Pupils Learning Preferences and Interest Development in Primary schools, Nigeria.

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Abstract

This paper presents an overview of the extent to which pupils' learning preference and interest development could influence their learning in school. Interest is referred to as an individual's relative enduring psychological predisposition (preference) to engage in a particular class or object. Available evidence indicates that there are many factors that could either impede or enhance the development of Pupils interest for effective learning in school. Thus, one of the most important use of preference learning is that it makes it easier for teachers to incorporate children into their teaching and learning process. Such include, active, sensing, visual and sequential in which children take in information. The importance of interest in education are highlighted, as well as how it could be developed in schools. Educational implication of the study reveals that learning preference can influence school children depending on their level of interest or personality.
Keywords: Learning Preference, Interest Development, Primary Schools.

1.   Introduction

Learning is a social activity that involve interaction between the teacher and pupils that leads to permanent change in behaviour of an individual regardless of his ability. Learning plays a significant role in the school setting due to its unique way of processing and assimilating information for individual progress. Hence, the increased development of learners' personal identities over the basics of their teachers has been popular among educators over the years. This is as a result of learners' ability to control their own instructional needs better. With this exertion, many school children have become independent learners and have developed their self-determination to learn. In other words, individuals differ with regard to what mode of instruction or study is most effective for them. In spite of that, many Scholars who promote the learning preferences approach, agree that effective instruction can only be undertaken if the learners' preferences are diagnosed and instructions tailored accordingly, while others identified various determinants of learners' satisfaction and effective learning in schools. (Pashler, McDaniel, Rohrer, and Bjork, 2008; and Wang 2003).

    Similarly, learning preference refers to the ability of learners to perceive and process information in learning situations. Reid (1995) states that learning preference expresses an individual's "natural, habitual and preferred way" of assimilating new information. This implies that individuals differ with regard to what mode of instruction or study is most effective for them. It is described as a set of factors, behaviours and attitudes that facilitate learning for an individual in a given situation. That means it has the general tendency of relating to a particular learning approach for the purpose of organizing, and processing information in order to make decisions and to form values (North Carolina Department of Public Instruction, 1999). Learning preference is also seen as the way each learner perceives and processes new information for storage and retrieval. It is classified and identified in many different ways; there are overall patterns that provide directions to learning and teaching in order to help children learn. Such approaches include, "deep", "surface" and "achieving" methods. A deep approach to learning is characterized by intrinsic motivation and engagement with the subject matter and the desire to know everything about a given topic. On the other hand, children who opt for a surface approach to learning are not interested in the task per se, but aim at learning the minimum amount of material that is required to pass. Finally, achieving approach to learning are characterized by students' goal-oriented study strategies; consequently, achieving oriented students are pragmatic and inspired by results (Duff, 2003; Duff, Boyle, and Dunleavy, 2004). These approaches are subsumed under active and reflective, sensing and intuitive, visual and verbal as well as sequential and global preference. The teacher would therefore, need to understand how such preferences work during the teaching process. Meanwhile, in most cases, it is very rare to find all the three of these learning preference approaches in a class. But it sometimes seems possible to combine them through

thoughtful planning and preparation of the teaching and learning activities. The learning preferences approach has gained significant mileage despite the lack of experimental evidence to support the utility of this approach.

A number of learners are indeed multimodal, with more than one preferred style of learning in addition to using different learning styles for different components of the same subject. Learning preferences are "characteristic cognitive, affective, and psychological behaviours that serve as relatively stable indicators of how learners perceive, interact with, and respond to the learning environment". Terrell (2002) identified the dimensions of learning preference as learning which has received less attention from researchers. This includes:

- **Active vs. reflective;** (Allows both experiential engagement learning and time for evaluation and analysis as well as observation)
- **Sensing vs. intuitive** (Provides both hard facts and general concepts, such as concrete experience, information through sense, memories, ideas, or direct perception).
- **Visual vs. verbal**; (Incorporates both visual and verbal cues like pictures, diagrams, sounds, spoken words etc.) and
- **Sequential vs. global** (Provides detail in a structured way, as well as the big picture). i.e. logical progression and holistic in nature.

According to Felder and Silverman (1988), active learners retain and understand information best by doing something "active" with it, such as discussing or applying the information or explaining it to others. Reflective learners, in other words, prefer to think about information quietly first and to work alone. Omrod (2008) observes that most of the children learn better when information is presented to them verbally (by word to learners), while others seem to learn better when it is presented in the form of pictures (visual learners)'. Whereas courses with theories and abstract concepts might be more favourable to reflective learners, such courses require hands–on exercises and/or projects might be more satisfying to those with an active learning style. The sensing/intuitive style relates to the preference for information selection, such learners are good at learning facts and concepts while intuitive learners would prefer discovering possibilities and relationships. Regarding visual styles, visual learners are more likely to process information by seeing images such as pictures, diagrams, and graphs. Verbal learners prefer to process information in words by reading or listening to others. In relation to distance education, research has shown that visual learners prefer online collaboration while other children are comfortable with theories and abstractions concept; some feel much more at home with facts and observable phenomena; others prefer active learning and others lean toward introspection; some prefer visual presentation of information but others prefer verbal explanations. Therefore, ones learning style could neither be superior nor substandard to another, rather they are simply different with different characteristics of their strengths and weaknesses.
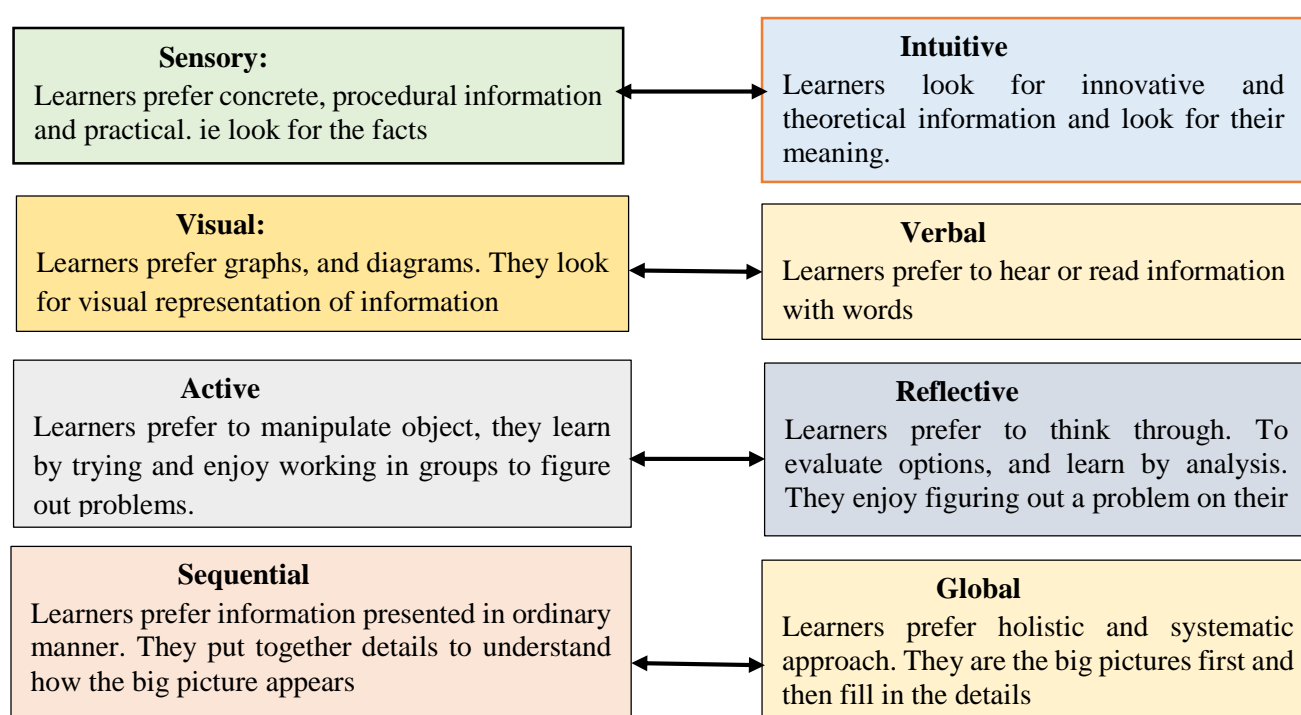
Sensory: Learners prefer concrete, procedural information and practical. ie look for the facts	⟷	**Intuitive** Learners look for innovative and theoretical information and look for their meaning.
Visual: Learners prefer graphs, and diagrams. They look for visual representation of information	⟷	**Verbal** Learners prefer to hear or read information with words
Active Learners prefer to manipulate object, they learn by trying and enjoy working in groups to figure out problems.	⟷	**Reflective** Learners prefer to think through. To evaluate options, and learn by analysis. They enjoy figuring out a problem on their
Sequential Learners prefer information presented in ordinary manner. They put together details to understand how the big picture appears	⟷	**Global** Learners prefer holistic and systematic approach. They are the big pictures first and then fill in the details

Figure 1: Index of learning preference (Terrell, 2002)

This model indicates that once the child knows where his or her preferences lie on each of these dimensions in learning, he/she can begin to stretch beyond those preferences and develop a more balanced interest to learning. These dimensions therefore seem to be a continuum with one learning preference on the far left and the other on the far right as seen in fig 1. Curry (1987) suggests that there is a relationship between pupils' learning preferences, strategies, and outcomes. As such, there is a need for more research examining constructs that are emphasized in both cognitive and motivational models of learning. For instance, a kinesthetic learner, most times, seems to benefit more in traditional classroom at the secondary school level than others. Their cognitive models of learning provide information regarding '**how**' students develop an understanding of classroom academic tasks through the use of cognitive resources and tools, whereas models of motivation like, expectancy theory, incentive theory, humanistic, hygiene theory etc, provide an understanding of the '**why**' of student choice level of activity and effort, and persistence at classroom academic tasks. Therefore, cognitive or motivations alone cannot account for the different aspects of students learning.

In a classroom environment where both cognitive and motivational factors operate simultaneously, both constructs are needed to be examined in the school setting with respect to their cognitive aspects. Research has also shown that what children learn is significantly affected by their learning preference. So children have their different learning style preferences for taking in and processing information, (Felder, 1988. Learning style is not just ability, but rather a preference, and it is facilitated by the individual's perceptual and sensory strengths (Taylor, 1997). Learning preferences and Interests have been identified as two important constructs that influence pupils' engagement and accomplishment in the teaching and learning process (Chen and Shen, 2004). Children have different levels of being motivated, different attitudes to learning and different responses to specific classroom environments and instructional practices. The more thorough instructors understand the differences, the better chances they have of meeting the diverse learning needs of all of their pupils. In order to help the child learn better, one is expected to expose them to as many as preferences as possible.

Interest in this paper is seen as a psychological state or dispositional characteristic of an individual that plays a predominant role in everyday-thinking, as well as in the professional considerations of teachers about the learners or individual difference in learning and achievement. Individual interest involve the individual's to relatively endure psychological predisposition that helps them to re-engage in particular classes of objects, events, or ideas over time and in a content specific situation (Hidi and Harackiewicz, 2000; Hidi and Renninger, 2006). In essence, individual interest develops slowly and tends to be long-lasting and is considered to be relatively stable. Interest, on the other hand, has been found to play a key role in influencing pupils' learning behaviour and intention to participate in the future (Chen, 2001). According to literatures, interest emerges from an individual's interactions with their environment (Oerter, 1995) it is characterized by their learning motive (why pupils learn) and learning strategy (how they learn). It represents a specific relationship between the developing person and some content of their life-space. Interest is demonstrated by the affective, as well as cognitive components that could be associated with positive emotional experience, personal relevance and readiness to be engaged with high level effort. It is mostly understood as a phenomenon that emerges from an individual's interaction with their environment (Hidi and Renninger, 2006).

Interest is of two types, namely, the situational interest and interest emanating from curiosity. Situational interest is tied to very specific contents and not just only structural features. Although individual interest is triggered by an individual's psychological predisposition and situational interest by environmental stimuli, Hidi (1990) points out that individual interest and situational interest are not dichotomous phenomena that occur in isolation, rather, both types of interest tend to interact and influence each other's' development. Which means that, it may last longer as it develops into personal interest (Hidi and Berndorff 1998). Thus, it may last longer as it develops into personal interest irrespective of it approach (Hidi and Berndorff 1998). Further illustration is seen in figure 2.
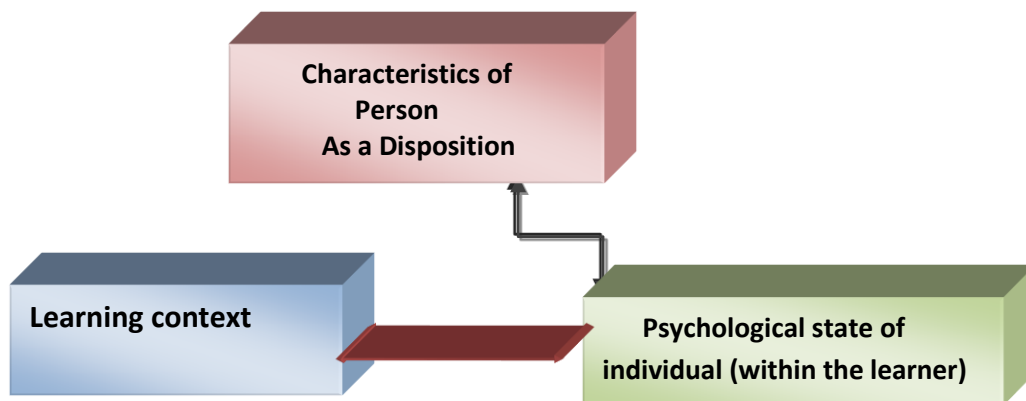
Figure 2: *Adopted from Hidi and Berndorff 1998.*

Fig 2. Reveals the three approaches to concept of interest as viewed by individuals. The first approach reveals that interest is a personal disposition that tends to have a long lasting preference for certain topics that are presented. The second aspect is that interest is seen as a specific psychological state rather than a mere personal disposition of the child to learn a particular concept. Consequently they both focus on the cognitive and affective state of an individual that produces the actual interest (learning context). Furthermore, it is important to state that most of the research on individual interest today is mainly concerned with the objective side of the individual's relationship with the content. Babalola (2011) holds that learning preference has influences on the child's interest in school. The relationship then seems to be a function of Gender, Age, school type and subject, interest has been proven to be the main motivating factor of learning. Although, most of the teachers seem to lack a clear understanding of its potential role in the development of learners' personality (Chen and Daprst, 2002). Teachers usually think that learners either have or do not have interest and this has made it impossible to facilitate its growth and development most especially for learners without their learning motivation (Ennis, Cothran, and Davidson (1997).

   Furthermore, the constructivist learning theory state that all human knowledge is constructed from a base of prior knowledge and meaning from an interaction between their experiences and their ideas. Children are not blank slate that knowledge cannot be imparted without the child making sense of it according to their current perceptions (learning preference). Therefore children learn best when they are allowed to construct a personal understanding based on experiencing things and reflecting on those practices. It involves learning by doing what they are interested in to derive their own knowledge and meaning. This means that the constructivist theory creates an environments where children can actively construct their own knowledge, rather than depend solely on the teacher's explanation.

Even though interest has been known as an important variable for learning, some teachers still do not have a clear understanding of their potential role in helping children develop interest in most of their teaching subjects especially in sciences. Teachers also tend to think that children either have or do not have interest, and may not recognize that they could potentially stimulate and enhance the growth and development of students' academic interest particularly for those students who are uninterested and disengaged in learning. It is on this note that the researcher investigates the extent to which learning preference influences pupil's interest development in basic science.

2.   Development of Individual Interests

Development of interest is related to the change in their content depending on the age of an individual. That is, in dissimilar life periods, age graded tasks have to be tackled. Interests may shift according to the changes of life tasks. The development of interests, however, has to take into account the whole range of goals a person strives for. It is argued that interests develops as hobbies that take place outside school. The development of an interest can be described as an expansion in the level of stored knowledge (Renninger, 1990). As a matter of fact, it is an increase of discrepancy and integration in the structure of the person and object of relationship (Fink, 1991, Krapp, 2002) that is, interests grow with age and may decline over the years. Hoffmann (2002) observes that loss of interest in school matters is particularly severe when a child makes transition to secondary school. In the same vain, an individual's interest develops only if the type of activities involves in is pleasant and highly appreciated as to contribute to their personal goals of study. Krapp (2004) added that in most cases, "there are close interrelations between a person's formations of individual interests their self-development''.

        Interest development is conceived as taking place within the process whereby a person finds out who they are and who they want to be. It is therefore argued that in the course of solving life tasks, people

have to aim at personal goals in different life areas. Interests can develop in the fields in which people are active, including those that serve general needs, for instance, relaxing, body care, or eating, are notable fields that are considered to be self-initiated. In the classroom, it is possible to motivate learners by activating multiple ways of meaning-making through the use of tasks relating to the different intelligences of the individuals. Besides, there is a central axiom of the position that states that people's actions are product of development and at the same time this drive and stimulate development (unknown author). Individuals are seen as attaining the competence and readiness to shape their own growth. Development is described by considering those concepts by which the growing person represents and constructs their own past, present, and future. In interest development, cognitive-rational processes play an important role, for example, in deciding on studying any subject and professional career. Hofer (2010) observed that, an individual with any of the learning preference interests evolves if the individual's continues or resumes an interaction with an object of potential interest. A potential interest is any interaction between a person and the environment that may or may not turn into an individual interest.

According to Hidi and Renninger (2006), three factors contribute to the development of interest. These include knowledge, positive emotion, and personal value. As individuals learn more about a topic, they become more skilled and knowledgeable. An increase in knowledge can bring about positive effect as individuals feel more competent and skilled through task engagement, therefore any of the reserved interaction that a person displays in their daily life, like when in the classroom learning environment, contribute to the development of interest.

3.   Situational Interest Development and Learning

From an educational perspective, students come into the learning environment with a wide array of individual interests. Situational interest is the affective reaction activated by specific or appealing stimuli in the environment. A situational interest, thus, represents a more immediate affective reaction that may or may not last (Hidi, 1990, 2000). Research indicates that situational interest can be enhanced through the manipulation or the modification of certain aspects of the learning environment and contextual factors such as teaching strategies, task presentation, and structuring of learning experiences. Situational interest, therefore, is a viable medium that can be harnessed by teachers to motivate the unmotivated and disengaged learners to learn (Subramaniam, 2009). He also opines that teachers do have control of the learning environment and could potentially modify or manipulate the learning environment to make it more of situational interesting to influence student's engagement and learning and subsequently impact the development of individual interest in the subject. Such interest is interpreted as a relatively stable tendency to occupy oneself with an object of attention.

Krapp (2002) asserts that situational interest manifests itself in curiosity and may take the form of excitement but is merely a temporary and transitory state. Therefore, whether situational interest arises among the students depends on the situational evidence as well as their individual factors. Situational interest, on the other hand, refers to the affective reaction triggered in the moment by stimuli in the environment which may have a short-term effect, and may marginally influence an individual's knowledge and values. It is evoked by specific or appealing features in the environment and has the potential to generate a true state of interest (Hidi, 1990; Hidi and Anderson, 1992). Although individual interest is triggered by an individual's psychological predisposition and situational interest by environmental stimuli, Hidi (1990) points out that individual interest and situational interest are not dichotomous phenomena that occur in isolation. On the contrary, each type of interest tends to interact and influence the development of the other in the subject they learned in school. Situational interest, therefore, offers an alternative to the individualization of interest to study. Meanwhile, creating a learning environment that evokes or triggers situational interest of the child, plays an important role in the development of individual interest to teach any subject (Hidi and Anderson's 1992).

Furthermore, situational interest can be enhanced through the modification of certain aspects of the learning environment and contextual factors such as teaching strategies, task presentation, and structuring of learning experiences (Chen, 1996; Chen and Darst, 2001). Hidi and Renninger (2006) in Harackiewicz and Hulleman (2010) have recently outlined ways of interest development detailing the conditions under which situational interest can be transformed over time into individual interest. Their approach contains an element of classic Lewian social psychology in that interest develops as a function of both the individual and the situation around them. That is to say that the level of interaction between the child's subjects could determine their interest development, including the personal characteristics' and social activities.

4.   Educational Implication

The need for learning preferences is likely to help teachers to identify their way of teaching and the way the students learn and their responses to classroom activities. That is because visual learners could be seen to be good in terms of drawing of objects, maps, events in history or draw scientific process, watch videos, use highlights, circle words, underline, take notes make list. Auditory learners may be good at using word associations, recording lectures, listening to videos, engaging in group discussions, taping notes etc. in order word, most of the students at this stage may like to study in short blocks by visiting the laboratory, taking field trips or visiting the museums (Vaishnav, 2013). Students may improve on their academic level of interest and strengthen the weaken areas of studies: It may help the teachers who have a greater understanding of individual personality to find out which of the preferred learning style that is predominant for students' best learning method. With this development, teachers knowledge about how the child learn could bridge the gap between the different need of the individual which will help the teachers in selection of their teaching strategies that will improve upon students classroom needs. Rosenfeld and Rosenfeld (2008) holds the view that teachers understanding of learning preference can significantly influence student learning differences. Also, several studies have shown the relationship that exists between interest of students, subjects, schools and other displays in science and other subjects. The school subject at this stage is seen as an important moderator that reveals the level of student involvement in learning while interest in what they learn provide a direct information about the learning preference to adopt during the learning process which can also be modified over time. Therefore, there is a higher expectation from the teachers if the need of the students will be satisfied. It also implies that, the understanding of student interest and learning preference places a check on their level of socialization as they are exposed to different task of learning.

5.   Conclusion

The review of the literature have strongly indicated how important interest and role of learning preference in teaching and learning processes. Different patterns of learning preference and interest have been identified and this could be summarized by pointing out that, children are characterized by different learning preferences especially focusing on different types of information and tending to operate on perceived information in different ways. While literature and classroom observation exposes that the existence of different type of learning preference is to maintain a singular approach to teaching and learning as well as develop understanding that meet the interest of the learner. Meanwhile, it is belief that the teacher demonstrate a high level of interest in order to spur the desire to improve upon student learning ability (Hall and Moseley, 2005). Also, given the role that interest plays in determining the quality of learning preference adopted by the child, it was observed that some children seem to be comfortable with the theories and abstractions of learning, while others feel much more at home with facts and observable phenomena; hence, some prefer active learning while others lean toward introspection, visual presentation of information and verbal explanations. With situational interest, teachers are willing to potentially contribute to the development of students' interest by engaging them in their different learning abilities.

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