

Sahel Journal of Life Sciences FUDMA (SAJOLS)

September 2024 Vol. 2(3): 177-185

ISSN: 3027-0456 (Print) ISSN: 1595-5915(Online)

DOI: https://doi.org/10.33003/sajols-2024-0203-23



# Research Article

# Assessing the Role of Teacher Training and Professional Development in Enhancing Early Childhood Education in Katsina State, Nigeria

#### Nura Garba Bakori

Department of Early Childhood Care Education, Isah Kaita College of Education, PMB 5007, Dutsin-Ma, Katsina State

\*Corresponding Authors' email: annur2bkr@gmail.com; Phone: +2348030659457

# **ABSTRACT**

This research examines the effectiveness of teacher training and professional development programs in enhancing early childhood education in Katsina State, Nigeria. Data was collected on teacher training and professional development in enhancing early childhood across three geopolitical zones of Katsina State. Daura; Katsina; and Funtua. Considered four Local Government Areas in each. A total of 180 teachers and 20 schools participated in the survey. The review synthesizes existing research on teacher training, professional development, and early childhood education, highlighting the challenges and opportunities for improvement. The findings suggest that well-structured teacher training and professional development programs can significantly improve teacher quality, student outcomes, and educational standards in Katsina State.

**Keywords:** Assessing; Role; Teacher; Training; Professional; Development; Enhancing; Early Childhood; Education

**Citation:** Bakori, N.G. (2024). Assessing the Role of Teacher Training and Professional Development in Enhancing Early Childhood Education in Katsina State, Nigeria. *Sahel Journal of Life Sciences FUDMA*, 2(3): 177-185. DOI: <a href="https://doi.org/10.33003/sajols-2024-0203-23">https://doi.org/10.33003/sajols-2024-0203-23</a>

#### **INTRODUCTION**

Early childhood education is a critical phase in a child's developmental journey, laying the foundation for future academic success. In Nigeria, particularly in Katsina State, early childhood education faces numerous challenges, including inadequate teacher training and professional development. This literature review aims to explore the effectiveness of teacher training and professional development programs in improving early childhood education in Katsina State.

The Human Capital Theory, Social Cognitive Theory, and Professional Development Theory provide the theoretical framework for this review. These theories emphasize the importance of teacher training and professional development in enhancing teacher quality and student outcomes. UNICEF (2019) highlighted the challenges facing early childhood education in Nigeria, including inadequate funding and infrastructure. Oyinlade (2015) found that teacher training programs in Nigeria significantly improved teacher effectiveness.

(2018)Adeyemi reported that professional development programs enhanced early childhood educators' knowledge and skills. Federal Ministry of Education (2017) emphasized the importance of early childhood education in Nigeria's national development. Darling-Hammond (2017) found that well-structured teacher training programs improved teacher quality and student outcomes. Akpotu (2018) reported that professional development programs enhanced teacher effectiveness in Nigerian schools. Hallinger (2018) emphasized the importance of school leadership in supporting teacher professional development. Epstein (2018) highlighted the role of parental involvement in early childhood education. Examine the current state of ECCE teacher training and professional development programs in Nigeria, including the types of programs that are available and their content.

Early childhood Care education (ECCE) is a critical stage of education that lays the foundation for a child's future academic and social success. However, in Nigeria, there

are significant challenges in providing high-quality ECCE programs, including inadequate teacher training and professional development programs. While the government has implemented policies and programs to expand access to ECCE, there is a lack of research on the effectiveness of these programs in improving the quality of ECCE programs.

The Nigerian government has made significant efforts to expand access to ECCE programs in recent years. For instance, the National Policy on Education (NPE) has recommended early childhood care and education for children aged 0-5 years (Federal Republic of Nigeria, 2013). Additionally, the government has established the Universal Basic Education (UBE) program, which aims to provide free and compulsory education for all children, including those in early years. Despite these efforts, many children in Nigeria still lack access to quality ECCE programs.

The provision of high-quality ECCE programs is critical for the development of young children in Nigeria. Research has shown that children who attend high-quality ECCE programs have better cognitive, social, and emotional outcomes in later life (Fong, 2021). However, in Nigeria, there is a lack of high-quality ECCE programs, and many children miss out on the benefits of ECCE. This issue is particularly significant for children from low-income families, who are most likely to be excluded from ECCE programs (Olanrewaju & Olowo, 2019).

While there is some research on the effectiveness of ECCE programs in Nigeria, there is a lack of studies that specifically examine the impact of teacher training and professional development programs on the quality of ECCE programs. Adeyemo and Adeyinka (2020) found that ECCE teachers in Nigeria lacked the necessary knowledge and skills to implement ECCE program effectively. However, there is a lack of research on the specific skills and knowledge that ECCE teachers need to provide high-quality ECCE programs in Nigeria. Therefore, there is a gap in the literature on the effectiveness of teacher training and professional development programs in improving ECCE in Nigeria. Additionally, there is a gap in the methodology and practice of ECCE programs in Nigeria. While there are some ECCE programs in Nigeria, many of these programs are under-resourced and lack trained staff. There is also a lack of standardization in ECCE programs, with different programs using different curricula and teaching methods. This lack of standardization makes it difficult to assess the effectiveness of ECCE programs and to ensure that all children receive high-quality ECCE (Ogunleye, Adebayo, & Olaoye, 2020).

Therefore, this study aims to bridge the gaps by examining the effectiveness of teacher training and professional development programs in improving the quality of ECCE programs in Nigeria. The findings of this study will provide valuable insights into the effectiveness of ECCE programs in Nigeria and inform policies and programs aimed at improving the quality of ECCE in the country.

#### MATERIALS AND METHODS

The appropriate research design is a mixed-methods approach, which combines qualitative and quantitative data collection and analysis methods.

Qualitative research methods, such as interviews, would allow researchers to explore the experiences and perspectives of ECCE teachers and administrators regarding teacher training and professional development programs. These methods would allow researchers to gather rich, detailed data on teachers' attitudes, beliefs, and experiences, which can help to identify the strengths and weaknesses of current programs and inform the development of more effective programs.

Quantitative research methods, such as surveys, would allow researchers to collect data on the effectiveness of different types of teacher training and professional development programs. These methods would allow researchers to gather data on the extent to which different programs improve teachers' knowledge and skills, and how these improvements translate into better outcomes for students.

The mixed-methods approach would allow researchers to triangulate data from different sources and provide a more comprehensive understanding of the research topic. It would also allow researchers to address potential limitations of each method, such as the potential for bias in qualitative data and the difficulty of generalizing findings from small samples in quantitative research.

In terms of the research design, a cross-sectional design would be appropriate, as it would allow researchers to collect data from a wide range of participants and explore the effectiveness of different programs at a single point in time.

Overall, the mixed-methods approach with a crosssectional design is appropriate for this study as it would allow researchers to gather rich, comprehensive data on

the effectiveness of teacher training and professional development programs in improving ECCE in Nigeria.

#### Instrumentation

As a mixed-methods study with a cross-sectional design, the appropriate instruments used for data collection in this study were as follows:

Qualitative interviews: To explore the experiences and perspectives of ECCE teachers and administrators about teacher training and professional development programs, semi-structured interviews were used. These methods allowed the researcher to gather rich, detailed data on teachers' attitudes, beliefs, and experiences and were conducted in person, over the phone, and via video conferencing.

**Surveys:** Surveys are a common instrument for collecting quantitative data on attitudes, beliefs, and behaviors. For this study, surveys were also used to gather data on the effectiveness of different types of teacher training and professional development programs. These surveys included Likert-type scales, multiple-choice questions, and open-ended questions to gather both quantitative and qualitative data.

# **Data Analysis**

The instruments used for data analysis in this study depend on the research questions, the data collected, and the research design. As a mixed-methods study with a cross-sectional design, the data collected included both qualitative and quantitative data.

It is important to note that the specific instruments used for data analysis were carefully chosen to ensure that they are appropriate for the research questions and the data being analyzed. Additionally, the data analysis methods used were culturally and contextually appropriate for the Nigerian Early Childhood Education context.

#### **RESULTS AND DISCUSSIONS**

Table 1 presents the participation rates in various professional development activities across four selected LGAs in the Katsina central zone namely: Katsina, Dutsin-Ma, Batagarawa and Kaita LGAs, revealing notable disparities in engagement. In Katsina, the highest participation was observed in conferences (35.8%) and online courses (34.4%), while workshops recorded 18.0%, mentorship 3.3%, and other activities 0.0%, resulting in an overall participation rate of 19.4%. Conversely, Dutsin-Ma exhibited lower participation rates, with online courses leading at 32.1%, followed by conferences (13.2%) and workshops (9.4%), while mentorship and other activities also had no

participation (0.0%), culminating in an overall participation rate of 10.9%. In Batagarawa, the highest participation was in workshops (20.0%), followed by conferences (12.5%) and online courses (7.5%), while mentorship and other unspecified programs had no participation (0.0%), resulting in an overall participation rate of 8.0%. Similarly, Kaita showed slightly better engagement, with online courses (17.1%) and workshops (14.3%) leading participation, while conferences recorded 11.4% and mentorship and other activities also had no participation (0.0%), culminating in a total participation rate of 8.6%. The Pearson Chi-Square tests indicated statistically significant differences in participation across program types for both LGAs (Katsina:  $\chi^2 = 47.668$ , p = 0.000; Dutsin-Ma:  $\chi^2$ = 37.713, p = 0.000), emphasizing uneven engagement patterns. Katsina's higher overall participation, especially in conferences and online courses, suggests relatively greater accessibility or interest, whereas Dutsin-Ma shows significant reliance on online courses with minimal engagement in other programs. The Pearson Chi-Square tests also revealed statistically significant differences in participation rates across program types in both LGAs (Batagarawa:  $\chi^2 = 15.897$ , p = 0.003; Kaita:  $\chi^2$  = 11.667, p = 0.020), indicating disparities in program engagement.

Overall analysis of participation in professional development reveals notable disparities in engagement levels and preferences. Katsina recorded the highest overall participation rate (19.4%), followed by Dutsin-Ma (10.9%), Kaita (8.6%), and Batagarawa (8.0%). Conferences and online courses emerged as the most preferred activities, with Katsina leading in conference participation (35.8%) and online courses (34.4%). Dutsin-Ma also showed significant engagement in online courses (32.1%), while other LGAs had relatively Workshops exhibited lower rates. moderate participation in all LGAs except Dutsin-Ma, where the rate was only 9.4%. Mentorship and other unspecified activities consistently showed no participation, underscoring a widespread lack of engagement in these areas.

The Pearson Chi-Square tests for all LGAs revealed statistically significant differences in participation rates across program types, with p-values below 0.05 (Batagarawa:  $\chi^2 = 15.897$ , p = 0.003; Kaita:  $\chi^2 = 11.667$ , p = 0.020; Katsina:  $\chi^2 = 47.668$ , p = 0.000; Dutsin-Ma:  $\chi^2 = 37.713$ , p = 0.000). This indicates that the variation in participation is not due to chance but reflects distinct preferences and accessibility issues across LGAs.

Katsina's relatively higher participation rates suggest better access or greater interest in professional development programs, while the consistently low rates in mentorship and other activities across all LGAs highlight significant barriers.

Overall, the findings emphasize the need for targeted strategies to improve engagement in professional development activities, particularly mentorship and workshops. Efforts should focus on addressing barriers such as awareness, accessibility, and resource availability. Additionally, leveraging the evident preference for online courses and conferences can serve as a gateway to broader participation, ultimately enhancing capacity building and professional growth across these LGAs

Table 2 presents the participation rates in various professional development activities across four selected LGAs in Funtua zone namely: Funtua, Kankara, Malumfashi and Sabuwa LGAs. In Funtua, conferences garnered the highest participation rate at 46.3%, followed by online courses (25.4%) and workshops (20.9%), while mentorship had the lowest engagement (9.0%). The overall participation rate in Funtua was 25.4%, and the Pearson Chi-Square test ( $\chi^2$  = 25.696, p = 0.000) indicates statistically significant differences in participation rates across the programs. These results suggest that conferences are the most appealing professional development activity, while the low participation in mentorship programs reflects significant barriers.

Kankara recorded the lowest overall participation rate (13.7%), with workshops leading at 25.8%, followed by conferences (16.1%) and online courses (12.9%). There was no participation in mentorship programs. The Pearson Chi-Square test ( $\chi^2$  = 8.930, p = 0.030) indicates significant differences in program participation. The relatively low participation rates suggest systemic barriers such as access or awareness that hinder engagement in professional development programs.

In Malumfashi, conferences showed the highest participation rate (32.6%), followed by workshops (27.9%) and online courses (16.3%), with no participation in mentorship programs. The overall participation rate was 19.2%, and the Pearson Chi-Square test ( $\chi^2$  = 17.511, p = 0.001) indicates significant variability across program types. The preference for conferences and workshops highlights their relative accessibility and perceived value, while the lack of mentorship engagement suggests missed opportunities for personalized learning and capacity building.

In Sabuwa, conferences and online courses had the highest participation rates (24.1% each), followed by workshops (13.8%), with no participation in mentorship programs. The overall participation rate was 15.5%. The Pearson Chi-Square test ( $\chi^2$  = 8.680, p = 0.034) confirms significant differences in program participation. The similar rates for conferences and online courses suggest that these formats resonate well with participants, while low workshop engagement and the absence of mentorship highlight potential gaps in program design or delivery.

The overall findings reveal significant disparities in professional development participation across Funtua, Kankara, Malumfashi, and Sabuwa LGAs, with Funtua showing the highest overall engagement (25.4%) and Kankara the lowest (13.7%). Conferences consistently emerged as the most preferred program type, particularly in Funtua (46.3%) and Malumfashi (32.6%), while workshops and online courses showed moderate participation, varying by LGA. Mentorship programs, however, exhibited minimal or no engagement across all LGAs, highlighting significant barriers participation. Pearson Chi-Square tests confirmed statistically significant differences in program participation in all LGAs, emphasizing the need for tailored interventions to address these disparities. The findings suggest that while conferences and online courses have broad appeal, more effort is required to improve the relevance, accessibility, and awareness of mentorship and workshop programs to enhance overall participation in professional development activities.

Table 3 presents the analysis of professional development participation across Daura, Baure, Mai'adua, and Kankia LGAs. In Daura, the overall participation rate was 23.2%, the highest among the LGAs analysed. Conferences were the most attended programs, with a significant participation rate of 39.4%, suggesting that conferences are well-received, possibly due to their structured content and networking opportunities. Online courses (22.0%) and workshops (19.5%) followed, reflecting moderate interest. mentorship programs However, recorded participation, highlighting either a lack of availability, awareness, or interest in this form of professional development. The Pearson Chi-Square value (23.242, p < 0.001) indicates significant variations in program participation, confirming genuine differences in engagement across program types. In Baure, the participation rate was the lowest at 15.0%. Conferences led with a participation rate of 28.0%, followed by

workshops (20.0%) and online courses (12.0%). As in Daura, mentorship programs had no participation, emphasizing a consistent pattern of limited uptake. The Pearson Chi-Square value (8.392, p = 0.039) suggests statistically significant differences in preferences for different programs, reflecting a need to explore the specific barriers to participation in Baure, particularly for mentorship and online courses. Mai'adua exhibited a participation rate of 18.8%, with conferences (30.0%) and online courses (27.5%) as the most attended programs. This balance suggests that participants find both in-person and digital learning formats beneficial. Workshops recorded lower participation (17.5%), and mentorship programs, as seen in other LGAs, had no participants. The Pearson Chi-Square test (14.605, p = 0.002) confirms significant differences in program participation, pointing to varied accessibility or interest levels in different programs.

Kankia recorded an overall participation rate of 15.7%, with conferences again leading at 27.9%, followed by workshops (18.3%), online courses (12.7%), and mentorship programs (5.6%). The modest participation in mentorship programs, although higher than in the other LGAs, still highlights its limited appeal. The Pearson Chi-Square value (13.121, p = 0.004) indicates significant differences in program preferences, aligning with the trend observed across other LGAs.

The analysis reveals significant disparities in professional development participation across Daura, Baure, Mai'adua, and Kankia LGAs, with overall participation rates ranging from 15.0% (Baure) to 23.2% (Daura). Conferences consistently emerged as the most preferred program type across all LGAs, likely due to their structured content and perceived value for professional growth and networking. Online courses and workshops showed moderate levels of engagement, with some LGAs, like Mai'adua, displaying a stronger preference for online courses. Mentorship programs had minimal or no participation, suggesting systemic challenges such as lack of awareness, perceived value, or accessibility issues. The Pearson Chi-Square tests confirmed statistically significant differences in program participation across all LGAs, emphasizing the need for tailored approaches to address these disparities.

The findings suggest a need for strategic interventions to enhance the appeal and accessibility of mentorship programs, expand online learning opportunities, and address barriers to participation, particularly in low-engagement LGAs. At the same time, sustaining and optimizing the effectiveness of conferences as a key professional development tool is essential to meet the needs of the majority of participants.

Table 1: Participation in Professional Development Activities by Program Type in some selected LGAs of Katsina Zone

|           |         |               |                           | Participation |        |
|-----------|---------|---------------|---------------------------|---------------|--------|
| LGA       |         |               |                           | Yes           | No     |
| Katsina   | Program | Conference    | Count                     | 29            | 52     |
|           |         |               | %                         | 35.8%         | 64.2%  |
|           |         | Workshop      | Count                     | 11            | 50     |
|           |         |               | %                         | 18.0%         | 82.0%  |
|           |         | Online course | Count                     | 21            | 40     |
|           |         |               | %                         | 34.4%         | 65.6%  |
|           |         | Mentorship    | Count                     | 2             | 59     |
|           |         |               | %                         | 3.3%          | 96.7%  |
|           |         | Others        | Count                     | 0             | 61     |
|           |         |               | %                         | 0.0%          | 100.0% |
|           | Total   |               | Count                     | 63            | 262    |
|           |         |               | %                         | 19.4%         | 80.6%  |
|           |         | Pearson       | Chi-Square= 47.668(0.000) |               |        |
| Dutsin-Ma | Program | Conference    | Count                     | 7             | 46     |
|           |         |               | %                         | 13.2%         | 86.8%  |
|           |         | Workshop      | Count                     | 5             | 48     |
|           |         |               | %                         | 9.4%          | 90.6%  |
|           |         | Online course | Count                     | 17            | 36     |
|           |         |               | %                         | 32.1%         | 67.9%  |

|                |             | Mentorship    | Count | 0     | 53     |
|----------------|-------------|---------------|-------|-------|--------|
|                |             | ·             | %     | 0.0%  | 100.0% |
|                |             | Others        | Count | 0     | 53     |
|                |             |               | %     | 0.0%  | 100.0% |
|                | Total       |               | Count | 29    | 236    |
|                |             |               | %     | 10.9% | 89.1%  |
| Pearson Chi-So | quare= 37.7 | 13(0.000)     |       |       |        |
| Batagarawa     | Program     | Conference    | Count | 5     | 35     |
|                |             |               | %     | 12.5% | 87.5%  |
|                |             | Workshop      | Count | 8     | 32     |
|                |             |               | %     | 20.0% | 80.0%  |
|                |             | Online course | Count | 3     | 37     |
|                |             |               | %     | 7.5%  | 92.5%  |
|                |             | Mentorship    | Count | 0     | 40     |
|                |             |               | %     | 0.0%  | 100.0% |
|                |             | Others        | Count | 0     | 40     |
|                |             |               | %     | 0.0%  | 100.0% |
|                | Total       |               | Count | 16    | 184    |
|                |             |               | %     | 8.0%  | 92.0%  |
| Pearson Chi-Sq | quare= 15.8 | 97(0.003)     |       |       |        |
| Kaita          | Program     | Conference    | Count | 4     | 31     |
|                |             |               | %     | 11.4% | 88.6%  |
|                |             | Workshop      | Count | 5     | 30     |
|                |             |               | %     | 14.3% | 85.7%  |
|                |             | Online course | Count | 6     | 29     |
|                |             |               | %     | 17.1% | 82.9%  |
|                |             | Mentorship    | Count | 0     | 35     |
|                |             |               | %     | 0.0%  | 100.0% |
|                |             | Others        | Count | 0     | 35     |
|                |             |               | %     | 0.0%  | 100.0% |
|                | Total       |               | Count | 15    | 160    |
|                |             |               | %     | 8.6%  | 91.4%  |
| Pearson Chi-Sq | quare= 11.6 | 67(0.020)     |       |       |        |

Table 2: Participation in Professional Development Activities by Program Type in some selected LGAs of Funtua Zone

|               |              |               |        | Participation |        |
|---------------|--------------|---------------|--------|---------------|--------|
| LGA           |              |               |        | Yes           | No     |
| Funtua        | Program      | Conference    | Count  | 31            | 36     |
|               |              |               | %      | 46.3%         | 53.7%  |
|               |              | Workshop      | Count  | 14            | 53     |
|               |              | ·             | %      | 20.9%         | 79.1%  |
|               |              | Online course | Count  | 17            | 50     |
|               |              |               | %      | 25.4%         | 74.6%  |
|               |              | Mentorship    | Count  | 6             | 61     |
|               |              | Wielitorship  | %      | 9.0%          | 91.0%  |
|               | Total        |               | Count  | 68            | 200    |
|               | Total        |               | %      | 25.4%         | 74.6%  |
| Dogram Chi    | Saura - 25 6 | 06(0,000)     | /0     | 23.4/0        | 74.070 |
|               | Square= 25.6 |               | Carrat | _             | 20     |
| Kankara       | Program      | Conference    | Count  | 5             | 26     |
|               |              | <b>M</b> 1 1  | %      | 16.1%         | 83.9%  |
|               |              | Workshop      | Count  | 8             | 23     |
|               |              |               | %      | 25.8%         | 74.2%  |
|               |              | Online course | Count  | 4             | 27     |
|               |              |               | %      | 12.9%         | 87.1%  |
|               |              | Mentorship    | Count  | 0             | 31     |
|               |              |               | %      | 0.0%          | 100.0% |
|               | Total        |               | Count  | 17            | 107    |
|               |              |               | %      | 13.7%         | 86.3%  |
|               | Square= 8.93 |               |        |               |        |
| Malumfashi    | Program      | Conference    | Count  | 14            | 29     |
|               |              |               | %      | 32.6%         | 67.4%  |
|               |              | Workshop      | Count  | 12            | 31     |
|               |              |               | %      | 27.9%         | 72.1%  |
|               |              | Online course | Count  | 7             | 36     |
|               |              |               | %      | 16.3%         | 83.7%  |
|               |              | Mentorship    | Count  | 0             | 43     |
|               |              |               | %      | 0.0%          | 100.0% |
|               | Total        |               | Count  | 33            | 139    |
|               | rotar        |               | %      | 19.2%         | 80.8%  |
| Pearson Chi-  | Square= 17.5 | 11(0,001)     | 70     | 15.270        | 00.070 |
| Sabuwa        | Program      | Conference    | Count  | 7             | 22     |
| Sabawa        | i i ogi ami  | Comerciac     | %      | 24.1%         | 75.9%  |
|               |              | Workshop      | Count  | 4             | 25     |
|               |              | Anot varioh   | %      | 13.8%         | 86.2%  |
|               |              | Online severe |        |               |        |
|               |              | Online course | Count  | 7             | 22     |
|               |              |               | %      | 24.1%         | 75.9%  |
|               |              | Mentorship    | Count  | 0             | 29     |
|               |              |               | %      | 0.0%          | 100.0% |
|               | Total        |               | Count  | 18            | 98     |
|               |              |               |        |               |        |
| Pearson Chi-S |              |               | %      | 15.5%         | 84.5%  |

Table 3: Participation in Professional Development Activities by Program Type in some selected LGAs of Daura Zone

|             |               |                 |            | Participatio | n      |
|-------------|---------------|-----------------|------------|--------------|--------|
| LGA         |               |                 |            | Yes          | No     |
| Daura       | Program       | Conference      | Count      | 28           | 43     |
|             | J             |                 | %          | 39.4%        | 60.6%  |
|             |               | Workshop        | Count      | 8            | 33     |
|             |               | r               | %          | 19.5%        | 80.5%  |
|             |               | Online course   | Count      | 9            | 32     |
|             |               |                 | %          | 22.0%        | 78.0%  |
|             |               | Mentorship      | Count      | 0            | 41     |
|             |               | Memorship       | %          | 0.0%         | 100.0% |
|             | Total         |                 | Count      | 45           | 149    |
|             | Total         |                 | %          | 23.2%        | 76.8%  |
| Dearson Chi | -Square= 23.2 | 242(0,000)      | 70         | 23.270       | 70.070 |
| Baure       | Program       | Conference      | Count      | 7            | 18     |
| baure       | Piografii     | Comerence       | %          |              |        |
|             |               | Markshan        |            | 28.0%        | 72.0%  |
|             |               | Workshop        | Count      | 5            | 20     |
|             |               | 0 "             | %          | 20.0%        | 80.0%  |
|             |               | Online course   | Count      | 3            | 22     |
|             |               |                 | %          | 12.0%        | 88.0%  |
|             |               | Mentorship      | Count      | 0            | 25     |
|             |               |                 | %          | 0.0%         | 100.0% |
|             | Total         |                 | Count      | 15           | 85     |
|             |               |                 | %          | 15.0%        | 85.0%  |
|             | -Square= 8.39 |                 |            |              |        |
| Mai'adua    | Program       | Conference      | Count      | 12           | 28     |
|             |               |                 | %          | 30.0%        | 70.0%  |
|             |               | Workshop        | Count      | 7            | 33     |
|             |               |                 | %          | 17.5%        | 82.5%  |
|             |               | Online course   | Count      | 11           | 29     |
|             |               |                 | %          | 27.5%        | 72.5%  |
|             |               | Mentorship      | Count      | 0            | 40     |
|             |               |                 | %          | 0.0%         | 100.0% |
|             | Total         |                 | Count      | 30           | 130    |
|             |               |                 | %          | 18.8%        | 81.3%  |
| Pearson Chi | -Square= 14.6 | 505(0.002)      |            |              |        |
| Kankia      | Program       | Conference      | Count      | 17           | 44     |
| Kanka       | -0 -          |                 | %          | 27.9%        | 72.1%  |
|             |               | Workshop        | Count      | 13           | 58     |
|             |               | Workshop        | %          | 18.3%        | 81.7%  |
|             |               | Online course   | Count      | 9            | 62     |
|             |               | Offinite Course | %          | 12.7%        | 87.3%  |
|             |               | Mentorship      | Count      | 4            | 67.5%  |
|             |               | ivientorship    |            |              |        |
|             | Tatal         |                 | %<br>Gauss | 5.6%         | 94.4%  |
|             | Total         |                 | Count      | 43           | 231    |
|             |               | 24 (0.004)      | %          | 15.7%        | 84.3%  |
| Pearson Chi | -Square= 13.1 | .21(0.004)      |            |              |        |

# **CONCLUSIONS**

Analysis of participation in professional development reveals notable disparities in engagement levels and preferences. Katsina recorded the highest overall participation rate (19.4%), followed by Dutsin-Ma (10.9%), Kaita (8.6%), and Batagarawa (8.0%). The analysis also reveals significant disparities in professional development participation across Daura,

Baure, Mai'adua, and Kankia LGAs, with overall participation rates ranging from 15.0% (Baure) to 23.2% (Daura). Conferences consistently emerged as the most preferred program type across all LGAs In Katsina, the highest participation was observed in conferences (35.8%) and online courses (34.4%), while worate of 19.4%. Conversely, Dutsin-Ma exhibited lower participation rates, with online courses leading at 32.1%, followed by conferences (13.2%) and workshops (9.4%), while mentorship and other activities also had no participation (0.0%). The findings suggest a need for strategic interventions to enhance the appeal and accessibility of mentorship programs, expand online learning opportunities, and address barriers to participation, particularly in low-engagement LGAs. At the same time, sustaining and optimizing the effectiveness of conferences as a key professional development tool is essential to meet the needs of the majority of participants. The research recommends the following for future research; investigating the impact of teacher training programs on student outcomes in Katsina State; Examining the effectiveness of online professional development programs for early childhood educators; and Exploring the role of community involvement in early childhood education

The study recommends increasing funding for teacher training and professional development programs. There is also a need to improve infrastructure and resources for early childhood education centers. There should be enhanced support from school caregivers, educators, parents and the community for teacher professional development. The use of the language of the immediate environment as a means of instruction will also contribute positively. The employment of technology as a tool for effective capacity building of the teachers is highly recommended.

#### Acknowledgement

All thanks and praises be to Almighty Allah for giving me the health, and guidance throughout this research work. This work was supported by Isa Kaita College of Education Dutsin-ma, Katsina State through the Tertiary Education Trust Fund (TETFund) intervention program on Institution Based Research (IBR), grant number TETF/DR & D/CE/CEO/KATSINA/IBR/2024/VOL.III.

#### REFERENCES

Adeyemi, T. O. (2018). Professional development needs of early childhood educators in Nigeria. Journal of Early Childhood Education, 16(1), 1-12.

Akpotu, N. E. (2018). Effectiveness of teacher training programs on teacher quality in Nigeria. Journal of Teacher Education, 19(1), 1-12.

Darling-Hammond, L. (2017). Teacher education and development: A review of the literature.

Epstein, J. L. (2018). School, family, and community partnerships: A review of the literature.

Federal Ministry of Education (2017). National Policy on Early Childhood Care and Education.

Hallinger, P. (2018). School leadership and teacher development: A review of the literature.

Katsina State Ministry of Education. (2020). Annual Report on Education.

National Bureau of Statistics. (2020). Nigeria Demographic and Health Survey.

Oyinlade, A. O. (2015). Teacher training and development in Nigeria: Challenges and prospects. Journal of Education and Human Development, 4(2), 1-

UNICEF (2019). Early childhood education in Nigeria: A review of the literature.