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Extent of Use of Teaching Learning Materials (TLM) in the Promotion of Diversity Equity, Inclusion and Accessibility (DEIA) in Basic Education in Ebonyi State, Nigeria

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ABSTRACT

The Universal Basic Education (UBE) programme was launched in Nigeria with the objective of providing every Nigeria child of school going age unfettered access to a 9 year compulsory, equitable, and inclusive schooling devoid of any form of discrimination. To gauge the extent to which this objective is being implemented, this researcher investigated the extent to which the teaching Learning Materials (TLM) which aid teaching and learning in the classroom promote diversity, equity, inclusion and access (DEIA) in educational practice. Specifically, the researcher isolated textbook contents a variable component of TLM for the study. Two research designs, content analysis and inclusive designs were jointly used to conduct the study. Four research questions and one null hypothesis tested at alpha level of 0.05 significance guided the study. Four of the Approved and Recommended Textbook in use in Ebonyi State Basic Education were sampled for the study using simple random sampling (SRS) technique. The instrument for data collection was the Guidance for Promoting Diversity, Equity, inclusion and Access in Educational Practice (GPDEIAEP). The guidance was adapted and used for the study. The findings of the study showed that the universal design of the sampled textbooks was strong in the promotion of DEIA. The study however revealed that the character/ subject/guest; the narration/dialogue; and images were not adequate in promoting DEIA in educational practices. Furthermore, the test of the hypothesis further revealed the strength of the universal design in promoting DEIA, practices. This is because the test of hypothesis showed that a significant difference does not exist in the universal design but it existed in other criterion (subject/character, images and narration/dialogue). Based on the findings of the study, the researcher recommended that Ebonyi State Ministry of Education should as a matter of urgency organize the review of approved textbooks and other TLMS used in schools to ensure that they promote, DEIA practices; sensitize and train textbook authors and other people who produce TLM and the general public on the need that TLMs promote DEIA; practices and ensure that only TLMS that promote DEIA practices are approved for use in schools.

INTRODUCTION

The Universal Basic Education (UBE) programme in Nigeria was launched in 1999 (Alaba & Olowoniwa, 2022; UBEC 2002). The thrust of the programme is to offer every Nigerian child of school-going age equal educational opportunity to develop through free, compulsory and uninterrupted education starting from pre-primary to Junior Secondary School (JSS 3) (FRN, 2013). Hence UBE program has three components; the Early Childhood Education (ECCE) the Primary Education, and the Junior Secondary School (UBEC, 2012)

The philosophy of the UBE programme is anchored on inclusive and universal access to basic education for all children in Nigeria devoid of discrimination of any type and provision of access and equity in UBE service delivery (Wikipedia, 2024). One of the UBE programme objectives is to provide free, inclusive, universal and compulsory basic education to every Nigerian child aged 6-15 years (UBEC, 2024) in a conducive environment through hands-on and minds-on processes using relevant teaching learning materials.

Consequently, the teaching learning materials (TLM) which aid the pedagogic processes (mind-on and hands-on) in the UBE classroom play important roles in the achievement of the UBE goals. This is due to the crucial roles that TLM plays in the delivery of quality instructions in the classrooms, (NovelUP,2024). Some of the roles include; facilitates understanding, promotes independent learning and simplifies assessment tasks. (Ampersand Group, 2024)-

Hence, if the lofty goals of providing free, compulsory, and universal basic education for all children etc (FME, 2021) of the UBE programme are to be achieved, there is compelling need that TLMs must be provided in school and also that diversity, equity, inclusion and accessibility (DEIA) be considered and included as integral component in the design of TLMs in use in basic education program. This will help to ensure that all children are carried along without exclusion. Perhaps it is expedient to explain these DEIA concepts and implication in basic education. Diversity as a concept in education and a component

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of quality education is the recognition by education managers that there are group or individual differences that exist among group being served and that each group has a right to quality education which must be met. It encompasses all the different characteristics that make an individual or group different from another (CREATE, 2024) This means that for UBE program implementation to bear the desired fruits it must integrate for recognition and respect diversity as a critical component. Basically diversity consideration in education practice is not synonymous with quota, it is rather the expression and recognition of the variety in nature and human society. Hence in the provision of equitable and qualitative basic education, there should be representational diversity, which is an outcome of proactive measures to correct systematic under-representation and to create mass of those who are historically marginalized through under representation (Ucalgary, 2024). It is crucial that the Basic Education managers in the world, especially in Nigeria recognize the diversity in ethnicity, gender, clan, languages, thought, socio-economic status, religious affiliation etc among the children that are served. The children who are served have different backgrounds abilities and identity which must be recognized and planned for, in teaching and learning materials development for use in the classroom and in other services. Worthy of note is that openness to diversity widens access to the best talent (IVIC, 2020) The assertion applies to all field of life including basic education. Equity, as an important component of education service delivery refers to a state of affairs, where all members of a group enjoy the same inputs, outputs or outcomes in terms of status, rights and responsibility (USAID, 2020). It encompasses distribution of resource and service in educational setting that allows all children to access high quality educational services or resources in the pursuit of their learning aspirations. According to Ucalgary, (2014), equity is the ethical principle and practice of fairness and doing the right things. The UBE program recognized the important role of equity in service delivery and hence, reflected equity in it's philosophy. What seems to be lacking is the ability of UBE managers to recognize and reflect equity in their practices. For equity to prevail in the design of teaching and learning materials in Basic Education, requires identifying patterns or type of inequalities and exclusion that currently pervades the system so that changes will be effected to the system, culture and even processes that impede members from assessing required services that help to achieve their education potentials. It is informative and advantageous that education managers in Nigeria understand that equity enable delivery of fair outcomes. This leads to innovation, creativity, and productivity (IVIC, 2020). This therefore shows that construction and delivery of teaching learning material that promote equity in the contents of teaching learning materials and their availability to pupils in Nigeria must be the watchword of basic education managers, in Ebonyi State and Nigeria at large. The equity theory developed

by Adams JS (1963) is a testament to the above assertion as it focuses on determining whether the distribution of resources is fair (Orji & Nwokeocha, 2014). The theory can be conceived as a subjective judgment by individuals about the fairness of the reward she/he gets relative to his/her personal worth in comparison to others within the same system. This means that the use of established rules and regulation should be tempered by a sense of fairness, kindness and justice. Hence, Educational materials and services must consider each learner's peculiarity and provide him/her the chance to learn in the way that supports his/her learning style. Equity within the education parlance or context connotes a learner receiving the support and resources needed to achieve academic success, regardless of their social, economic and academic circumstance. Basic education managers should provide equitable environment to all learners in all facets of the program implementation in order for equity to prevail and for the goals of basic education program to be achieved.

Inclusion, this is another major concept and component of quality education delivery that needs to be highlighted for promotion by education managers. This is due to the fact that the main goal of educational system is to function as an integrational institution in the society, and inclusion is often seen as the way to reach this goal (Rapp & Grandos, 2021). Inclusion itself as a concept connotes creation of experience in which all individuals feel welcomed, belonged, respected, supported and valued to fully participate in a program or enterprise (CREATE, 2024) It is also viewed as a deliberate effort to promote participation, engagement, empowerment and a sense of belonging for members of historically underrepresented and disadvantage group in all aspect of life (Ucalgary, 2024). Consequently, establishing inclusive environment enables authentic and empowered participation and a true sense of belonging (CREATE, 2024). It has been noted by researchers that inclusion allows engagement with talent effectively. That forms the reasons why education managers should promote inclusion in teaching learning materials used in the classroom. In fact, the inclusive education theory focuses on ensuring equal opportunities for all learners regardless of difference in abilities, background, or characteristics. The theory's focus also extends to educational policies and organization (Schirmer & Michailakis, 2015). The role of inclusive education can be better understood from the Vygostky and NiklasLuhman's theories of inclusive education. Vygostky's theory emphasized the importance of social and cultural interaction in child's development. He believed that inclusion is very essential for the development of a child's cognitive and social skills. He argued that children learn best in an environment which is inclusive of others with diverse abilities and backgrounds. Such a classroom according to him can provide opportunities for collaborative learning and social interaction which can enhance the development of all children, hence, such environment is beneficial

of all children. NiklasLuhman's theory of inclusion, is anchored on system theory and constructive perspective (Schormer & Michailiki 2015) The theory suggests that various forms of communication during a typical school day can lead to the inclusion or exclusion of learners. From the theory of institutionalism, he looked at the roles of institutions in shaping social norms, values and practices. He therefore stated that education processes, systems, and institutions can promote, inclusive practices and cultures that value diversity equity and social justice. He strongly advocated for educational policy reform which will enhance implementing policies that promote inclusivity and address systemic barriers. Based on the two theories, there is a compelling need for education managers to design teaching and learning materials and other education services that promote social interaction and addresses the learning needs of every child. There should be institutional support for development of TLMS that promote inclusive practices and culture that does not discriminate persons. This will enhance the achievement of the goals of education especially the basic education globally, nationally and the state and local levels.

Accessibility: One of the philosophy of the Nigeria universal basic education program is to ensure access to basic education for all children of school going age, regardless of ethnicity, gender, religion and class (FRN: 2012). This assertion has direct correspondence to accessibility. It shows that accessibility and other services that support the implementation of basic education program are inextricably tied together. Accessibility as a variable of interest here refers to the reduction or elimination of physical and attitudinal barriers to equitable opportunities, especially for people with disabilities to enable them independently access every outward-facing and internal activity or electronic space and pursuit of best practices such as universal designs (CREATE 2024). It could be conceived to be removal of barriers to equitable participation in all aspect of life by people living with adverse visual, motor, auditory, learning and cognitive abilities (Ucalgary, 2024). The theory of access by Ribot and Peluso conceived access as the abilities of actors to benefit from things, or the ability to derive benefit from things (Ribot&Peluso, 2003). Hence, access is key to the implementation of any program which includes basic education. All resources must be amenable to reconfiguration in a way that they will be accessible to all learners at the right time irrespective of the learner's characteristics. It is unarguable that accessibility is intricately linked with equity and inclusion, as inclusive and equitable learning are not possible if the needs of learners with disabilities or other physical or psychological barriers are not addressed. The framework for access to basic education in Nigeria is contained in the National Policy on Education (FRN, 2013). The policy stipulated that every child is entitled to free and compulsory, education at the basic level in Nigeria. Consequent upon this policy provision which serves as a legal backing, education stakeholders must ensure that every child

enjoys unfettered access to basic education in Ebonyi state and Nigeria. Against this back drop and upon the central role of access to program success, education institutional structures/ framework such as classroom, pedagogical processes and teaching learning material etc must support access to basic education provision, as access is a precursor to completion and outcome. Another major factor worthy of consideration that promote or hinders achieving the objective of basic education and promotion of DEIA practices program is the teaching learning material (TLM) available to support classroom instructional delivery. It is obvious, that the quality of instructional delivery in the classroom is dependent on the quality and quantity of the teaching learning materials designed and effectively used by teachers to support instruction delivery. This is because TLMS supports learning and aids a learner in concretizing a learning experience and make learning more exciting and interesting and interactive (MOES Uganda 2024.) TLM, as an education concept refers to a spectrum of educational materials that teachers use in the classroom to support specific learning objectives as obtained in the lesson plan (Lewis, 2024). It also refers to any material or resources used by teachers to facilitate learner learning in the class room (Edu.Tinker, 2023). To PBISS(2022) TLM is a broad range of instrument, resources and materials that are specifically created to assist in the acquisition of knowledge, ability, and comprehension across a variety of topic and discipline. Indeed, it is any material used by teachers to enhance their teaching to be comprehensive and effective (Teachmint, 2024). Indeed, TLM plays crucial roles in effective classroom pedagogical process and teacher who uses TLM can greatly assist students in learning process (Lewis, 2024).. TLM includes variety of materials such as textbook, handout, multimedia resource, manipulative and visual aid (Edu.Tinker, 2024). Other types of TLM include curricular or training materials or supplementary learning resources. The content may be delivered through any modality including text, image, audio, video etc (USAID, 2024).

There are benefits derivable from the appropriate use of TLMs in instructional delivery in the classroom and elsewhere. These include:

- Helpful in understanding and better learning;
- Time saving: Teacher spends less time to explain especially if it's audio video.
- Makes lesson more interesting.
- Makes content more comprehensive and clear.
- Removes language related difficulty (Teachmint, 2024)

It has been earlier noted that CLT is a theory that suggest ways to improve retention and expand the brain memory using teaching learning materials, since the CLT applies to all learners, everywhere, irrespective of race, society, gender, culture or disability, TLMS must accommodate each learner in order to enhance the expansion of his /her learning memory. TLM usage in the classroom is based on the cognitive load theory (CLT). The CLT is an instructional designs theory that reflects the way individual processes information (Mind tool, 2024). The

theory maintains that during learning, information must be held in the memory until it is processed sufficiently, to pass into long term memory (LTM). But the capacity of working memory is limited. When too much information is presented at a time, it becomes, overwhelmed and much of the information is lost. Hence there is need to expand working memory by using both visual and auditory channels. There is also need to merge together multiple sources of visual information wherever possible. Hence CLT considers the cognitive demand of learning materials to optimize learning outcomes, (Mind tools, 2024), the theory buttresses, the need for the design and use of TLM that recognizes and reflects, diversity, equity and can easily be accessible since the CLT applies to all learners. The TLM, should also promote inclusivity in educational processes. An inclusive TLM refers to TLM that tries to serve the needs of all learners, regardless of background, identity and support their engagement with the subject matter (Poorvu.centre.Vale.edu. 2025).

Schools are communities of learners (children) and staff of diverse background and needs. For schools to be alive to the demands of its clientele, which sometimes reflects diverse perspectives, must implement programmes that promote equity, diversity, inclusion and accessibility. Hence schools should provide structures and frameworks that meet the needs of all learners, provide inclusive services and use languages that are non-discriminatory. Above all, materials for teaching and learning and others that indirectly support teaching and learning must reflect diverse perspectives of the learners. It is by so doing, that school will create friendly environment for learning, all this will lead to the provision of TLMS and instructional delivery to promote DEIA practices in the schools.

Specifically, TLMs use in schools must as a matter of necessity;

- Reflect diverse stories and characters, present different viewpoints and perspectives on all events.
- The curriculum must accommodate diverse experiences and practice it.
- Use respectful language and terms while communicating. Such language must be clear and concise. There should be effective usage of visual aids which reflects diverse cultures.
- Dialogue in the classroom should be open and inclusive. There should be collaborative activities among learners and staff.
- There should be celebration of diversity in a way that fosters a sense of appreciation of diversity. Therefore materials for teaching and learning in schools must be designed to reflect all this considerations.

In this study, the emphasis will be on the contents of selected textbooks, which is one of the TLMs used in instructional delivery in schools. The contents are subdivided into four main domains/categories viz;

(a) Character/Subject: This includes animals, people or creatures in a story.

(b) Dialogue/narration: This is the process which teachers use to draw pictures in the mind of learners for

preservation and clear understanding of concepts.

(c) Images: This appeals to the visual components of learning and helps a great deal to enhance retention.

(d) The universal design of the textbooks: This makes the textbook accessible to all learners irrespective of their abilities, learning styles or other challenges.

Ebonyi state located in the South East geopolitical zone of Nigeria and an educational less developed states (EbonyiMoE), keyed into the UBE scheme at the programme inception. The UBE implementation in the state has been pursued with candour and vigor. The state had seen the UBE program as a veritable opportunity to develop strong foundation for education at the formative level and a panacea to exit the educationally less developed categorization. However, for these lofty dreams to happen, TLMS used in pedagogical processes in schools must integrate or reflect the DEIA principle in the outlook and usage. This isto make them appealing to and as well to cater for the learning needs of all children of school going age in the state. It is on record that 95% of the state inhabitants are Igbo(EBSG, 2002). The remaining 5% of the inhabitants who are from other ethnic groups and other population of the state who are physically challenged stand the grave risk of marginalization and exclusion if their interests are not reflected in the TLMs produced and utilized in schools. It is note worthy, that setting up of special schools for the physical challenged as is observed in the state is not enough to prevent physically challenged children from exclusion or marginalization as materials available in the schools may not be configured enough to address their peculiar needs. This reflection of DEIA in TLMs is one of the ways to prevent marginalization in educational practices.

The roles that DEIA embedded ITLMs play in instructional delivery in the classroom especially in the achievement of the UBE program prompted this study, which was intended to determine whether the TLMS in use in Ebonyi state basic education are DEIA complaint, the area of interest in the TLMs was the contents(character/subject, images of illustrations, narration /dialogue; and the universal design) of textbooks in use in the UBE Programme

Statement of Problem

The emphasis on quota system in all sphere of educational practice in Nigeria at both national and state levels is a strong indictment of non-consideration of DEIA principles in educational practices. Quota system is a non- inclusive practice that considers interest of only a particular group member, this undermines the principle of diversity, equality, inclusivity and hinders universal access to resources and opportunity. Consequent upon this, TLMs which promotes teaching and learning in classrooms, if designed based on quota consideration like other education program may not reflect DEIA principles. Furthermore, research evidences showed that gender biasmanifest in educational practices in Nigeria

in somany aspects such as; enrolment completion, textbooks, leadership roles, gender stereotypes, poverty and covid-19. (Ayodeji, (2010),Kaymalacloglu& Thomas (2024). Mustapha (2012), Ibeji (2023), Alabi, Mkpado, Ajala, Ifeyirika, Ngwube, Egbo, Ideis, Fasoranti, and Oganjimi (2024). Furthermore, Atoyeba (2024) had decried the under representation of cultural practice, community values, practical skills inherent in deferent parts of Nigeria in the TLMs and teaching models in schools. This observation was further amplified by Kabir, Marly, Akinrimade, and Zylkowaski (2021 as they reported that TLMs were generally not culturally responsive in some regions in Nigeria and TLM displayed only emergent gender balance. If those observations are correct, it shows that the TLMs and associated usage in instructional delivery is not DEIA complaint.

More-over, if the above observations reflect the nature of TLMs in some parts of Nigeria, there is tendency that the same applies in educational practices in Ebonyi State. Hence this study is carried out to determine the extent to which some TLMs used in Ebonyi State is DEIA compliant.

Purpose of the Study

The purpose of the study was to find out the extent to which the teaching learning materials TLMs (text books) in use in Basic Education in Ebonyi State promote diversity, equity, inclusion, and accessibility (DEIA) in educational practices. Specifically, the study investigated;

1. The extent to which the subject/characters in the contents promote DEIA.
2. The extent to which the images in the textbooks promote DEIA.
3. The extent to which the dialogue/ narrations promote DEIA.
4. The extent to which the universal design of the text book promotes DEIA in educational practice.

Four (4) research questions were raised to guide the study. They are

1. To what extent do the characters/subjects in the content of the text books promote DEIA in educational practice in Ebonyi State:
2. To what extent do the images in the textbooks promote DEIA in educational practice in Ebonyi state?
3. To what extent does the narration/dialogues on the textbooks promote DEIA in educational practice in Ebonyi state?
4. To what extent does the universal design of the textbooks promote DEIA in educational practice in Ebonyi State basic education?

Hypotheses

The researchers formulated one (1) null hypothesis to guide the study and the hypothesis was tested at 0.05 levels of significance.

HO: The contents of the TLMs (textbooks) (especially in character/subject; images; narration/ dialogue and

universal designs) do not significantly deviate from specification for TLMs (text books) in basic education.

MATERIALS AND METHODS

This study employed a content analysis research design to examine the Extent of Use of Teaching Learning Materials (TLM) in the Promotion of Diversity, Equity, Inclusion and Accessibility (DEIA) in Basic Education in Ebonyi State, Nigeria. These designs were considered appropriate to this study because content analysis research design helps researchers to quantify and analyze presence of themes, or concepts in a text or other qualitative contents and the inclusive research design helps researchers to incorporate or integrate the interests of everyone within the group or society and inquire if services, policies or products meet their needs. The combination of these two designs helped the researchers to make deductive value judgment on the instructional materials in use in the state basic schools.

The population of the study comprises all the instructional materials (textbooks, wall charts, electronic devises, chalkboards and others) that aid teaching and learning in Ebonyi State Basic schools. Purposive sampling technique was used to select approved textbooks (one of the TLMs) in use in basic schools in the state while simple Random sampling (SRS) was used to select four (4) textbooks. These were STAN Basic Science and Technology for Primary (4); Macmillan Verbal Reasoning for Primary four (4); Learn Mathematics Textbook for Primary Six (6) and New Concept English for Junior Secondary Schools Three (3). Finally SRS was used to select the content of these text books.

The instrument for the collection of data was the Guidance for Promoting Diversity, Equity, Inclusion and Accessibility in Educational Materials (GPDEIAEM) data assessment instrument. The instrument was downloaded from (USAID) website. The instrument was already validated standardized and in use by education development partners such as USAID, UNESCO, UNICEF and others. The researchers adapted the instrument before using it for data collection. The data collected was analyzed using summation and percentages. Chi-square was conducted on the collected data in order to answer the research question.

RESULTS AND DISCUSSIONS

Results

Research Question 1

To what extent do the characters/ subjects in the contents of the textbooks promote DEIA in educational practice in Ebonyi State?

From the specifications contained in the guidance, which is the data collection tool developed by USAID, educational materials can be considered exemplary in promoting diversity, equity, inclusion, and accessibility if it meets the following criteria as displayed in attached appendices (1-4). See the appendices).

Table 1: Showing Rubric Rating for the Criteria in Section 1 (Subjects/Character/Guests) of the four (4) Sampled Textbooks used in Ebonyi State Basic Education

Macmillan reasoning for pry 4	STAN Basic Science & Tech.	Learn Mathematic For PRY 6	New Concept English Language For JSS3
Total average score 12/26(46.2%). It scored 2(100%) in disability; gender; social-economic status; Active and protagonist roles; asnd conflict sensitivity; age; rural vs urban. It scored 0 (<50%) rating in ethnicity and religion and language diversity.	Total average score 10/26 (38.5%). It was rated 2 (100%) in age; socio-economic status, and conflict sensitivity. It had 1 (>50%) in gender sensitivity; rural vs urban it had 0 (<50%) rating in disability ethnic and religion and language diversity.	Total score 10/26 (38.5%) it was rate 2 (100) in ethnicity and religion; age; rural vs urban; active and protagonist roles and conflict sensitivity. It was rated 0(<50) in gender; while other criteria considered were not captured.	Total average score 15/26 (57.7%) in the 13 units. But the score for gender is, 2 (100%); language and diversity 2 (100%) rural vs urban 2 (100%) socio-economic status 2 (100%), for ethnicity and religion; Active and protagonist roles, their scores were 1 (>50%). Disability; and age considerations had a score of 0 (<50%)

Rating keys: 2 = fully met; 1 = partially met; 0 = not met

From the results displayed on table 1 the textbooks character/subject promotion of DEIA are as follows; Macmillan Verbal Reasoning for pry 4 was rated 46.2%; New Concept English language for JSS3 57.7%, STAN Basic Science and Technology for primary 4 38.5% and Learn mathematics for pry 6 = 38.5%. this shows that New concept English language has the highest rating in the use of character/subject to promote DEIA in basic educational materials.

Research Question 2

To what extent do the images in the textbooks promote DEIA in educational practice in basic education in Ebonyi State?

Educational materials can be considered exemplary in terms of promoting DEIA if it scores 2(100) in all the criteria assessed in images (See appendix 2 for the criteria on images).

Table 2: Showing Rubric Rating of the Criteria on Section 2 (Text book Images) of the Four (4) Sampled Textbooks used as Instructional Material in Ebonyi State Basic Education

Macmillan Verbal reasoning for pry 4	STAN Basic Science & Tech. for pry 4	Learn Mathematic For PRY 6	New Concept English Language For JSS3
The total score in the rating is 4/14(28.6%). The rating in conflict sensitivity; and other were 2 (100%) respectively while disability; ethnicity and religion; Age group; and public and private spaces were rated 0(<50%)	The overall score in this criteria is 7/14 (50%) public and print media spaces was rated 1(>50%) while Disability; ethnicity and religion; and accommodation for print sensitively was rated 0 (<50%)	The total rating/score of the textbook is 5/14 (35.7%) the rating in conflict sensitivity and in other is 2(100%) while ethnicity and religion was rated 1 (>50%). Disability; age group and accommodation for print disability were rated 0(>50%). There is no evidence showing provision for diversity.	The total score in this rating is 7/14 (50%) it was rated 2 (100) in Age conflict sensitivity; and others. It was rated 1 (>50%) in ethnicity and religion while diversity; and public and private spaces were rated 0 (<50) respectively.

Keys for Rating: 2 (100) fully met; 1 (>50%) partially met and 0(<50) not met

From the results presented on table 2, the textbook whose images promote DEIA in Educational materials are new concept English language and STAN basic science and Technology with ratings of 50% respective. They are followed by learn mathematics with the rating of 35.7%, while the least is Macmillan verbal reasoning with the rating of 28.6%.

Research Question 3

To what extent do the narration/dialogue in textbooks promote DEIA in educational practices in Ebonyi Basic Education?

Educational materials can be considered exemplary in terms of promoting DEIA if it scores 2 (100) in all the criteria assessed in narration/dialogue (See appendix 3

Table 3: Showing the Rubrics Rating of the Criteria on Section 3 on Textbooks Narration/Dialogue of the Four (4) Sampled Textbooks used as Instructional Materials in Ebonyi State Basic Education

Macmillan Verbal Reasoning for pry 4	STAN Basic Science & Tech.	Learn Mathematic For PRY 6	New Concept English Language For JSS3
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Total ratio s 9/16 (56%). Respectful terms: multilingual contexts; accommodation for hard of hearing, disability and other were rated 0(<50%) respectively, white gender (b) was rated 1 (>50%).	Total rating 8/16 (50%). Gender (a), (b) & (c); and respectful terms were rated 2 (100%), while the remaining criteria were rated 0(<50%)	The total rating is 7/16 (44%). Gender (a) and (c); and respectful terms were rated 2 (100%) while multilingual contexts; and disability; and accommodation for deaf and hard of hearing were rate 0(<50%). Gender (b) was rated 1 (>50%)	The total rating/score is 7/16 (44%) Gender (a) and gender(b); and respectful terms were rated 2 (100%) gender(c) was rated 1 (>50%) while disability; respectful terms; multilingual content narrators, presenters, and instructors were rated 0(<50%). Accommodation for deaf and hard of hearing was rated 0(<50%)
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Ratingkeys: 2(100) = fully met; 1 (>50%)= partially met; and 0(<50%) not met

for the criteria on narration/dialogue).

3 had 50% respectively as well.

From the result presented in table 3, the textbook whose narration/dialogue promotes DEIA most is Macmillan Verbal Reasoning with the rating of 56%. This is followed by STAN Basic Science and Technology for primary 4 with the rating of 50%, while Learn Mathematics for primary six and New Concept English Language for JSS

Research Question 4

To what extend does the universal design of the textbooks promote DEIA in educational practices in Ebonyi State basic education?

Education materials can be considered exemplary in

Table 4: Showing the Rubric Rating of the Criteria on Textbooks Universal Design of the Four (4) Sampled Textbooks used in Ebonyi State Universal Basic Education

Macmillan reasoning for pry 4	STAN Basic Science & Tech. for pry 4.	Learn Mathematic For PRY 6	New Concept English Language For JSS3
Total rating is3/4(75%)	Total Rating is 4/4 (100%)	Total rating is 3/4 (75%)	Total rating is3/4 (75%)
Rating on interesting, engaging and interactive 2(100), while sustains efforts, persistence and participation in learning 1 (>50%)	Rating in interesting engaging and interactive; sustains efforts; persistence and participation in learning 2 (100) respectively	Rating on sustains efforts persistence and participation in learning 2(100%) while interesting, engaging and interactive is 1 (>50)	Rating on interesting, engaging interactive is 2 (100) while sustains efforts, persistence and participation in learning is rated 1 (>50%)

Rating keys=2(100) fully met; 1(>50) partially met while 0(<50) not met

terms of promoting DEIA if it is rated 2 (100) in all the criteria assessed in universal design (See appendix 4 for the criteria under universal design).

was rated 1 (>50%) and New Concept English Language for JSS 3 was equally rated 1(>50%).

From the table 4, STAN Basic Science and Technology for primary 4 had the highest rating of 100%, while the rest of the textbooks were rated 75% respectively on the universal design. It was also important to note that interesting, engaging and interactive were rated 2(100) in Macmillan Verbal Reasoning; Learn Mathematics and New Concept English. Sustains efforts, persistence and participation in learning were rated 100 in Macmillan Verbal Reasoning, STAN Basic Science and Technology

Hypothesis

Ho1

The character/subjects; Images; narration/dialogues; and the universal design of the contents of the sampled textbook (TLMs) do not deviate significantly from the DEIA specification from the DEIA specification for TLMs in basic education.

To determine whether to accept or reject this null hypothesis of “no significance effect, the researchers

Table 5: Showing the Output of the X2 test of goodness of fit for the TLMs content criteria (subject/character; images; narration/dialogue; and universal design) on the significance of the deviation of the sampled textbooks (TLMs) in use in Ebonyi State Basic Education on DEIA specification for Basic Education independence on the significance of the deviation of the sampled text books (TLMs) in use in Ebonyi State Basis Education on DEIA Specification for Basic Education

TLM Criteria	df	X ² cal	X ² crit	Decision
P	3	31.6	7.85	Sig
Q	3	19.94	7.85	Sig

R	3	17.18	7.85	Sig
S	3	0.75	7.85	N.Sig

Alpha LEVEL = 0.05

Note: P = Subject/Character; Q = images; R = narration/dialogue

employed the chi square test of independence at 0.05 level of significance (see table 5).

The outputs of the chisquare goodness of fit test displayed on table five (5) on the significance of deviation of the content of the selected textbooks in use in Ebonyi state universal basic education showed that all the sampled text books deviated from the criteria except in the universal design as specified standard for text books content in basic education.

Form the table, P(subject/character) had a calculated chisquare of 31.6 which is greater than the critical table value of 7.75. Q (images of the content) had a calculated chisquare of 19.94 which is also greater than the critical table value of 7.85, (images of the content(s) had a calculated chisquare of 19.94 which is also greater than the critical table value of 7.85, while (R(narration/dialogue) of the text books contents had a calculated chisquare value of 17.18 against the critical value of 7.85. S(universal designs) of the contents of the textbooks had a calculated value of 0.75, which the critical table value is 7.85. hence the researchers therefore rejected the hypothesis of no significance deviations of the text books contents in terms of character/subject, images and narration/dialogue, in promoting DEIA in educational practice but accepted the hypothesis of no significance deviation of the text books contents' in universal design in promoting DEIA in Educational practices. Based on those outputs the researchers concluded that where as the subjects/characters; images; and narratives /diagonal of the contents of textbooks in use in Basic Education do not promote DEIA practices, the universal design of the contents of sampled text books does.

Discussions

The discussions of the findings of this study were guided by the research questions and the hypothesis. The findings of the study showed that the subjects/characters/guests in the four(4) sampled textbooks do not promote highly DEIA principles in educational practices. This is unfortunate as textbook characters represent people, creatures and animals, and they help to make up a story in the book. Characters/subjects impact significantly on the minds of the readers by allowing the reader connect with the narrative. If the characters in a book do not promote DEIA, it means that some populations of the learners are marginalized as their interests are not adequately reflected by the characters in the textbook. It was in line with this that Mustapha (2014) had noted that there is gender under-representation in text books used in Nigerian schools which reflects gender ideologies of Nigerian society that women are minor characters than their male counterparts. He noted that such practices lead to bias in the content of learning materials in favour

of the males. This jeopardizes the interests and learning outcomes of those whose interests (culture, religion, language, sex) are not properly represented in the textbooks characters. The impact of low representation of the character of any specific group in textbook may culminate in feeling of low self-esteem, invisibility and narrow career opportunities. This may inadvertently reinforce stereotypes and discrimination in the learning environment.

Furthermore, the findings from the study showed that where as two of the sampled text books' images STAN Basic Science and Technology and New Concept English language scored average in promoting DEIA in educational practices the remaining two sampled textbooks (Macmillan Verbal Reasoning and Learn Mathematics) scored very low. This is regrettable as Rehman, Hussain, Khan and Ullah (2022) had noted that images are important sources of information and play vital roles in presenting meaning and significance of related themes and intention. Images in textbooks influence the learning process as students often see pictures before reading the texts and these pictures can enhance the power of imagination of the students (Kasmaienezhadfar, Pourajah, and Rabbani, 2015). The illustrative visuals in textbooks play key roles in the retention, comprehension and the general transfer of knowledge (Singh, Vauher; and Schan, 2023).

This low score of some of the sampled textbooks confirms the assertion of Rehman et al that some textbooks produce and reproduce gender difference; portray the value of the dominant class and reinforce religious bias and division as against cultural and religious harmony. Rehman et al (2022) suggested that as against the prevailing practices, that proper spaces should be created by images in textbooks portraying religious and local dresses and language in all text books used in the country. Ajibade (2012) frowned that many recommended primary and secondary school textbooks do not include visual illustrations that are adequate in terms of their relevance to the social and cultural reality of most pupils and ability to capture narratives and ideas in their learning environment.

It was further shown by the finding of the study that whereas two of the sample four textbooks (TLMs) scored average in promoting DEIA through their narration// dialogue, the other two (Learn Mathematics Primary 6 and the New Concept English for JSS 3) were below average in promoting DEIA through narration/dialogue. Textbooks narration makes the textbook interesting as it makes the subject easy for learners by enhancing retention while dialogues encourages active participation for both teachers and learners. Dialogue promotes critical thinking, cultural understanding in a multi-cultural and diverse learning environment. This shows that textbooks

(TLMs) that do not portray narration and dialogue that covers multicultural settings has placed limits in promoting the learning outcomes of the diverse learners. This leads to marginalization of those learners whose interests are not adequately captured by the dialogue/narration in the TLMs. It was shown by the findings of the study that all the sample textbooks (TLMs) promote strongly/ highly DEIA through the universal design. This is commendable as textbook universal designs removes barriers to learning and creates an equitable classroom for all learners to take in, digest and express information in the way that is most suitable for them. Conversely, it makes learning accessible to every student's individual needs regardless of the challenges and barriers they may face (Prodigy, 2023). These attributes of the sampled textbooks (TLMs) needs to be sustained as it is shown that the challenge of potential barriers or unnecessary delays to learning are eliminated in all TLMS with high universal design (CTI, 2025). Finally, the test of the hypothesis showed that three criteria of the sampled text book content (subject) character images; and narration/ dialogue do not promote DEIA practices, it was only the universal design that does. This result validated the report from the research question which indicated that all the standard text books contain universal design that promote DEIA practices in education Hence, it is only the universal design that promote DEIA practices in basic education, whereas the other criteria do not.

CONCLUSION

Basic Education Program in Nigeria is designed to be inclusive, accessible, equitable and to cater for diverse interest of every school aged children in Nigeria. Textbook (a teaching learning material) is a veritable tool for effective teaching and learning in the classroom and is also designed to aid and promote diversity, equity inclusion and accessibility (DEIA) in basic educational practice. This study investigated(i) the extent to which the character/subjects/guests in the contents of textbook (TLMs) promote DEIA in the educational practice (ii) the extent to which images in the contents of textbooks (TLM) promote educational practice (iii) the extent to which the narration/dialogue in the content of textbooks (TLMs) promote DEIA in educational practice, (iv) the extend which the universal design of the content of textbooks (TLMs) promote DEIA in educational practice. The findings of the study showed that, some of the contents of the textbooks (TLMs) such as character/subject guest) images; narration/dialogues) do not promote strongly DEIA in educational practice. It was however found that the universal design of the content of the textbooks was strong in the promotion of DEIA. The test of the hypothesis however showed that only the universal designed of the textbooks (TLMs) fall within the specified standard for the promotion of DEIA in educational practice. On the basis of the findings, it is instructive for the State Ministry of Education of Ebonyi State to encourage the use of those textbooks

(TLM) that promote DEIA in educational practice, while others still lagging should be encouraged to upgrade the contents of their textbooks (TLMs). Finally the ministry should enforce the use of textbooks and other (TLMs) that promote DEIA in their basic education and other levels of education. This is to ensure that basic education is equitable, accessible, and inclusive and protect the interest of the universe basic school aged population.

Recommendations

In line with the findings of this research study, it is hereby recommended that Ebonyi State Ministry of Education should ensure:

- The review of all textbooks and other educational Instructional materials (TLMs) to determine those that promote DEIA in educational practices.
- Organise Orientation/seminar for textbook and other TLMs publishers to sensitize them on the need to publish only instructional materials that promote DEIA in educational practice.
- Organize training for authors of TLMs so as to strengthen their skills in writing and publication of TLMs that promote DEIA in educational practices.
- Ensure that only TLMs that promote DEIA in education practices are approved and recommended for use in schools.

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