



Horse-stream truism in Thorndike's law of readiness: Educational implications

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Abstract

This paper reviews the Edward Lee Thorndike's law of readiness. The stance of Thorndike and his theory is that learning proceeds from the learner's readiness to learn. Thorndike was mainly interested in the application of his theory to education especially in the teaching and learning of mathematics, spelling, reading and measurement of intelligence. Teacher's knowledge of the efficacy of this law is every essential for educational goal attainment. Paper has succinctly discussed this very relevant principle for an improved teaching and learning process in the contemporary educational system. Their implications on the pursuit of higher education in Nigeria were highlighted.

Keywords: horse-stream truism, law, readiness, and higher education

Introduction

There is a wise saying: you can take a horse to the stream, but you cannot force it to drink. This means that the will to drink belongs to the horse, not the horseman. Pulling the horse into the stream when it is not ready to drink will be an effort in futility. The horse's readiness to drink thus becomes very essential fact to consider when it is to be taking to the stream. The issue of readiness is a major highlight of the theoretical construction of Edward Lee Thorndike.

Edward Lee Thorndike (1874-1949) was one of the foremost American behavioural Psychologists who believed that learning is an outcome of the connection of stimulus and response. Due to the practicality of his theory of connectionism in learning, the American education was greatly impacted at his time. He extensively carried out experiments on learning processes and measured learning outcomes as well as intelligence. In his experiments with animals, He demonstrated how through the process of trial and error, organisms could establish a connection between stimuli and responses. He was credited for his scientific disposition in his studies. He subjected commonly observed phenomenon to scientific analysis. This 20th century educational psychologist espoused the working of the human mind in relation to learning. He applied his theory to the process of teaching and learning of mathematics, reading spelling, and measurement of intelligence (Elliot, Kratochwil, Cook & Travers, 2003 ^[3]; Blair, Jones and Simpson, 1978) ^[1].

From his series of experiments, Thorndike observed that there are underlying principles that facilitate the process of learning. He thus formulates three laws of learning. They are the law of readiness; the law of exercise and law of effect. This article isolates the law of readiness for discussion with a view to explicating its relevance in the real-life learning situations.

The law of readiness, what is it all about?

Thorndike strongly believed that without readiness, the learner

cannot learn. The law of readiness states that learning is made possible by the arousal of action tendency in the learner. The arousal is the readiness or propensity to carry out an action. Learner's readiness facilitates the process of connection between stimulus and response. Learners must be biological and psychological prepared before the school can make them learn (Elliot, Kratochwill, Cook & Travers, 2003) ^[3]. Nwankwo, Kemjika & Ekeh, (2002) ^[9] consider readiness as a necessity for learning. According to them, readiness is an individual's willingness to learn, and without readiness, no learning can take place. Oladele (1989) ^[10] adds that organism must be mentally ready to perform the instructional behaviour due to motivation. Also describing readiness, Kemjika (1996) ^[8], noted that learner finds learning easy or difficult due to his attributes of readiness such as his previous knowledge, attitude towards rewards and punishment, emotional and intellectual development. He concluded that learners differ in their ability to learn due to readiness.

Discussing the concept of readiness on the basis of individual differences, Blair, Jones and Simpson (1978) ^[1] opined that readiness to learn should be conceived on the basis of the individual learner. They believe that individuals' readiness is always based on their interests and abilities, thus if they are considered accordingly, they would do their bests and contribute meaningfully to the society. The emphasis in education is the learner and the learning experience. The teacher's greatest concern should be how to make the learner be adjusted to learning for the school to achieve the educational goal. The law of readiness emphasizes learner's motivation and interest in school activities. Teachers thus are expected to cultivate the culture of motivating and arousing the interest of learners at all times. As long learners are ready to learn, educational success is assured.

Readiness to learn appears in two broad categories namely, the biological readiness and the psychological readiness (Elliot *et al*, 2003) ^[3]. Biological readiness to learn entails the

presence of physical and mental capacities to carry out the assigned task. Growth and maturation are a biological explanation of the process of physical changes in human beings. The growth represents a quantitative increase in the body size, height and weight while maturation entails the systematic manifestation of inherited attributes at different stages of human development (Nwankwo *et al*, 2002) ^[9]

Factors that Stimulate Readiness

1. Growth and maturation: According to Blair *et al* (1978) ^[1], growth and maturation have a lot to do with learning. They maintained that physical and mental maturation of a baby at different stages enables them to sit up, crawl, walk, have bladder and bowel control, talk, relate and perform simple manipulative skills. It is only when the brain, muscles and bones mature that the child can do physical activities such as mentioned above.
2. Drive. Hunger was the drive in Thorndike's experimental cat. The random behaviours of moving, clawing, jumping and biting that led to the accidental opening of the puzzle box in the experiment were exacerbated by the state of hunger (Gleitman, Fridlund & Reisber, 2004) ^[7]. The cat could not afford to remain calm and die eventually, so it struggled to get out of the cage. The same is applicable to readiness in learning. When an individual is driven to achieve a goal, he goes all out for it.
3. Experience: Learner's previous pleasant experience facilitates learning in a new learning situation. Initial exposure helps to douse tension and doubt.
4. Instructional contents and techniques: What to learn and how it is learnt can influence learners' response positively or negatively. Learners have their preferences for what they learn and how they learn it. When there is congruence between what a learner desires and what is presented as learning material, readiness is triggered.
5. Learner's emotion: Learner's emotional state can account for his level of readiness to learn. Emotions cause a state of behavioural readiness, which can be observed in someone's body language. Every action portraying readiness or otherwise are guided by emotions because emotions manifest in feelings, cognition and physical reactions (Gazzaniga & Heatherton, 2003) ^[5]. A student suffering severe emotional conditions like trauma, stress or depression, will definitely not be psychologically ready to learn because he will lose concentration and coordination. Emotionally disturbed learners develop a disdain for things that previously arouse their interest. When a learner is emotionally stable, he is calm, relaxed and happy with what he does.
6. Learner's socio-economic background: The socio-economic background of a learner correlates greatly with readiness to learn. The educational level, finance, social awareness and condition of living of parents and other members of a family have a lot to do with the readiness to go to school and learn. If the family and home backgrounds are stimulating, children from such background would be ready and enthusiastic about school and learning.

The case of a child that was not physically and psychologically

ready

Miss Soso was eight years old in primary four when her parents abruptly ended her primary education and secured admission for her into a secondary school. Soso was an enthusiastic and excellent performer. Right from her primary one class, she maintained outstanding academic records. Her parents considered moving her to secondary school believing that she could always perform excellently. They secured an admission for her in a good private secondary school. At the end of her first session in the school, it was observed that the little girl was highly distressed, had very poor results and could not cope with the demands on her. She admitted to her parents that it was difficult for her to cope with the challenges at that level. When Soso was presented to the author of this paper for counselling, she confessed that school was no more interesting to her and that she did not want to continue. It was noted that brilliance alone could not help the little girl to succeed: she needed to be physically and psychologically ready. Soso's parents did not consider her readiness to proceed to secondary school before they took the decision for her.

Common School Practices that Negate the Law of Readiness

The learner is supposed to be the point of focus in the educational process. The learner's general predisposition (his readiness, interest, comfort, satisfaction, attitudes, etc) are supposed to guide the teaching and general school practice so that the ultimate goal of training and human capacity development of the school would be realized. Some unethical and ill-informed practices currently pervade schools in our schools, of the students. The following practices have been observed in our schools and should be corrected.

▪ Arbitrary acceleration

Acceleration is the change in the normal school programme that allows a gifted child to be admitted into a higher class or higher level of school. Elliot *et al* (2003) ^[3], outlined the different forms that acceleration can take. They include admission based on mental age instead of the chronological age of the child skipping of class, combining of two years' work as one year; early admission into secondary or higher school. Contrary to the rule for acceleration, schools today yield to the pressure and demand of parent to skip classes and admit underage students into higher classes. This common practice in our schools where parents dictate the level of school and class children should be admitted negates the natural law of readiness.

Whereas the normal age for graduation at the primary school is 11 to 12 years, today. Children are made to finish their primary school at an average age of 9. At this age, the mental and physical and emotional capacities of the child may not have matured enough to contain tasks and pressure of work at the secondary school level.

▪ Late school closure

In the past, schools closed at 2.00 pm and 1. 00 pm at the secondary and primary levels respectively. That arrangement enabled students to have a reasonable time to go home or dormitory to refresh before evening when they should attend

to their home works and to prepare for the next day. But today, students at the primary and secondary school levels are kept behind in the schools for additional lessons after the normal school hours. It is obvious that these children could not be mentally and physically ready for such excess workload. The author of this paper has personally observed that very little children kept in school until late hours (4.00 to 5.00 pm) go home weak and dejected. Such children are bound to come to school the next day psychologically unprepared.

▪ **Excess academic workload**

Arbitrary introduction of new curriculum contents and new subjects in schools has led to increased number of subjects offered each day. Most of these changes are done without professional inputs. They may have their merits, but they are done without due consideration of their impact on learning and learners' educational adjustment.

▪ **Irrelevant curriculum contents**

Curriculum reviews are not supposed to be done in exclusion of the needs and interests of the learners. New contents have been introduced to the nation's curriculum, which learners have not considered necessary. Readiness to learn is of the learner. According to Nwankwo *et al* (2002) ^[9], no actual learning can take place if the learner is not psychologically ready. Learners' interest and needs should be considered in every curriculum review process, their readiness is paramount in the educational process.

Ways schools can boost learners' readiness

- **Readiness training:** Since lack of readiness does not necessarily imply lack of capacity or ability, learners can be trained to revive their readiness to learn and study. At the primary level of education, preparatory experiences that would build readiness should be carried out. For instance, at kindergarten and primary levels of schooling, infants and children can be exposed to pleasurable activities like spelling B' and award of certificates to winners. By so doing, the children will build up readiness in reading studies.
- **Enrichment instructional strategy:** Enrichment is an instructional strategy whereby the teacher packages higher academic experiences for the gifted students in the normal classroom setting. The aim is to provide the gifted students more challenging experiences due to their higher academic capacities. The teacher could assign them tasks meant for students at the upper class or assign them a higher-level task. The teacher could also encourage parents of the gifted to take on special field trips where they would gain practical experience. Failure to consider a special arrangement for the gifted can cause poor readiness among them because they may not gain satisfaction from the normal school instructions.
- **Motivation:** Human beings naturally enjoy pleasurable and rewarding outcomes. The entire school activities should be structured to capture the interest of learners, Interest is a strong factor that arouses and sustains readiness. Learners should be made early to perceive schooling and learning as rewarding exercise. The same is applicable to every single

subject that students offer. Presentation of lessons should

be pleasing and inspirational and not to be threatening to learners.

- **Special Grouping:** School should adopt other instructional techniques from the old conventional ones where the teacher stands in the front of the classroom and talks to students sitting down on their desks. Teaching techniques that would involve and engage students are usually appreciated more by learners. They are more receptive to things that they know emanated from their ideas and thinking. Group discussion sessions enable them to air their line of thoughts and opinion. Higher academic performance has been attributed to group learning due to its potential for increased elaborative thinking, exchange of ideas and motivation (Brad, 2002^[1] Gillies, 2004^[6] & Slavin, 1987)^[11].
- **Identification of challenged students:** Effort should be made by schools to identify students who are not ready to learn. Some of them might be physically present but psychologically absent. Identifying them and interacting with them perhaps through counselling, can be quite revealing to schools and parents. The lack of readiness in some learners is due to the negative personality of the teacher or the methods of teaching he consistently adopts, which does not adequately arouse the interest of the learner.
- **Self-confidence training:** Schools should train students on how to build self-confidence. Lack of self-confidence results in an inferiority complex. Inferiority complex makes a person to shy away from school tasks because of the pervasive feeling of inadequacy and failure. Individualized training on building self-confidence can help greatly. A child suffering poor attitude towards self and cannot cope with his age-mates can be temporarily placed with younger children until the feeling of fear and inferiority is extinguished (Blair *et al* 1978)^[11].
- **Explore entry behaviour:** To arouse learners' readiness in a new learning situation, the teacher should explore their previous experience and connect it with the present experience. Also, sharing the specific objectives of the lesson with the students prepares their minds for the lesson. When they realize the gains of the lesson, their readiness is built up.
- **Ensuring the usefulness of information:** Learners at all level of education want information that is useful, real, able and beneficial to them. The teacher should avoid the presentation of abstractive information but rather an information that is more real and usable. Readiness is built when the learner realizes the usefulness of the learning materials.
- **Ensuring learners' fitness:** Readiness is built when the learner is mental, physically and emotionally stable. Good health, adequate nutrition and sound mind are essential for learners' readiness to learn. The home and school should cater for the physical and mental well-being of the learners.
- **Innovation and creativity:** Teacher should be creative and innovative in the selection and presentation of lesson content. The readiness level and capacity of learners should guide this process. The method of teaching should

be determined by what is suitable for learners and to a large degree, learning should be individualized so that students will learn according to their respective mental ability.

- **Facilitative teaching:** To achieve a high level of readiness among learners, the teacher should be facilitative. The teacher should create an enabling atmosphere for learning. He should take lessons to be interactive, interesting, challenging and problem-solving oriented. Learners naturally want to be sure that school programme is addressing their individual needs and aspirations.
- **Subject matter mastery:** Assigning of subjects to the teacher should be based on mastery. Knowledge of the subject matter is paramount to quality teaching. Learners are always sensitive to teacher's mastery of the subject. When they discern that a particular teacher has a good command of the subject, they make good remarks about the teacher and exhibit likeness for both the teacher and the subject.

Conclusion

Human learning proceeds more rapidly when the learner is ready to learn. The readiness may be physical or psychological. When an individual learner realizes that the outcome of his action is enjoyable and beneficial, his readiness to act is boosted. The school and the teacher, in particular, have a task of ensuring that learners view school activities as a beneficial venture. Teaching and learning must be made to be very attractive and satisfying to the learner at all times. The national policy on education (2013), supports that educational activities should be learner centred for maximum development and fulfilment of the learner and that teaching should be practical, activity-based and experiential. These conditions are tailored towards building greater readiness in learners

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