Adolescent Development in Learning and Secondary Education in Nigeria: New Trends and Expectations

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Abstract. Adolescents are young people aged between 10 and 19. Their growth and development is a crucial element as they transition to adulthood. Benchmarking on the structure of education in Nigeria, most adolescents fall within the secondary education cadre where they are exposed to learn and acquire affective, behavioural and cognitive skills, commonly referred to as the ABC of learning. However, the extent of what adolescents learn and how they learn has become undefined in a way that can influence practice and teaching. This study presents the results of research done to investigate the new trends and expectations in adolescent development in learning and secondary education. Data were collected from late adolescents across the study area in Lagos State who, were enrolled in approved senior secondary schools within the study area. The multi-stage sampling technique was adopted using a hybrid of three techniques: purposive sampling, quota, and random sampling to select the final sampled schools. A total of 674 copies of the questionnaire were administered by hand during the first term of the 2018/2019 academic session. A total of 488 were analysed using descriptive statistics. The result showed that adolescents in the study area were predominantly auditory learners; they learn through lesson discussion and prefer to listen in class. This study has reiterated that adolescents love learning and are not lay back. They can be well cultured and groomed when learning is best suited and presented to align with their learning styles as against a one-fit-all approach to teaching instruction in the classroom.

Keywords: Adolescent, Adolescent development, Learning, Secondary Education, Nigeria

1. Introduction
The secondary schooling period is a crucial foundation for the development of adolescents. Although it has become difficult to define the age bracket for adolescents, UNICEF opines that adolescents are young people between the ages of 10 and 19 years of age [1]. The World Health Organisation similarly affirms this age bracket [2]. Of much importance, however, is the fact that on average, most adolescents enroll into secondary school at age 11/12 and graduate at age 16/17. In Nigeria, education is the shared responsibility of the federal, state, and local governments [3]. In Lagos State, for example, there is the State Ministry of Education and State Universal Basic Education Board (SUBEB) at the state level and the Local Government Education Authority (LGEA) at the local government level. For the regulation of the education at the tertiary level and the formation of policy and quality control, the Federal Ministry of Education is at the helm of affairs. Other cadres of schooling are much decentralized under the control of the state (secondary) and local (primary) governments. Just as the case is with other cadres of education in Nigeria, this cadre of education for adolescents is regulated by the National Policy on Education with the latest version being that of the year 2004 [4]. It covers from the early years and pre-primary education, basic education, post-basic/senior secondary, to tertiary/higher education.

The curriculum in the first three years of secondary schooling is both pre-vocational and academic. According to a need assessment of the educational sector in Nigeria, junior secondary school has a
structure that enables students to acquire skills and knowledge [5]. Upon completion, students have the option or interest to proceed to the next three years for the senior secondary schooling or a technical college or vocational institute as the case may be. However, it has been observed that most students and parents prefer senior secondary schools to technical colleges or vocational schools. The goal of secondary education is in line with the national objectives, which are to prepare students to be responsible and well-civilized in preparation for tertiary education. The senior secondary school has a broad curriculum, with six core subjects, plus a minimum of two and a maximum of three from the list of elective subjects, resulting in a minimum of eight and a maximum of nine subjects. Students’ promotion is based on a blend of summative assessment, combining the mid-term assessment with the end of term assessment. The final certification examination is however, taken at the last year, commonly known as the Senior School Certificate Examination [SSCE] conducted by the West African Examination Council and the National Examinations Council [5]. This study therefore sought to investigate the educational development of adolescents in secondary school especially as it concerns their learning. The study answers the following research questions:

i. What are the socio-economic characteristics of adolescents in the selected secondary schools?

ii. To what end are their learning styles affecting their learning & development? Another section of your paper

2. Review of Literature

This section is a review of published literature on the nexus between students’ learning styles and their actual learning and development in secondary schools.

2.1 Learning and Learning Outcomes

Learning is the process of acquiring knowledge; this knowledge could either be new or a modification of an existing area of knowledge. It also transcends to the acquisition of values which later influence behaviour not only knowledge [6]. However, one of the most defined and acclaimed forms of learning is formal learning, the others being non-formal and informal learning. Formal learning is the type of learning that takes place within a teacher-student relationship, such as in a school system. Whilst a number of adolescents are enrolled in school, the extent of their actual learning looks uncertain. At most, some studies have limited their learning to one aspect of learning outcome - the cognitive domain, neglecting the behavioural and the affective domain. As a result of this, the holistic development of adolescents has not been fully fulfilled hitherto through secondary education. The impact of learning for adolescents is a crucial foundation because; learning has a long term impact. The impact could result in outcomes that affect knowledge, skills, actions, feelings and emotions, ideas, affiliation to learning, a sense of oneself, a sense of others, and a sense of membership [7]. In other words, if adolescents are to be reprogrammed to behave responsibly, live ethically, contribute to nation-building and be useful to self and the community, their learning must exact a positive long term impact on them. The development of adolescents can therefore be proportional to their level of learning. Similarly, findings from the review of literature [8, 9], suggest that teaching and learning styles also have a considerable influence on learning. Section 2.1 gives a wider review on learning styles.

2.2 A review of Learning Styles

The concept of learning style is a broad area that studies how students learn. The underlying position therefore, is that, learners learn differently and that there is no one particular style of learning. Amongst others, the most predominant styles by which learners learn include visual, auditory, and kinesthetics commonly called the VAK learning theory designed by Walter Burke Barbe and later
developed by Neil Fleming [10]. According to the Study Skills and Supplemental Instruction Centre, learning style is a preferred method of learning through the way we perceive and process information [11]. Their study revealed that for every ten students, there would be two auditory learners, four visual learners, and four tactile-kinesthetic learners. However, 90% of all teaching is auditory, thus short-changing eight out of ten students [11].

a) Visual learners learn faster through teaching aids such as charts, pictures, power points, graphs, videos, infographics, visual media, and symbols they see. What stimulates their learning is mostly sight. Unfortunately, how many adolescents are aware of their learning style? How about school administrators and teachers, how many have aligned teaching style with learning styles? No doubt, colouring is a good way to highlight key learning points for visual learners.

b) Auditory (Aural) learners learn actively through active listening. This can be through lectures, discussion groups, one-on-one conversations, podcasts, oral presentations, audiotapes, rhymes, jingles, and other allied forms of music/sound integrated into learning. Reading out texts and books as well can be helpful to auditory learners.

c) Kinesthetic (Physical) learners learn through doing. They are eager to feel and touch through practicals, hands-on sessions, and other physical activities. Kinesthetic learners look forward to field trips, workshop classes, and other activities that demand physical exertions.

3. Research Methods

The data presented in this article is part of those used for a larger research work investigating the impact of classroom architecture on students’ learning outcomes in selected secondary schools in Lagos State, Nigeria. The research design and approach used for the study was a cross-sectional survey and quantitative research, respectively.

The study population for this study comprised of all approved public and private secondary schools in Lagos State with a focus on the senior secondary schools, with students predominantly late adolescents across the three senatorial districts in the study area, namely: Lagos West, Lagos Central, and Lagos East. The multi-stage sampling technique was adopted using a hybrid of three techniques: purposive sampling, quota, and random sampling. The purposive sampling was based on the criterion that the selected schools must be approved with a senior secondary section. Next, for quota sampling, they were grouped in the three senatorial districts, dividing them into smaller units and afterward applying a ratio based on the appearances. A ratio of 3:1 (private: public schools) is adopted based on the proportion of private and public schools (1078 private senior secondary schools and 338 senior secondary schools), respectively.

The final school subjects were selected at random; three (3) private senior secondary schools and one (1) public senior secondary school per senatorial district following the ratio 3:1.

The sample for the study was drawn from the population of the sampled schools. The total number of students enrolled in the sampled senior secondary private and public senior secondary schools gives a value of N = 3291. The sample size formulae on the one hand for finite population by [12] for population above one hundred (100); this gives 3018. On the other hand, census is applied for population below one hundred (100).

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

where;

N = 3018; the total population size (for population above one hundred (100), e = the maximum acceptable error margin (5% which gives e = 0.05) and, n = the required sample size = 353. Census is applied for the population below one hundred (100); this gives a total sample size of 626.

674 of the questionnaires were administered by hand during the first term of the 2018/2019 academic session. A total of 488 were duly filled and useful for analysis, representing 72% of the total
administered. The questionnaire used was designed by the researchers and had five (5) sections A to E on different thematic foci. However, only data collected from sections A and B of the questionnaire were included in this paper. This covered socio-economic characteristics and learning styles.

The data collected from the survey were analysed using the Statistical Package for the Social Sciences (SPSS) software package and presented in tables and charts.

4. Results and Discussion

4.1 Adolescent Spread across the Study Area

Figure 1 shows the distribution spread of the 488 adolescents who responded to the questionnaire across the three senatorial districts of the study area.

![Lagos Central (35%), Lagos East (37%), Lagos West (28%)]

Figure 1: Distribution of the adolescent across the senatorial districts of the study area

A larger demography of the respondents is from the Lagos East senatorial district. This is followed by Lagos West and subsequently, Lagos Central.

4.2 Adolescent Spread across the Senatorial Districts in Lagos

Table 1: Adolescents’ Profile

| Variables                  | Frequency (n=488) | Percentage (%) |
|----------------------------|------------------|----------------|
| Gender                     |                  |                |
| Boys                       | 208              | 42.6           |
| Girls                      | 280              | 57.4           |
| Age                        |                  |                |
| Under 13                   | 17               | 3.5            |
| 13 - 15                    | 342              | 70.1           |
| 16 - 18                    | 123              | 25.5           |
| 19 and above               | 1                | 0.2            |
| Class                      |                  |                |
| SS 1 (Year 10)             | 202              | 41.4           |
| SS 2 (Year 11)             | 176              | 36.1           |
| SS 3 (Year 12)             | 106              | 21.7           |
| Residence                  |                  |                |
| Duplex/Maisonette          | 160              | 32.8           |
| Bungalow                   | 87               | 17.8           |
| Flat                       | 112              | 23.0           |
| Mini-Flat / Self-Contain   | 49               | 10.0           |
| 'Face me, I face you'      | 72               | 14.8           |
| Transportation             |                  |                |
Since adolescents come from various socio-economic backgrounds into the school system, there is little or no control over this. However, the kind of house the students lived in, the ownership and the means of transportation to school are three (3) metrics pivotal to showing their social and family background as found from this study. The implication of this therefore is that there will always be learners of varying socio-economic backgrounds in schools, as seen from this study. Although the socio-economic background of adolescents cannot be predetermined, it surely has an influence on the level of satisfaction of the physiological needs of adolescents, which is also a step along with their self-actualisation in school as inferred through the Maslow’s hierarchy of needs.

### 4.3 Learning Styles of Students in the Selected Secondary Schools
Findings from this study show the new trend in adolescent learning styles and are at variance with the findings of the Study Skills and Supplemental Instruction Centre, which revealed that out of ten learners, two are auditory, four are visual while the balance four are kinesthetic. Finding from this study, however, reveal that more than half of the adolescents are auditory learners, as shown in Figures 2. This was followed next by kinesthetic learners and then visual learners. This diverging result is observed to be as a result of the existing facilities in the sampled schools where adolescents learn- their classrooms. Figure 2 shows the distribution of adolescents’ learning styles in the study area.

![Figure 2: Distribution of adolescents’ learning styles in the study area.](image_url)
are made to only listen in classes, and any attempt to make suggestion, discuss with classmates, share ideas and collaborate would be tantamount to noise making with the same punishable by the teacher.

4.4 New Trends and Expectations in Students’ Learning Preference

This section shows a breakdown of the new trends of learning for adolescents as found in this study and how this impact on their development. Figures 3 to 6 shows this explicitly. Figure 3 shows how adolescents learn best in class and the aligning learning styles.

Findings from this study show that students learn best through lesson discussion. This is an offshoot of the predominant learning style - auditory learning style. However, for discussions to thrive, it must be mutual and collaborative. Unfortunately, the existing classroom furniture where adolescents learn does not allow for flexibility and mobility. Furthermore, students learn best by isolated discussion through answering questions in class. A similar proportion also learns best through hands-on practical followed by adolescents who learn best through pictures, charts, diagrams etc. Figure 4 is a presentation of how adolescents prefer to learn new skills and the aligning learning styles.

A new trend further shows that adolescents prefer to acquire new skills when they can watch someone show it. Unfortunately, not all sampled schools have equipped classrooms with smart boards/screens and constant electricity for multimedia presentations. Moreover, access to the internet can boost learning new skills where adolescents can easily watch and learn new desired skills.
Figure 5 is a reflection of adolescents’ preference for learning in class and aligning learning styles.

| Learning Style | Percentage |
|----------------|------------|
| List to Act Out a Story (K) | 30.10% |
| See a Comic Strip of a Story (V) | 28.10% |
| Listen to a Story (A) | 41.00% |

Figure 5: Students’ preference to learning in class

A larger proportion of adolescents prefer to listen in class, which directly implies that, the classroom learning environment should have a good audible audio system with adjoining visual display gadgets like interactive screen, projectors for the category of learners who prefer to see. Lastly, an allotment should be provided in the lesson planning by the teacher for those who prefer to role play a story or do role-play for the class as shown in Figure 5.

Figure 6 shows adolescents’ intellectual strength and aligning learning styles.

| Learning Style | Percentage |
|----------------|------------|
| Good at Learning Physical Skills (K) | 61.30% |
| Good Memory for Faces (V) | 27.80% |
| Good Memory for People's Names (A) | 9.60% |

Figure 6: Students’ intellectual strength and the aligning learning styles.

Findings from this study have shown that, majority of adolescents are good at learning physical skills, hands-on, experiential learning as shown in Figure 6.

5. Conclusion
Adolescents can be well cultured and groomed when learning is best suited and presented to align to their learning styles. To therefore enhance their development through learning, teachers should access and familiarise themselves with the learning styles of their learners to create personalised emotional connection and relationship as against a one-fit-all approach to teaching instruction in the classroom. At the commencement of new terms/sessions, learning style assessment should be administered qualitatively or quantitatively. This should also be assessed at term ends so as to evaluate comparatively. Although the majority of adolescents are found to be auditory learners, external noise to the classroom should, therefore, be drastically reduced to avoid distractions through buffers and other landscape features.

Acknowledgments
The researchers would like to appreciate Covenant University Centre for Research, Innovation and Discovery (CUCRID) for the support in this publication. We appreciate the inputs of Dr. Tosin Babalola and the sampled schools for the opportunity to undertake this study in their respective schools.
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