commonly involves assessing attitudes, opinions and procedures. The study was mainly concerned with collecting data on views of the respondents on their experiences in curriculum implementation, survey method was deemed suitable in achieving the objectives of the study. A sample of 120 Pre-service teachers a preservice department was selected using convenience sampling across the science fields (Biology, Chemistry, Physics) in the Study area. Data were collected through an online survey administered via Google Forms. The form contained four sections including the section to assess the emigration potential, teaching efficacy and motivation of the respondents. Each section contained a four-point Likert scale. The instrument was validated by expert judgement and Cronbach Alpha coefficient was used as the test of reliability yield a value of 0.78, 0.76 and 0.82 for emigration potential, teaching efficacy and teaching motivation respectively. The scores 4,3,2,1 was assigned to responses of strongly agree, agree, disagree and strongly disagree respectively. The researcher then randomly selected respondents across the three major fields to ensure adequate representation of the samples for the study. The data collected were analyzed using appropriate descriptive statistics of mean, frequency distribution and percentages for the research questions and inferential statistics of Chi square was used for the research hypothesis.

Results

Research Question One: What is the prevalence level of the Emigration Potential among Science Education Students at Obafemi Awolowo University Ile-Ife Osun State?

To answer this question, items in Section B of the questionnaire were designed to elicit information about the respondents' view about the Prevalence of Emigration Potential. All structured items in Section A was graded such that Strongly Agree was 4, Agree (3), Disagree (2) and Strongly Disagree (1) to ensure interpretation consistency.

Table 4.1 Frequency and Percentage distribution of responses for Prevalence of Emigration Potential

S/N	STATEMENT	SA F(%)	A F(%)	D F(%)	SD F(%)
1	Emigration Potential is prevalent among Science Education students in Obafemi Awolowo University.	23 (19%)	80 (67%)	17 (14%)	0 0.0
2	It is common for Science Education students at my university to consider emigration as a viable option for their future	32 (27%)	77 (64%)	3 (2%)	8 (7%)
3	I do not see myself working as a teacher in Nigeria due to the economic factors and teachers' welfare.	53 (44%)	50 (42%)	7 (6%)	10 (8%)
4	Have you personally experienced feelings of pressure or influence to emigrate from peers, family, or societal expectations?	37 (31%)	42 (35%)	30 (25%)	11 (9%)
5	I am aware of specific peers who are actively preparing to emigrate for their studies or careers.	32 (27%)	80 (66%)	8 (7%)	0 0.0
6	I have considered or am considering emigrating from Nigeria for better career opportunities.	61 (51%)	53 (44%)	6 (5%)	0 0.0
7	I believe that emigrating from Nigeria would significantly enhance my career prospects.	59 (49%)	55 (46%)	6 (5%)	0 0.0
8	I have actively researched or sought information about emigrating from Nigeria.	30 (25%)	61 (51%)	29 (24%)	0 0.0
9	My family or friends have encouraged me to consider emigrating for better opportunities.	48 (40%)	50 (42%)	18 (15%)	4 (3%)
10	The current economic and political situation in Nigeria has influenced my consideration to emigrate.	70 (58%)	41 (34%)	9 (8%)	0 0.0
	Average Percentage%	37.1%	45.1%	11.1%	2.7%

Source: Field Survey, 2024

The total responses indicate that there is a notable level of agreement across all items regarding the prevalence of the Emigration Potential, with a average (37.1%) agreeing strongly and (45.1%) indicating an agreement across various statements. The categorization is based on the cumulative scores from the respondents' answers to the items in Section B of the questionnaire, which assessed their attitudes towards emigration. The new classification

ranges are: scores between 30-40 are classified as High, scores between 20-30 are classified as Medium, and scores between 10-20 are classified as Low. The result is presented below.

Table 4.2: Level of Emigration Potential

S/N	Level	Emigration Potential Level Class	Percentage
1.	High	30-40	40%
2.	Medium	20-30	35%
3.	Low	10-20	25%

Source: Field Survey, 2024

From Table 4.2, it is evident that 40.0% of the surveyed students fall into the High Emigration Potential category as 35% were moderately inclined as 25% were lowly inclined towards emigration. This result shows a high level of emigration potential among respondents in the study area.

Question Two: What is the level of Teaching motivation of Science Education Students at Obafemi Awolowo University Ile-Ife Osun State?

To answer this question, items in section C of the questionnaire were designed to elicit information about the respondents' view about the level of Teaching Motivation. All structured items in Section C were graded such that Strongly Agree was 4, Agree (3), Disagree (2) and Strongly Disagree (1) to ensure interpretation consistency.

Table 4.3: Frequency and Percentage distribution of responses for teaching motivation

S/N	STATEMENT	SA	A	D	SD
1	I believe that my academic performance is influenced by my level of motivation in Science Education	32 (27%)	62 (52%)	26 (21%)	0 0.0
2	I feel supported by the academic environment at Obafemi Awolowo University in enhancing my teaching skills?	17 (14%)	67 (56%)	32 (27%)	4 (3%)
3	I feel confident in my ability to adapt teaching methods to effectively communicate complex scientific concepts to others	22 (18%)	92 (77%)	6 (5%)	0 0.0
4	I am highly motivated to excel academically in Science Education at Obafemi Awolowo University.	32 (27%)	71 (59%)	13 (11%)	4 (3%)
5	I believe in my ability to effectively teach science subjects to others.	38 (32%)	78 (65%)	4 (3%)	0 0.0
6	I believe that my teaching efficacy directly impacts the academic performance of your students?	54 (45%)	66 (55%)	0 0.0	0 0.0

7	Inability to cater for the welfare of teachers directly affects the motivation and Teaching efficacy of students.	59 (49%)	56 (47%)	5 (4%)	0 0.0
8	The possibility of emigrating from Nigeria affects my motivation to pursue a career in Science Education.	29 (24%)	49 (41%)	37 (31%)	5 (4%)
9	The uncertainty about the future prospects in Nigeria affects my motivation to pursue a career in Science Education.	20 (17%)	80 (66%)	20 (17%)	0 0.0
10	The lack of recognition or appreciation for educators in Nigeria affects my willingness to stay and teach here	62 (52%)	51 (43%)	3 (2%)	4 (3%)
	Percentage%	35.9%	45.7%	12.0%	1.0%

Source: Field Survey, 2024

Table 4.3 summarizes the responses from Science Education students at Obafemi Awolowo University concerning factors that influence their motivation to pursue a career in teaching. Nearly all respondents (100%) agree that their academic performance is closely linked to their level of motivation, highlighting motivation as a critical factor in their success. While the majority (70%) feel supported by the academic environment in enhancing their teaching skills, 30% express some level of dissatisfaction, indicating room for improvement in institutional support. A significant majority (95%) of students feel confident in their ability to adapt teaching methods and effectively communicate complex scientific concepts, suggesting strong self-efficacy in their teaching capabilities. Many students (52% strongly agree, 43% agree) feel that the lack of recognition for educators in Nigeria negatively impacts their willingness to remain in the teaching profession. Additionally, the possibility of emigrating and uncertainties about future prospects in Nigeria influence their motivation, with 65% agreeing that these factors affect their career considerations. Overall, the data reveals that while students are generally motivated and confident in their teaching abilities, external factors such as institutional support, recognition, and the broader socio-economic context in Nigeria significantly impact their motivation to pursue and remain in a teaching career.

The responses of respondents on the level of Teaching Motivation were graded below;

Table 4.4: Level of Teaching Motivation

S/N	Level	Teaching Motivation Level Class	Percentage
1.	High	30-40	51%
2.	Medium	20-30	39%
3.	Low	10-20	10%

Source: Field Survey

Table 4.4 provides a detailed summary of the distribution of Science Education students at Obafemi Awolowo University, Ile-Ife, across three categories of Teaching Motivation: Low, Medium, and High. From Table 4.5, a significant portion of the surveyed students, comprising 51.0%, falls into the High Teaching Motivation category. This substantial percentage indicates that these students are highly motivated to pursue a teaching career. Their scores suggest strong agreement with statements reflecting enthusiasm for education, confidence in teaching abilities, and positive perceptions of their academic environment. The high level of motivation demonstrated by this group reflects a commitment to excelling in the teaching profession and contributing positively to the education sector.

The Medium Teaching Motivation category accounting for 39.0% of the total respondents. These students exhibit a moderate level of motivation towards teaching. Their scores suggest that while they are motivated, they may have reservations or be influenced by various factors affecting their enthusiasm. This group represents students who are committed to teaching but may require additional support or encouragement to fully engage in the profession. Their future decisions may hinge on factors such as career opportunities, recognition of their efforts, and the overall academic environment.

The Low Teaching Motivation category comprises 10 students, representing 10.0% of the respondents. These students are less motivated to pursue a teaching career, indicating that they might be considering alternative paths or have significant reservations about the teaching profession. Their scores suggest that they may feel unsupported, lack confidence, or are influenced by negative perceptions of teaching. This group could be swayed by external factors, such as job security concerns, economic prospects, or personal aspirations outside of education.

Question Three: What is the level of Teaching efficacy of Science Education Students in Obafemi Awolowo University Ile-Ife Osun State?

To answer this question, items of the questionnaire were designed to elicit information about the respondents' view about the level of Teaching Efficacy. All structured items were graded such that Strongly Agree was 1, Agree (2), Disagree (3) and Strongly Disagree (4) to ensure interpretation consistency.

Table 4.5: Frequency and percentage distribution of responses for teaching efficacy

S/N	STATEMENT	SA	A	D	SD
1	I can establish a classroom environment that promotes learning	58 (48%)	62 (52%)	0 0.0	0 0.0
2	I am confident in my ability to maintain discipline in the classroom.	60 (50%)	58 (48%)	2 (2%)	0 0.0
3	I can effectively manage disruptive behaviors in my classroom.	58 (48%)	62 (52%)	0 0.0	0 0.0
4	I seek out opportunities for professional growth and development.	64 (53%)	54 (45%)	2 (2%)	0 0.0

5	I believe in my ability to effectively teach science subjects to others.	32 (27%)	79 (66%)	9 (7%)	0 0.0
6	I feel confident in applying new teaching strategies that I have learned	56 (46%)	62 (52%)	2 (2%)	0 0.0
7	I adapt my teaching to be inclusive of all students' cultural experiences.	43 (36%)	77 (64%)	0 0.0	0 0.0
8	I am able to implement classroom rules and procedures effectively.	47 (39%)	71 (59%)	2 (2%)	0 0.0
9	I can quickly and effectively address conflicts among students	43 (36%)	67 (56%)	10 (8%)	0 0.0
10	I can maintain a positive classroom atmosphere even during challenging times.	40 (33%)	78 (65%)	2 (2%)	0 0.0
	Percentage%	41.6%	55.9%	2.5%	0.0

Source: Field Survey, 2024

A significant number of respondents expressed confidence in their abilities to establish a conducive classroom environment, maintain discipline, and manage disruptive behaviors. For instance, 48% strongly agreed, and 52% agreed with the statement about establishing a learning environment, reflecting a strong belief in their capability to foster positive classroom dynamics. Similar trends were observed for statements regarding professional growth and the effective implementation of classroom rules, with over half of the respondents demonstrating confidence in these areas. Despite the general positivity, the statement regarding believing in their ability to effectively teach science subjects revealed a lower percentage of strong agreement (27%) compared to other statements. However, 66% still agreed, indicating that while confidence exists, there may be underlying concerns about specific competencies in teaching science effectively. The ability to maintain a positive atmosphere during challenging times was affirmed by 65% of respondents, suggesting resilience among the students. However, some reservations were noted in handling conflicts, with 36% strongly agreeing to address conflicts quickly and effectively, indicating potential areas for further development.

Table 4.6 highlights that the majority of students have a positive perception of their teaching efficacy, particularly in creating supportive learning environments and maintaining discipline. However, there are areas, particularly in specific teaching competencies, that may require further attention and professional development. Overall, the results suggest a strong foundation of teaching efficacy among these future educators, which can be harnessed to enhance their effectiveness in the classroom. The responses of respondents on the level of Teaching Efficacy were graded below;

Table 4.6 provides a detailed summary of the distribution of Science Education students across three categories of Teaching Efficacy: Low, Medium, and High.

Table 4.7: Level of Teaching Efficacy

Level	Teaching Efficacy Level Class	Percentage
High	30 - 40	30%
Medium	20 - 30	28%
Low	10 - 20	42%

From Table 4.6, 30.0% were classified in the High Teaching Efficacy category. This indicates that these students possess strong confidence in their teaching abilities and believe they can effectively create positive learning environments and manage classroom dynamics. Their scores suggest a high level of preparedness to engage and inspire their future students. The Medium Teaching Efficacy category included 28.0% of the respondents. This group represents a moderate level of confidence and suggests that these individuals may feel somewhat capable but might still face challenges or uncertainties in their teaching practices. A significant portion of respondents (42.0%) fell into the Low Teaching Efficacy category.

This suggests that these students may lack confidence in their teaching abilities or feel unprepared for the challenges of teaching. With a significant portion of students classified as having low efficacy, it is imperative for stakeholders to prioritize support and development initiatives that empower these future educators, ultimately enhancing the quality of education in Nigeria.

Hypotheses 1: There's no significance difference between emigration potential and teachers' motivation

To assess the relationship between emigration potential and teacher motivation among Science Education students at Obafemi Awolowo University, the responses of the students were categorized into three levels based on their cumulative scores. The categorization of the levels of the emigration potential and teachers' motivation above was used for the chi square calculation. To examine the association between these categories of emigration potential and the levels of teaching motivation, a Chi-square test was conducted. The results are summarized in Table 5.1.

Table 4.7: Showing the Chi-square test for Emigration Potential and Teaching motivation

		Motivation			χ			Cramers
		Low	Medium	High	Value	df	p	phi
Emigration	Low	8	10	37	6.604	4	.014	.557
Potential	Medium	2	3	10				
	High	5	11	14				
Total		15	24	61				

Source: Field Survey

The findings of the study showed ($\chi^2 = 6.604$, $p < 0.05$) showing that there is a significant relationship between emigration potential and teacher motivation levels among the respondents.

Moreover, the value of Cramér's Phi is 0.557, indicating a moderate to strong association between the two variables, and that 55% of the results are found in the sampled population. This result suggests that as the levels of teacher motivation vary, there is a corresponding change in emigration potential among the students. Hence, the null hypothesis was rejected.

Research Hypotheses 2: There's no significance difference between emigration potential and teachers' efficacy

To assess the relationship between emigration potential and teaching Efficacy among Science Education preservice teachers, the responses of the students were categorized into three levels based on their cumulative scores. To examine the association between these categories of emigration potential and the levels of teaching efficacy, a Chi-square test was conducted. The results are summarized in Table 4.9.

Table 4.8: Showing the Chi-square test for Emigration Potential and Teaching Efficacy

		Efficacy						Cramers
		Low	Medium	High	Chi Sq	df	p	V
Emigration Potential	Low	21	5	6	22.50	4	0.002	.607
	Medium	2	8	5				
	High	18	8	27				
Total		41	21	38				

Source: Field Survey

The findings of the study showed ($\chi^2 = 22.50$, $p < 0.05$) showing that there is a significant relationship between emigration potential and teacher efficacy levels among the respondents, hence, the null hypothesis is rejected, showing that there is a statistically significant difference between emigration potential and teaching efficacy among the respondents. The value of Cramér's Phi is 0.607, suggesting a strong association between the two variables. This result implies that variations in teaching efficacy are related to changes in emigration potential among the students.

Hypothesis Three: There is no significant influence of Science (Biology, Chemistry and Physics) programme and emigration potential on teaching motivation and teaching efficacy of preservice teachers in the study area.

To answer this hypothesis, the total scores of the teaching motivation and efficacy was used as a continuous variable scores of the construct while the programme of choice and emigration potential was the dependent variable. Multivariate analysis of variance (MANOVA) was then used to test the effect of the independent variable on the multiple dependent variable (teaching motivation and efficacy). Pilla trace value of the MANOVA statistics was used to explain the significance of the multivariate effect. Pilla trace was chosen as it tends to cater for concerns about assumption violations as the dependent variables are Likert scales converted

to continuous variables and also as there are **multiple dependent variables** and the correlations between them are moderate to strong.

Table 4.9 MANOVA Table of Effect of Pre-service teacher’s programme and emigration potential on teaching efficacy and motivation

Tests of Between-Subjects Effects							
Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	Efficacy	421.541 ^a	8	52.693	4.872	<.001	.300
	MOTIVATION	268.855 ^b	8	33.607	2.892	.006	.203
Intercept	Efficacy	11902.354	1	11902.354	1100.447	<.001	.924
	MOTIVATION	16619.971	1	16619.971	1430.174	<.001	.940
DepartmentUnit	Efficacy	15.339	2	7.669	.709	.495	.015
	MOTIVATION	10.567	2	5.284	.455	.636	.010
EPCLASS	Efficacy	67.700	2	33.850	3.130	.048	.064
	MOTIVATION	20.907	2	10.454	.900	.410	.019
DepartmentUnit * EPCLASS	Efficacy	160.106	4	40.027	3.701	.008	.140
	MOTIVATION	120.087	4	30.022	2.583	.042	.102
Error	Efficacy	984.249	91	10.816			
	MOTIVATION	1057.505	91	11.621			
Total	Efficacy	26655.000	100				
	MOTIVATION	35256.000	100				
Corrected Total	Efficacy	1405.790	99				
	MOTIVATION	1326.360	99				

a. R Squared = .300 (Adjusted R Squared = .238)

b. R Squared = .203 (Adjusted R Squared = .133)

[Pilla trace value (Value= 0.192, $p < 0.05$)]

The MANOVA analysis explored the effects of Science programmes, EPlevel, and their interaction on two dependent variables: Efficacy and Motivation. The results show that Science programmes does not have a significant impact on either Efficacy ($F(2, 91) = 0.709$, $p = 0.495$, $\eta^2 = 0.015$) or Motivation ($F(2, 91) = 0.455$, $p = 0.636$, $\eta^2 = 0.010$). The very low partial eta squared values indicate that Science programme explains only a small proportion of the variance in these variables (1.5% for Efficacy and 1% for Motivation). The interaction between Science programme and EP Levels has a significant effect on both dependent variables: For Efficacy, the interaction is significant ($F(4, 91) = 3.701$, $p = 0.008$, $\eta^2 = 0.140$), explaining 14% of the variance. For Motivation, the interaction is also significant ($F(4, 91) = 2.583$, $p = 0.042$, $\eta^2 = 0.102$), accounting for 10.2% of the variance. Hence, Science programme alone does not have a significant impact on Efficacy or Motivation, but the interaction between Department Unit and EPCLASS is significant for both Efficacy and Motivation, suggesting that their combined influence is meaningful in explaining the variance in these variables. Hence, the null hypothesis was rejected. Also, the significant multivariate effect (Pillai’s Trace = 0.192, $p = 0.017$) for the interaction suggests that the relationship between Science programmes and Emigration potential matters when both dependent variables (Efficacy and Motivation) are considered together.

Discussion of Findings

The study showed the prevalence of Emigration Potential reveal a concerning trend among Science Education students as it was seen that a significant majority of respondents view emigration as a viable option for their future. This finding aligns with studies by Adeyemi and Oladipo (2020), which indicate that Nigerian students often consider emigration due to socio-economic challenges and a lack of confidence in the local educational system. The high prevalence of emigration potential underscores the urgency of this issue. The desire to emigrate for better career opportunities is echoed in literature, where students express

dissatisfaction with Nigeria's economic climate and educational policies (Fadeyi, 2019). Additionally, the significant influence of family and peers on students' decisions to consider emigration highlights the social dimensions of this phenomenon, suggesting societal pressures play a crucial role in shaping career aspirations (Daramola, 2021). Notably, concerns about Nigeria's economic and political situation are echoed by 58% of respondents, supporting findings from previous research emphasizing national issues' impact on student motivation and decision-making (Salihu & Adamu, 2016). As students grapple with uncertainty regarding their future, the high levels of emigration potential indicate a systemic problem that could have far-reaching implications for the educational sector and the country's overall human capital development.

The findings regarding teaching motivation among Science Education students reveal a nuanced picture. This shows that many pre-service teachers possess a strong desire to excel. Previous studies have similarly found that motivation plays a critical role in shaping educators' effectiveness and commitment to the profession (Tschannen-Moran & Hoy, 2001). While the majority feel supported by their academic environment (70% expressing satisfaction), the 30% dissatisfaction highlights an area needing attention. Institutional support is vital for enhancing teacher motivation, indicating the need for universities to improve engagement with students and provide resources to foster teaching skills (Ryan & Deci, 2000). Interestingly, most of the respondents believe that the lack of recognition for educators in Nigeria negatively impacts their willingness to remain in the profession. This resonates with research that underscores the importance of recognition in fostering teacher motivation and efficacy (Keller, 2018). Concerns about emigration's effect on motivation indicate a potential conflict between aspirations for better opportunities abroad and commitment to teaching in Nigeria. This tension suggests that universities must address motivational factors while considering strategies to retain talented educators (Uche et al., 2019).

Teaching efficacy indicates positive self-perception among respondents regarding their abilities to create effective learning environments and manage classroom dynamics. The majority express confidence in their teaching skills, which is crucial for future effectiveness as educators. Previous research highlights that high self-efficacy levels correlate with better teaching performance and student outcomes (Bandura & Wood, 1989; Bandura, 1997). This discrepancy suggests underlying concerns about specific teaching competencies that need addressing through targeted professional development (Gibson & Dembo, 1984). The categorization of teaching efficacy levels reflects varying degrees of confidence among future educators. This distribution emphasizes the necessity for continuous professional development and support to nurture teaching efficacy, particularly among those who may feel less confident (Brouwers & Tomic, 2000). The high emigration potential among respondents indicating a strong inclination to seek opportunities abroad, raises important concerns regarding the future of the teaching profession in Nigeria. This inclination is often driven by various socio-economic factors, including better job prospects and improved living conditions, which many students perceive as lacking in Nigeria (Adebayo, 2020; Ogunyemi & Adeniran, 2021). This tendency toward emigration can create a disconnect between students' immediate educational pursuits and their long-term career aspirations. As students increasingly focus on opportunities outside Nigeria, their commitment to the local education system may diminish. Studies suggest a correlation between high emigration potential and

lower career commitment, particularly in professions requiring significant training investment, like teaching (Nwafor, 2023; Olumide, 2023).

The study indicates that students with high emigration potential tend to exhibit lower levels of teaching motivation. Specifically, the data reveal that respondents expressing a strong desire to emigrate report feeling less motivated to engage deeply with their education and the teaching profession. This aligns with research suggesting that when students prioritize emigration, they often perceive less value in committing to local educational pathways (Fadipe, 2021). The lack of intrinsic motivation can significantly impact students' academic engagement and performance. For instance, students who view teaching merely as a temporary position until securing opportunities abroad may not fully invest in developing their teaching skills or understanding effective pedagogical methods (Elliott, 2021). This can lead to a cycle where low motivation adversely affects educational outcomes, resulting in a workforce ill-prepared to address local education system challenges (Umar, 2022). The relationship between emigration potential and teaching efficacy is noteworthy. The findings suggest that students with higher emigration aspirations demonstrate lower perceived teaching efficacy. Specifically, students focused on leaving Nigeria often report feeling less confident in their abilities to teach and manage classrooms. This can be attributed to perceived lack of future investment in their teaching careers and uncertainty surrounding their professional trajectories (Duncan et al., 2023). Research shows that teaching efficacy is closely linked to teacher preparation programs and support systems available during training (Smith, 2020; Harris, 2022). When students focus on emigration, their engagement with these preparatory processes diminishes, potentially leading to a lack of confidence in their teaching abilities. This is concerning, as effective teaching is essential for fostering positive learning environments and improving student outcomes (Tschannen-Moran & Woolfolk Hoy, 2001). The implications of the relationship between emigration potential and teaching motivation/efficacy are profound for teacher education programs. To address these issues, educational institutions must create an environment fostering a sense of belonging and commitment among prospective teachers. This could involve implementing mentorship programs, offering career counseling emphasizing local teaching careers' value, and providing incentives for students who choose to remain in Nigeria (Ogunleye, 2024). Moreover, enhancing the curriculum to include practical experiences and exposure to successful educators can help students visualize a rewarding career in teaching despite the allure of emigration. By instilling a stronger sense of purpose and professional identity, educational institutions can help students reconcile their aspirations for emigration with their commitment to teaching. This result shows that as students increasingly consider emigration a viable career path, it is essential to address potential negative impacts on their motivation and efficacy in teaching. By implementing targeted interventions and fostering a supportive educational environment, institutions can help students develop a robust commitment to the teaching profession while navigating the challenges posed by their aspirations for emigration. Although scientific programs by themselves have little impact on motivation or efficacy, the combination of science programs and EP levels has a significant effect on both. This implies that, depending on the particular science program a student is enrolled in, their desire to immigrate affects how they view their skills and how motivated they are to pursue a career in teaching. Previous studies have demonstrated that scientific programs do not have a substantial direct impact on teaching efficacy or motivation. Studies, for example, have demonstrated that intrinsic variables, such as socioeconomic pressures and personal goals,

have a greater influence on teacher motivation than the particular academic courses that students take (Fadipe, 2021; Ogunyemi & Adeniran, 2021). Students with higher emigration goals may be less motivated to commit to local educational routes, according to the substantial interaction between science programs and EP levels (Adeyemi et al., 2023). This result is consistent with other research showing that students who have strong plans to leave their country frequently show less involvement in the local educational system, which lowers their commitment to their careers (Nwafor, 2023). The study's findings also align with Ogunleye's (2024) research, which highlights the significance of teaching retention tactics in teacher preparation. Institutions must think about customised treatments that could lessen the detrimental effects of emigration aspirations on teaching commitment because the relationship between emigration possibility and program enrolment influences motivation and efficacy. To highlight the importance of teaching in Nigeria, this can entail expanding career counselling and offering opportunities for professional growth. Hence, Education policymakers and teacher preparation programs in Nigeria must consider the important relationship between scientific programs and EP levels. Given the increased likelihood of student emigration, educational institutions must address the efficacy and motivational gaps brought on by these goals. Talented future educators could be retained through tactics like offering incentives for instructors to stay in the nation (Ogunleye, 2024) and creating a welcoming learning atmosphere. Furthermore, given that emigration is mostly driven by social and economic considerations (Ogwo, 2022; Adebayo, 2020), it is imperative to address these systemic challenges in order to increase the appeal of teaching jobs in Nigeria. In addition to increasing teacher retention, this would help create a workforce of educators that are more dedicated and driven.

Conclusion

This study highlights the demographic profile, emigration potential, and teaching motivation and efficacy among Science Education preservice teachers. The study also shows that most of students have high teaching motivation; there is notable dissatisfaction with institutional support and concerns about recognition for educators. This indicates a need for improved engagement and support from universities. Additionally, although students generally feel confident in their teaching abilities, there is a discrepancy in specific competencies, highlighting the need for targeted professional development. Addressing these issues involves creating a supportive educational environment, enhancing curricula with practical experiences, and offering incentives for students to remain in Nigeria. By focusing on these areas, institutions can better prepare students for successful teaching careers and strengthen the local education system. However, The study's limitations include its focus on a single university, which may not be representative of all science education students across Nigeria. To address the challenges identified in the study, it is recommended that policymakers enhance teacher welfare through improved compensation and working conditions, while also providing clear career development opportunities. Educational institutions should create supportive environments that value teachers and policy reforms should focus on improving educational resources and infrastructure. Regular assessments of teacher motivation and efficacy are also crucial for timely interventions.

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