Assessment of Learning Paths for Maximizing Teachers’ Attitude and Efficacy in Implementing Inclusive Education in Ile-Ife, Southwestern Nigeria

Oyebode Stephen Oyetoro 1*

1 Department of Arts and Social Science Education, Faculty of Education, Obafemi Awolowo University, Ile-Ife, NIGERIA
*Corresponding Author: oyebode_oyetoro@hotmail.com

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ABSTRACT

The study assessed the in-service learning paths that could maximize teachers’ attitude towards and efficacy in implementing inclusive education among primary education teachers in Ile-Ife Metropolis, Southwestern Nigeria. The three in-service learning paths considered were postgraduate degree, school-based training and experience with inclusive classroom. The study adopted the ex-post facto research design. The sample comprised 200 primary education teachers who were selected using simple random sampling technique. Results obtained revealed that none of each of the three learning paths significantly influences either the attitude of the teacher towards or their efficacy in implementing inclusive education practices. It was also revealed that the combinations of postgraduate degree, experience with inclusive classroom and school-based training on inclusive classroom ranked first in maximizing both efficacy and attitude of the teachers while experience with inclusive classroom combined with school-based training on inclusive education ranked second in maximizing both attitude and efficacy. The combination which ranked least (4th) for efficacy was postgraduate degree with experience with inclusive education while the combination which ranked least for attitude was postgraduate degree with school-based training on inclusive education. The implications of these findings is that stakeholders in the development of human capital in the basic education sector in developing countries should continue to seek and use appropriate mix of continuing professional development paths that maximizes resources and the expected outcomes in teachers while minimizing costs. One of the limitations of the research is its scope which utilized teachers in a town in one of the states in Southwestern Nigeria. Future studies may consider the use of larger samples from various geopolitical zones and the use of robust statistical tools such as structural equation modelling to determine the interplay of personal, work-related variables and selected continuing professional development strategies on teachers’ outcomes in implementing inclusive education practices.

Keywords: human capital development, inclusive education, learning paths, primary education, teachers

INTRODUCTION

The role of education in sustaining the growth and development of nations has long been recognized. It develops the individual as an individual in his/her own right who in turn is expected to contribute to the wealth of nations. In fact, the beam light on education as a catalyst for growth and development could be said to have led to the emergence of myriads of concepts that needed to be understood within context and researched by policy makers and implementers. Some of these concepts include but are not limited to functional education, individualized/personalised education, transversal skills (which include creative thinking skills, critical thinking skills, reflective thinking skills, etc.), embodied learning, digital literacy, global citizenship, social capital, culturally responsive pedagogy, inclusive education, assessment-for, -of-, -as-learning, etc. Hence, while policy makers are saddled with including these concepts in key national and international documents, implementers chief of which are teachers are looked up to for turning the policies into feasible learning outcomes in the students.

One of the concepts that have pervaded education research literature in recent times is inclusive education. It refers to the process of strengthening the capacity of the education system to reach out to all learners and can thus be understood as a key strategy to achieve Education for All (UNESCO-International Bureau of Education (IBE), 2013). Inclusive education takes account of the needs of the poor and disadvantaged, including working children, remote rural dwellers and nomads, ethnic and logistics minorities, children, young people and adults affected by conflict, HIV/AIDS, hunger and poor, those with disabilities or special learning needs and girls and women (UNESCO, 2009). It is often perceived as an overarching principle that should guide all education policies and practices starting from the fact that education is a basic human right and the foundation for a just and
equal society (UNESCO, 2009). Inclusive education utilizes child-centred pedagogy and targets the education of all children including those who have serious disadvantages and disabilities (UNESCO-IBE, 2013). The merits of the practice include the empowerment of schools in providing quality education to all children; assistance in changing discriminatory attitudes thus creating welcoming communities and an inclusive society (UNESCO-IBE, 2013).

The National Policy on Education (NPE) which was published by the Nigerian Educational Research Development Council (NERDC) in 2013 also recognized the utility of inclusive education practices and has copiously provided for it (section 7, par. 117-124). As lofty as the merits of inclusive education practice are, implementing it is not without challenges. In Nigeria’s educational clime for instance, it is a fact that though the country is relatively abreast in terms of promulgating relevant educational policies yet the will power to implement the provisions of the educational policies are lacking as funds and other mechanisms for the successful implementation of these policies are rarely put into place several years after.

Suffice it to state that the provision of funds is a critical input factor in the implementation of policies and programmes and it is usually the practice that funds are released in blocks for the implementation of policies and programmes. As such, government administrators will have to decide on alternative courses of actions that will maximize the funds made available per time. One of the courses of actions that needed to be decided on early vis-à-vis the funds provided includes the provision of in-service supports otherwise known as continuous professional development to teachers in the act and art of implementing the policy provisions.

The imperatives of in-service support programmes most especially when linked to teachers’ needs and which enable them to learn more about teaching is evident in the large impact they have on student learning (International Institute for Educational Planning (IIEP), 2019). These in-service support programmes can take the form of school-based continuous development programmes, online or distance programmes based at institutions, workshops, meetings, short courses, mentoring programmes and professional learning communities (IIEP, 2019). The effectiveness of these professional learning paths is dependent on some characteristics such as being based on teachers’ needs, on-going, participatory, school-based, and collaborative (IIEP, 2019). Lee (2005) in Ajani (2018) emphasised that in-service teacher professional activities can be most effective when they are regular, constant, relevant and can be accessed by every teacher. Scholars also asserted that that longer time frame and the pulling of teachers of same subject specializations and grades together in order to focus on common subject contents are also determinants of training effectiveness for teachers (Desimone, Smith & Ueno, 2006 in Ajani, 2018). Punia and Kant (2013) identified via literature review factors that affect training effectiveness as the human resource policy surrounding the training, managerial support/departmental climate, open mindedness, the type of training implemented, training content, trainee expertise, lack of support from top management and peers, employees’ individual attitudes, job related factors, deficiencies in training practice, emotional training, psychological states of the trainees especially motivation, self-efficacy, perceived control and the realities of the organizational context, cross-cultural skill development, adjustment and performance. Preponderance of motivation in training effectiveness was however asserted by Punia and Kant (2013).

The good intentions of the government with respect to the continuous professional development of teachers is such that it asserted in the NPE that it seeks to ensure the improvement and regulation of career-long professional development of teachers through the provision of a wide range of programmes and multiple pathways in order to provide teachers with regular opportunities for updating their skills and knowledge (NERDC, 2013). Yet, translating this intention into reality in the short term may involve government administrators deciding on what forms of continuous professional development will maximize the efficacy and attitude of the teachers in implementing the policy provisions in relation to the funds made available.

Observations have revealed that in Nigeria, the three forms of continuous professional development programmes that are somewhat in use and could be further explored for maximizing the funds available and hence maximize teachers’ efficacy and attitude towards implementing inclusive education policy provisions include postgraduate degrees, organised training programmes and provision of requisite classroom environment with students of varying learning abilities and challenges that will provide teachers with hands-on-experience on inclusive education practices under the possible auspices of an expert. The effectiveness of these forms of continuous professional development programmes for teachers in Nigeria have been established directly and implied by Iyunade (2011), Kiadese (2011), Fareo (2013), and Ajani (2018).

The need for the implementation of inclusive education practices cuts across all educational levels- primary, secondary and tertiary education system. The initial training and continuous professional development of teachers in inclusive education practices at all levels of education is necessary. Much more, there is a need to focus on the training and re-training of pre-primary and primary education due to the following harnessed reasons. First, there are available evidences that a relatively growing number of school-age children are enrolled for pre-primary and primary education (UNESCO, 1995; HaliEkimu, 2017) even though they might not have access to formal education beyond this level as could be inferred from the increasing out of school figures (Department of Basic Education, 2015; UNESCO-UIS, 2019a; UNESCO, 2019). Second, the increasing number of pupils generally at the pre-primary and primary level will include a relatively increasing number of vulnerable, poor and children with learning difficulties (LD), and special education needs (SEN) (Department of Basic Education, 2015). Third, the qualifications of teachers at the pre-primary and primary school level may preclude them from attending adequately to the individual needs of vulnerable pupils, pupils with LD and SEN and those from low status families as teachers at this level are generally less qualified (UNESCO, 2014; UNESCO-UIS, 2019b). However, the need for training and the selection of a/or combination of training mode(s) should be based on sound empirical principles so that the learning outcomes could be maximized for the teachers. This study thus seeks to determine the combinations of the three identified continuous professional development programmes that would maximize primary school teachers’ efficacy and attitude towards implementing inclusive education practices.
THEORETICAL FRAMEWORK

Kirkpatrick’s Training Evaluation Model

Donald Kirkpatrick’s training evaluation model, an evaluation model propounded in 1959 has been found relevant for the present study. Kirkpatrick gave four levels of training evaluation as involving reaction evaluation (Level 1), learning evaluation (Level 2), behaviour evaluation (Level 3) and results evaluation (Level 4). The model assumes that each successive evaluation level: builds on the information provided by the lower level; and is taken to represent a more accurate measure of the effectiveness of the training programme thus requiring a more rigorous and time-consuming analysis. Reaction evaluation relates to the degree to which participants in the training react favourably to the learning event. Learning evaluation relates to the degree to which the participants acquire the intended knowledge, skills and attitudes based on their participation in the learning event. Behaviour evaluation determines the extent to which the trainees apply what they learned during training when they are back on the job. Lastly, Results evaluation seeks to provide answer to the question “to what degree do targeted outcomes occur, as a result of the learning event(s) and subsequent reinforcement” (Kirkpatrick & Kirkpatrick, 2009). The present study variables of teachers’ attitude and efficacy in implementing inclusive education practices could be accounted for as Level 2 variables. This study determined how these variables are influenced by each of and by combinations of the in-support training modes of postgraduate degree, organised training programmes and provision of requisite classroom environment with students of varying learning abilities and challenges.

RESEARCH QUESTIONS

The following four research questions were asked and answered in this study.
1. What is the influence of each of the learning paths of postgraduate degree, experience with inclusive classroom and training on inclusive education on the efficacy of primary teachers to implement inclusive education?
2. What combination of the learning paths of postgraduate degree, experience with inclusive classroom and training on inclusive education has the largest influence on the efficacy of primary teachers to implement inclusive education?
3. What is the influence of each of the learning paths of postgraduate degree, experience with inclusive classroom and training on inclusive education on the attitude of primary education teachers towards implementing inclusive education?
4. What combination of the learning paths of postgraduate degree, experience with inclusive classroom and training on inclusive education has the largest influence on the attitude of primary education teachers towards implementing inclusive education?

METHODS

Research Design

The study adopted the ex-post facto research design as it allows data on the variables of interest to be collected and analysed without manipulating these variables. The dependent variables in the study are efficacy in implementing inclusive education practices and attitude towards implementing inclusive education practices while the independent variables are the learning paths of postgraduate degree, experience with inclusive classroom and training on inclusive education.

Participants

The population for the study comprised all the teachers of all grade level in both public and privately owned primary schools in Ife metropolis. The sample for the study comprised 168 public and private primary school teachers in Ife metropolis. The teachers were selected using the simple random sampling technique. The characteristics of the sample used are: Male=64, Female= 104; Up to 30 years=38, 31-40 years= 62, 41-50 years= 33, 51-60 years= 29, Above 60 years=6; Teachers in Private schools=78, Teachers in Public schools= 89; Years of teaching experience range between 1 and 33 years with average years= 9.99 and standard deviation= 7.32; Class taught: Primary one=15, Primary two= 9, Primary three=19, Primary four=28, Primary five=67 and Primary six=29; 124 responded that they have postgraduate degrees while 44 responded no; 88 of the teachers responded that they have no experience with inclusive classrooms while 80 responded that they have had experiences with inclusive classrooms; 50 of the teachers have no training on inclusive education, 87 responded to have some trainings while 31 responded that they have had at least 40 hours training on inclusive education.

Instruments

The instruments consisted of two questionnaires viz.: Efficacy in Implementing Inclusive Education Questionnaire (EIEQ) and the Attitude towards Implementing Inclusive Education Questionnaire (AIEQ). These two instruments were presented as a single instrument with the former as Section A and the latter as Section B. A third Section, Section C on the personal information and the learning paths and experiences of the respondents with inclusive education was added. The EIEQ was adopted from Kielblock (2018) who also reported to have modified the original version credited to the research efforts of Sharma, Loreman and Forlin (2012). It is an 18-item questionnaire that measures the extent to which teachers perceive themselves as capable of implementing inclusive education practices. It has three subscales viz.: efficacy in managing behaviour, efficacy in collaboration and efficacy to
use inclusive instructions. The present study utilized a five-point Likert-type scale of Strongly Agree (SA), Agree (A), NS (Not Sure), Disagree (D) and Strongly Disagree (SD) in lieu of the 7-point scale used by Kielblock (2018). Sample items in the questionnaire include “I can use a variety of assessment strategies (e.g. portfolio assessment, modified text, performance-based assessment, etc.)” and “I can provide appropriate challenges for very capable students” The instrument has been validated in a number of settings with high Cronbach Alpha values. For instance, Forlin and Sin (2010) reported a pre and post-test total scale score of .90 and .92 respectively. A Cronbach alpha value of .84 was obtained for the total scale for present study.

The AIEQ which is contained in Section C assesses teachers’ predisposition towards implementing inclusive education using a 13-item questionnaire. The questionnaire utilizes the same Likert-type format as the EIEQ. The questionnaire was designed by Peng (2009). Sample items in the questionnaire include “All children should be educated in regular classes” and “inclusion sounds good in theory but does not work well in practice” (reversed). Four items viz.: Items 4, 6, 8 and 9 were negatively worded and were reversely scored. A Cronbach alpha value of .72 and Guttman Split-Half coefficient of 59.7 were obtained for the present study.

Procedure for Data Administration

The questionnaire was administered on the teachers after initial permission has been obtained from their school heads. The teachers were then approached and the questionnaire was administered on them. Out of the 200 administered questionnaires only 168 were found useful for data analysis.

RESULTS

The results obtained from the analyses of data are presented in research question by research question order in this section. Table 1 reveals that there is a relative spread among the respondents on the factors of interest to the study.

Table 1. Frequency counts of between-subject factors involved in the study

| Between-Subject Factors | Value Label | N   |
|-------------------------|-------------|-----|
| Postgraduate degree     | Yes         | 124 |
|                         | No          | 44  |
| Experience with inclusive classroom | Yes         | 80  |
|                         | No          | 88  |
| Training on inclusive education | None        | 50  |
|                         | Some        | 87  |
|                         | High (at least 40 hours) | 31  |

Research Question One: What is the influence of each of the learning paths of postgraduate degree, experience with inclusive classroom and training on inclusive education on the efficacy of primary teachers to implement inclusive education?

In order to answer research question one, the data gathered was subjected to analysis of variance. The results obtained are as presented in Table 2.

Table 2. Factorial analysis of variance of the influence of postgraduate degree, experience with inclusive classroom and training on inclusive education on the efficacy of primary teachers to implement inclusive education

| Source | Type III Sum of Squares | df | Mean Square | F    | Sig. | Partial Eta Squared | Observed Power^b |
|--------|-------------------------|----|-------------|------|------|---------------------|------------------|
| Corrected Model | 1327.893* | 11 | 120.718 | 1.849 | .050 | .115 | .860 |
| Intercept | 402454.782 | 1 | 402454.782 | 6152.812 | .000 | .975 | 1.000 |
| Postgraduate degree | 169.875 | 1 | 169.875 | 2.601 | .109 | .016 | .361 |
| Experience with inclusive classroom | 7.041 | 1 | 7.041 | .108 | .743 | .001 | .062 |
| Training on inclusive education | 133.536 | 2 | 66.768 | 1.022 | .362 | .013 | .226 |
| Postgraduate degree * Experience with inclusive classroom | 15.159 | 1 | 15.159 | .232 | .631 | .001 | .077 |
| Postgraduate degree * Training on inclusive education | 135.229 | 2 | 67.615 | 1.035 | .358 | .013 | .229 |
| Experience with inclusive classroom * Training on inclusive education | 386.566 | 2 | 193.283 | 2.960 | .055 | .037 | .569 |
| Postgraduate degree * Experience with inclusive classroom * Training on inclusive education | 427.976 | 2 | 213.988 | 3.277 | .040 | .040 | .616 |
| Error | 10187.386 | 156 | 65.304 | | | | |
| Total | 1022271.000 | 168 | | | | | |
| Corrected Total | 11515.280 | 167 | | | | | |

a. R Squared=.115 (Adjusted R Squared=.053)  
b. Computed using alpha=.05
The results from Table 2 reveal that none of the learning paths of postgraduate degree (F=2.60, p=.109, \( \eta^2 = .016 \)), experience with inclusive classroom (F=1.08, p=.743, \( \eta^2 = .001 \)), and training on inclusive education (F=1.02, p=.362, \( \eta^2 = .013 \)) had significant influence on the efficacy of the primary school teachers to implement inclusive education. The observed influences as could be inferred from the F-values are small (.108≤F≤2.60). This is also supported by the effect sizes (\( \eta^2 \) values) and observed powers which are too small (.062≤sms≤.36). Results from Table 2 however suggest that postgraduate degree has the largest potential to maximize efficacy of teachers in implementing inclusive education practices followed by organised training and lastly experience with inclusive classrooms.

Research Question Two: In what order do the combinations of the learning paths of postgraduate degree, experience with inclusive classroom and training on inclusive education maximize the efficacy of primary teachers to implement inclusive education?

In order to answer this question, the interaction effects of the learning paths on the efficacy of the primary teachers to implement inclusive education were obtained from the factorial analysis results in Table 2. The results depicted, in an ascending order, the following order: Postgraduate degree and Experience with inclusive classroom (F=.594, \( \eta^2 = .001 \)); Postgraduate degree and Training on inclusive education (F=1.035, p=.358, \( \eta^2 = .013 \)); Experience with inclusive classroom and Training on inclusive education (F=2.960, p=.055, \( \eta^2 = .037 \)) and; Postgraduate degree, Experience with inclusive classroom and Training on inclusive education (F=3.277, p=.040, \( \eta^2 = .040 \)). This is corroborated by the observed power statistics. Hence, the order presented by Table 2 is maintained. The results also reveal that only the combination of Postgraduate degree, Experience with inclusive classroom and Training on inclusive education is significant at 0.05 level of significance.

Research Question Three: What is the influence of each of the learning paths of postgraduate degree, experience with inclusive classroom and training on inclusive education on the attitude of primary education teachers towards implementing inclusive education?

In order to answer research question three, the data gathered was subjected to analysis of variance. The results obtained are as presented in Table 3.

Table 3. Factorial analysis of variance of the influence of postgraduate degree, experience with inclusive classroom and training on inclusive education on the attitude of primary teachers towards implementing inclusive education

| Source | Degree of Freedom | Sum of Squares | Mean Square | F | Sig. | Partial Eta Squared | Observed Power |
|--------|------------------|----------------|-------------|---|-----|---------------------|----------------|
| Corrected Model | 11 | 619.254 | 56.296 | 1.262 | .252 | .082 | .666 |
| Intercept | 1 | 136537.944 | 136537.944 | .000 | .951 | 1.000 |
| Postgraduate degree | 1 | 43.470 | 43.470 | .974 | .325 | .006 | .165 |
| Experience with inclusive classroom | 1 | 29.587 | 29.587 | .663 | .417 | .004 | .128 |
| Training on inclusive education | 2 | 30.947 | 15.473 | .347 | .708 | .004 | .105 |
| Postgraduate degree * Experience with inclusive classroom | 1 | 45.915 | 45.915 | 1.029 | .312 | .007 | .172 |
| Postgraduate degree * Training on inclusive education | 2 | 53.008 | 26.504 | .594 | .553 | .008 | .148 |
| Experience with inclusive classroom * Training on inclusive education | 2 | 261.328 | 130.664 | 2.928 | .056 | .036 | .564 |
| Postgraduate degree * Experience with inclusive classroom * Training on inclusive education | 2 | 388.041 | 194.020 | 4.348 | .015 | .053 | .747 |
| Error | 156 | 46.622 | | | | | |
| Total | 168 | 7580.286 | | | | | |

The results from Table 3 reveal that neither of the learning paths of postgraduate degree (F=.974, p=.325, \( \eta^2 = .006 \)), experience with inclusive classroom (F=.663, p=.417, \( \eta^2 = .004 \)) nor training on inclusive education (F=1.02, p=.362, \( \eta^2 = .013 \)) had significant influence on the attitude of the primary school teachers to implement inclusive education. Also, the observed influences as could be inferred from the F-values are small (.347≤F≤.974). This is also supported by the effect sizes (.004≤\( \eta^2 \)≤.006) and observed powers (.105≤sms≤.165) which are minute. Results from Table 3 however suggest that postgraduate degree has the largest potential to maximize efficacy of teachers in implementing inclusive education practices followed by experience with inclusive classrooms and lastly organised training programmes.

Research Question Four: In what order do the combinations of the learning paths of postgraduate degree, experience with inclusive classroom and training on inclusive education maximize the attitude of primary teachers to implement inclusive education?

In order to answer this question, the interaction effects of the learning paths on the attitude of the primary teachers towards implementing inclusive education were obtained from the factorial analysis results presented in Table 3. The results depicted, in an ascending order, the following order: Postgraduate degree and Training on inclusive education (F=.594, p=.553, \( \eta^2 = .008 \)); Postgraduate degree and Experience with inclusive classroom (F=1.029, p=.312, \( \eta^2 = .007 \)); Experience with inclusive classroom and Training on inclusive education (F=2.928, p=.056, \( \eta^2 = .036 \)) and; Postgraduate degree, Experience with inclusive classroom and Training on inclusive education (F=4.348, p=.015, \( \eta^2 = .053 \)). This order is corroborated by the observed power statistics. Also, result
reveal that only the combination of Postgraduate degree, Experience with inclusive classroom and Training on inclusive education is significant at 0.05 level of significance. The summary of the order of the learning paths for the teachers’ efficacy and attitude towards implementing inclusive education practices is as presented in Table 4.

Table 4. Summary of the order of the learning paths for the teachers’ efficacy and attitude towards implementing inclusive education practices

| Combinations of learning paths                                      | Rank order for teachers’ efficacy in implementing inclusive education | Rank order for teachers’ attitude towards implementing inclusive education |
|---------------------------------------------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Postgraduate degree * Experience with inclusive classroom (D)       | 4                                                                     | 3                                                                           |
| Postgraduate degree * Training on inclusive education (C)           | 3                                                                     | 4                                                                           |
| Experience with inclusive classroom * Training on inclusive education (B) | 2                                                                     | 2                                                                           |
| Postgraduate degree * Experience with inclusive classroom * Training on inclusive education (A) | 1                                                                     | 1                                                                           |

Table 4 reveal the same order for the combinations A and B on both teachers’ efficacy in and attitude towards implementing inclusive education with the former having the most influence followed by the latter. The order differs slightly for the two other combinations, C and D, with D being the least for efficacy while C is the least for attitude.

DISCUSSION

The study determined the influence of each of the learning paths on the efficacy in and attitude towards implementing inclusive education among primary school teachers in the study area. Results showed that none of the learning paths when taken separately significantly influences either efficacy in or attitude towards implementing inclusive education. The findings of this study may not be surprising as it has been highlighted that there are different factors that affect the effectiveness of training. More so, the non-significant influence do not mean that they do not improve the tendencies of the teachers towards the effective implementation of inclusive education practices but could be said to indicate the need for the combination of the in-service supports development modes in order to produce significant results. This assertion is corroborated by the significance of the combination of the three examined modes on teachers’ efficacy and attitude.

CONCLUSION AND RECOMMENDATIONS

The implication of the results for practice is that depending on the goals of the training; whether the development of efficacy in or attitude towards, stakeholders should determine the appropriate mix of postgraduate degree, experience with inclusive classroom and training on inclusive education that maximizes the resources available and teachers’ learning outcomes while minimizing costs. This recommendation stems from the findings of the study that none of the three continuous development programmes when individually assessed influence learning outcomes of the teachers. The findings of the study call for extension of research to determine the extent to which these findings could be generalizable to the in-service supports and continuing professional development programmes offered to primary education level teachers. Other research efforts may thus look at the factors that affect the effectiveness of each of these forms of in-service teacher supports most especially in Nigeria where maximum gains is expected of investments in teacher training and teacher education vis-à-vis the achievement of sustainable development goals in education.

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