

The Interplay between Gender and Learning Styles: Implications for Second Language Teaching

Olagbaju Oladotun Opeoluwa¹

¹ University of Ibadan, Ibadan, Nigeria.

Received: 8 December 2013 Accepted: 3 January 2014 Published: 15 January 2014

Abstract

Learning styles refer to the variation that exists in the ability of people to accumulate interpret and assimilate information. A learning style is an individual's preferred way of learning and scholars (Reid (1995), Wagaman (2008), Montgomery and Groat (1998) to mention a few) have established that when a teacher's style matches the student's learning styles then learning will occur. Research evidences (Howe 1997), Burham (2008) and Sax Leonard (2008)) support that gender plays a unique role in the way we learn. This paper thus seeks to investigate the relationship (if any) between gender and learning styles with its possible implications for language teaching. The paper draws conclusions that majority of females' preferred learning style is the diverging and assimilating (thinkers than doers) while a greater percentage of the males fall under converging and accommodating learning styles (doers than thinkers). Girls are motivated by the desire to impress adults while boys are motivated by the object or material to be learnt. This of course has serious implications for language teaching. Lastly, language teachers are encouraged to develop their instructional packages to cater for the differences in the students' gender and learning styles. Other stakeholders in the education industry are to accommodate the knowledge of different genders and learning styles in educational planning.

Index terms— gender, learning styles, language teaching, implications for teaching and commensalism.

1 Introduction

Several studies have been conducted in the field of education for the primary purpose of improving teaching and learning. It is also a known fact that so many other factors outside the teacher's competence or knowledge of the subject matter are responsible for effective teaching and learning to occur in a classroom. Some of the other factors include: the language of instruction employed, the gender of the learner, the learning styles of the different learners in class and so on. Gender as it is used here goes beyond differences in sex; it extends to other physiological differences between the male and the female gender.

Interestingly, apart from the differences in the genital configuration of both the male and female, the two sexes have differences in their strength and weaknesses as a result of the way their brain functions. Each student has a peculiar way of learning and interpreting whatever information is being presented to him or her, this peculiarity in learners is known as learning styles. Learning styles and gender have a commensalisms-like relationship because one seems to influence the other.

Some of the researchers in the field of learning styles (Kolb 1984, Montgomery and Groat (1998), Honey and Mumford (1992), Cezair (2005), O' Neill (2003)) have been able to link certain learning characteristics or styles to gender. A number of learning styles model, from Kolb's experiential learning to Gardner's VAK (Visual -Auditory -Kinesthetic) learning styles model confirms that gender has a major role to play in the way students

3 GENDER AND LEARNING STYLES: A COMMENSALISMS -RELATIONSHIP

learn. For example, majority of male learners tend towards having the kinesthetic style as their dominant learning style and that is why by implication, boys will learn better in a activity -based lesson.

On the contrary, a greater percentage of girls are dominant in the area of the auditory learning style. In essence, a teacher needs to plan his or her instruction with the aim of meeting the learning styles of individual students in the classroom. Also, language instructors need to consider the gender differences in the class as going beyond the genital differences. The gender of a leaner has serious implication on the way his or her brain works -either dependent on the left or the right hemisphere that of course has serious implications for learning in general and language teaching in particular. This study will delve into the numerous areas of relationship between learning styles and gender; implications will also be drawn for language teaching.

2 II.

3 Gender and Learning Styles: A Commensalisms -Relationship

Students have specific ways by which they learn best. These are technically referred to as learning styles or preferences. An understanding of a students learning style is very important when a teacher is planning his/ her lesson. ??later et.al (2007) opines, 'one of the many characteristics that make up a student's learning style is the sensory modality by which the student prefers to take in new information'. Other factors influence the choice of a student's learning style and these include: gender, age, culture, academic achievement, socioeconomic background and so on. The focus of this work will be on the relationship between gender and learning and the implication of same for language teaching. According to information posted on www.en.wikipedia.org/plearningstyles, "learning styles are simply put, various approaches or ways of learning. They involve educating methods, particularly to an individual, that are presumed to allow that individual to learn best". There are so many models of learning styles but notable amongst them include: David Kolb's Model, Anthony Gregorc Model and Sudbury Model of Democratic Education, Gardner's Multiple Intelligences and VAK learning styles Models. The focus of this paper will be on Kolb's Model.

Kolb's experiential learning theory (ELT) and learning styles inventory (LST) are strongly linked with the work of Dewey, Lewin and Piaget. Kolb's experiential learning theory emphasizes the point that experience plays an important role in the learning process. Kolb (1984) explains experiential learning theory as a holistic integrative perspective on learning that combines experience, perception, cognition and behaviour. Kolb presented a model, which works on a four-stage cycle namely:

(i) Concrete Experience (CE) abilities (ii) Reflective Observation (RO) abilities (iii) Abstract Conceptualization (AC) abilities (iv) Active Experimentation (AE) abilities Kolb (1984) states that the different abilities listed above must be in a student's learning style if such is to be effective and learners are capable of combining at least two abilities to form their learning styles. Kolb (1976) presented four types of learning styles' that are: Diverging learning Style-combines feeling and watching (CE/ RO), learners in this category are sensitive, and they prefer to watch rather than do, the gather information and use imagination to solve problems. Kolb (1984) refers to this style as diverging because these learners have their strength in situations that require ideas-generation, brainstorming imagination and so on. They tend to be strong in the arts and they are good listeners.

Assimilating learning style-(AC/ RO) combines the ability to watch and think. Learners in this category prefer concise and logical approach to instruction. Honey and Mumford (1992) as cited by O' Neill (2003) classify learners with this style as theorist because they require good and clear explanation rather than practical opportunity. They are more interested in ideas and abstract concepts. They excel at understanding wideranging information and organizing it in a clear and logical format.

Converging learning style (AC/ AE)-combines the abilities of doing and thinking. Learners in this category are capable of solving problems and transferring their knowledge to finding solutions to practical knowledge. They thrive on technical tasks and they like to experiment with new ideas, to stimulate and to work with practical applications.

Accommodating learning style (CE and AE)combines the abilities of doing and feeling. Learners in this category rely on intuition rather than logic. They use other people's analysis and prefer to take a practical, experiential approach. They are attracted to new challenges and experiences and to carry out plans. They prefer to rely on others for information than carry out their own analysis.

Cezair (2005) carries out a comparism of the different learning styles. Cezair opines that the knowledge of the learner who prefers the converging learning style (AC/ AE) is organized in such a way that, through hypothetical-deductive reasoning, he can focus it on specific problems. The learner who prefers the Diverging learning Style (CE/ RO) has learning strengths opposite to those of the converging style. This style performs better in situations that call for generation of ideas, such as "brainstorming".

On the other hand, learners with the Assimilating style (AC/RO) possess the ability to create theoretical models and such learners lay emphasis on logic and conciseness. The Assimilating learning style focuses on doing things, carrying out plans or experiments and involving him/ herself in new experiences.

Information posted on [www.brainbox.co.uk/ a3_aspects/pages/LSgender.htm](http://www.brainbox.co.uk/a3_aspects/pages/LSgender.htm) states, 'Although there are differences in the way in which boys and girls generally prefer to process information, we should nevertheless remind ourselves that this is the minimalist approach, in that it identifies only two categories'. Howe (1997) reported his findings in a research carried out on "Gender and Classroom interaction". The study observed young

children working on a jigsaw puzzle; it was observed that girls were three times as likely as boys to ask for help from the supervising adult. In the absence of an adult, girls directed their pleas for assistance to boys. This strengthens the argument that majority of female learners possess diverging and assimilating learning styles while boys have convergent and accommodating learning styles. Barton (1996) after conducting a research in 3 schools experimenting with single-sex teaching of modern languages concludes, 'All three heads of languages are keenly aware that segregation alone is not an answer but have done much to identify the learning styles, interests and needs of the boys they teach. Perhaps it is this that has led the boys at Madaley to thrive in what they describe as a "happier environment".

Geoff Hannan (cited on www.brainbox.co.uk/a3_aspects/pages/Lsgender.htm) points out the differences between the learning styles of both genders. Hannan states, "Girls tend to be brought up to have relationships with people, to be responsible for themselves and others, with a strong emphasis on communication. They are brought up as "the talkers". Boys on the other hand, are brought up to have relationships with objects. They are 'the doers'. Below is a table showing the salient features and differences between the male and the female brains: Source: Learning Styles and Gender www.brainbox.co.uk/a3_aspects/pages/Lsgender.htm While analyzing the table above, Hannan opines that the predominance of right-brain thinking in males could imply that a boy's oral skills are weaker as well as his literacy, organizational and analytical skills. Consequently, "his lack of competence (and interest) in analyzing, sequencing and prioritizing are central to his academic under-achievement". He thus concludes by stating that do first and then (hopefully) thinks while girls think first then (hopefully) does.

This of course has a dive implication for learning because the male has a trial and error, experiential learning style rooted in confidence, competence and interest in the manipulation of objects and systems while the female has a language-centred, sequential learning style with a strong based in association and relationship. The male is a speculative thinker while the female is a reflective thinker. Burman (2008) conducted a research to clarify gender differences in language processing. The children that participated in the study were between ages 9-15 years and the findings are listed below: * Girls had greater brain activity in three known language areas than boys of their brain when completing reading comprehension or word meaning tasks.

? Inferior frontal gyrus-an area involved in word meaning and other language functions ? Superior temporal gyrus on both sides of the brain-involved in sounds of words ? Fusiform gyrus on the left side of the brain-area involve in the spelling of words and their visual identification. * Girls used both the left and right sides of their brains for language-related activities whereas boys primarily used the left side. * Girls' language ability was dominated by auditory/ listening areas of the brain for accessing and processing information related to spelling and rhyming. * Boys' language ability was dominated by visual areas of the brain for accessing and processing information related to spelling and rhyming. The submission of ??alem (2006) that there is no significant gender differences in overall motivation and that the result did not show a significant role for gender in EFL proficiency seem to water down the role of gender in language learning. Interestingly, research by the NASSPE and posted on www.singlesexschools.org/ esearch states that the differences (in male and female) appear to be greatest among the YOUNGEST children.

Note: The above applies to the majority of right-handed people. In left-handed and ambidextrous people the functional specialisation is different: sometimes this is simply a swap-over -but may also be a more complex sharing of functions.

Males generally have more-developed right hemispheres -which disposes them towards spatial tasks such as map-reading or interpreting technical drawings. Females generally have more-developed left hemispheres -which is probably why they learn to speak earlier than males and are often more adept at languages. Females are also better at fine motor control, which probably accounts for their generally superior handwriting skills.

4 MALE AND FEMALE BRAINS

5 G)

From the foregoing, it is obvious that gender plays an important role in the learning needs of language learners. Therefore, language teachers must be conversant with a knowledge of these learning styles in order to meet the need (s) of their learners.

Commenting on gender, Davies (1989) states that masculinity and femininity are structural properties of our society, not necessarily of the individuals. Therefore, our social environments-particularly educational contexts-condition and reinforce genderspecific discursive patterns.

Most females tend to listen well in class while the males are hyperactive during lesson. By implication, girls will respond favourably to an auditory-centred teaching approach in a language class unlike males that would function effectively in a visual or tactile (Kinaesthetic) -centred teaching approach. Language teachers must be weary of planning a one-size-fits-all instruction in a mixed-sex class. Instructions in a language class must be planned in such a way that it will cater for all the learners.

The best way to get at a learner instructions to him or her in the style or manner that most suites him or her. Gardner (1993) suggested a learning style model effective for teaching young people. This he called the Visual-Auditory-Kinaesthetic learning style and it is very good for diverging and assimilating learners (that is, a person's whose dominant learning style is thinking and learning). V stands for seeing and reading, A-listening and speaking and K-touching and doing. Wagaman (2008) opined that there are all kinds of learners: those who

learn by seeing something that is being written, those who learn by listening to something being said and those who learn by actually doing something. Wagaman explains that these types of learners have technical names of visual learners, audio learners and Kinesthetic learners. He concludes by stating that the best learning situation includes a strong mixture of all three of these learning types. Reid (1995) was of the view that learning styles are internally based. Some learners rely on visual presentations; others are comfortable with spoken language while some may respond better to hands-on activities. People learn differently and these differences in learning are found in ESL/ EFL settings. When teaching styles are matched with the students learning styles then all the learners will have an equal chance in the classroom.

6 III.

7 Implication for Language Teaching

The National Association of Single-Sex Public Education (NASSPE) in an article on Single-sex Education published on www.singlesexschools.org/home.php states, "The brains of girls and boys develop along different trajectories. Some differences are genetically programmed and are present at birth; other differences are manifested later in childhood. "Girls and boys learn in subtly different ways, in part because of those differences in the developmental trajectory of the brain". The statement goes further to say that all girls do not learn the same way and the same applies for boys.

In a situation when the teacher's instructional style and the learner's style do not match, learning will definitely not take place. However, teachers who include all the learning styles in their lessons will be more effective and have more engaged students. It is therefore important that language teachers (both inservice and pre-service teachers) should acquire the knowledge of learning styles and inculcate it into their lesson plan.

Language teachers also need to know that gender (sex differences) in learning may derive in part from basic physiological differences, such as differences in the ability to hear and also from differences in learner's ability to comport themselves in the classroom. Sax (2008) stated, 'Girls have a sense of hearing which is subtly better than boys (depending on the frequency tested). For example, Erik Berninger of the Karolinska Institute in Stockholm, Sweden, demonstrated in 2007, in a study of more than 30,000 newborn babies, that girl babies have an ability to hear which is slightly but significantly better than boys-and those were newborn babies. Differences in the ability to hear get bigger as kids get older.

The implication of the above gender difference is that language teachers should bear this in mind and so, endeavour to reach every learner in the class even if it means raising his or her voice in order to carry the boys along. Sax also states that educational psychologists have consistently found that girls tend to have higher standards in the classroom, and evaluate their own performance more critically. Girls also out perform boys in school (as measured by students' grades), in all subjects and in all age groups.

The implication of the above gender difference is that language teachers need to include kinesthetic approaches into their lesson plan and delivery so as to actively involve the male learners or hyperactive individuals in the classroom. Max (2008) observed that there are differences in the factors that motivate girls and boys. Researchers (Pomerantz, Altermatt, and Saxon (2002)) have consistently found that "girls are more concerned than boys are with pleasing adults, such as parents and teachers". Most boys, on the other hand, will be less motivated to study unless the material itself interests them. The implication of this is that language teachers should seek to motivate the learners by being models and developing materials that can stimulate learning in boys.

Montgomery and Groat (1998) explained some of the reasons why learning styles have serious implications of learning styles for teaching and they include:

(1) Making Teaching and Learning a Dialogue:

Montgomery and Groat admitted that the basic assumption of most of the teaching practices is that students are "empty vessels" that had to be filled with knowledge by the teachers. The incorporation or awareness of learning styles will give birth to a more robust approach to teaching. For example, the interactive, cooperative or collaborative teaching and learning strategies. (2) Responding a more Diverse Student Body-Learning styles will make the teacher aware of individual differences in learning and thus, plan his instruction in such a way that everyone in the class will benefit. (3) Communicating our message-learning styles offer a teacher the rare opportunity to package and deliver his or her instruction in a multi-faceted way across the range of students' learning style. It also offers the students options on a range of instructional modes that best meets their needs. (4) Making teaching more Rewarding: the knowledge and application of learning styles to teaching will boost or increase students' performance or achievement. (5) Ensuring the future of our discipline: They argued that by raising a generation or group of learners that are knowledgeable in the theory of learning styles, then continuity is sure and safe guarded.

Possessing the knowledge of learning style does not mean that the teacher should plan instruction for individual students separately rather; the teacher should strive to provide a variety of learning experiences in order to cater for the needs of the different learners in the classroom.

Inculcating all the different learning styles (at least the major ones: Visual-Audio-Kinesthetic (VAK)) in a lesson will serve a dual purpose of meeting the learning needs of the different students in the class as well as developing other areas of learning styles in the class. For example Language teachers can introduce a combination of individual assignment and group work.

Juris, Ramos and Castaneda (2009) suggested that teachers should identify their own teaching style as well as learning styles in order to obtain a better result in the Class. As the need arises, teachers must endeavour to balance their teaching styles in conformity with the students learning style. A variety of learning tasks should be assigned by the teacher in order to appeal to the different learning styles in the class and attain learning goals. ¹



Figure 1:

LEFT BRAIN	language logic	RIGHT BRAIN	visual perspective spa-	Volume
mathematics analytical thinking	tial awareness creative & imaginative		functions emotions	XIV
shaping of ideas				Issue II
				Version
				I
sequencing	tone			
fine motor skills	quality of sound			
timing	facial recognition			

[Note: 17(]

Figure 2:

¹The Interplay between Gender and Learning Styles: Implications for Second Language Teaching

- [Juris et al. ()] , M F Juris , V V Ramos , M G G Castaneda . Learning and Teaching Crossroads 2009.
- [Colombia. Institute for Learning Styles Journal ()] , Colombia. Institute for Learning Styles Journal Spring 2009. 1. Pontificia Bolivariana University
- [Slater et al. ()] ‘does gender influence Learning Style preferences of first year medical students?’. Jill A Slater , Heidi L Liyan , Stephen E Dicarlo . Detroit, Michigan. Advanced physiological Education 2007. American Physiological Society. 31 p. . Department of physiology Wayne State University School of Medicine
- [McCullough (2001)] Does Learning Come in Pink and Blue? Gender and Learning, Laura McCullough . 2001. June, 2009. Department of Physics. University of Wisconsin-stout www
- [Kolb ()] Experiential learning -Experience as the source of learning and development, A Kolb . 1984. New Jersey: Prentice Hall.
- [Joan (1200)] Exploring the impact Gender may have on students’ Learning Styles and Course Achievement in Selected Accounting Courses, Cezair Joan . www.multicultural.vt.edu/proceedings/2005_Papers/Exploring_the_Impact_Gender_May_Have.pdf 2005. 1200. June, 2009. Murchison Rd, Fayetteville, NC 28301. 352. Fayetteville State University, SBE Bidy
- [Howe (1997)] Gender and Classroom Interaction Strathclyde: Scottish Council for Research in Education, C Howe . www.brainboxx.co.uk/a3_aspects/pages/Lsgender.htm 1997. June, 2009.
- [Burman and Douglas (2008)] Gender Differences in Language Abilities: Evidence from Brain Imaging, D Burman , Douglas . 2008. April, 2009. (Gender Differences Special Edition NASSPE www)
- [Kolb ()] A D Kolb . Learning Style Inventory, (Boston) 1976. McBer and Company.
- [Chapman (2006)] Kolb’s Learning Styles Model, A Chapman . www.businessballs.com/aboutus.htm 2006. June, 2009.
- [Leonard (2008)] Learning Style Differences: What are some differences in how girls and boys LEARN. National Association of Single sex Public Education, Sax Leonard . http://www.singlesexschools.org/research-learning.htm#top 2008. June, 2009.
- [Learning Styles and Gender (2009)] Learning Styles and Gender, www.brainboxx.co.uk/a3_aspects/pages/Lsgender.htm June, 2009.
- [Wagaman (2008)] Learning Styles in the Classroom. Learn How to Teach to Each Different Learning Style. www.suite101, J Wagaman . 2008. June, 2009.
- [Reid ()] Learning Styles in the EFL/ ESL Classroom, J Reid . 1995. Heinle & Heinle Publisher.
- [LearningStyles.wikipedia -The free Encyclopedia (2009)] www.en.wikipedia.org/pllearningstyles LearningStyles.wikipedia -The free Encyclopedia, June, 2009.
- [Gardner ()] Multiple Intelligences: Theory in practice. Multiple Intelligences Concept, H Gardner . 1993. 1983. 2003-2009. Howard Gardner.
- [Salem] N (2006) the Role of Motivation, Gender and Language Learning Strategies in EFL Proficiency. A Thesis submitted for the degree of Masters of Arts (MA) to the Department of, M Salem .
- [Geraldine and Neil (2003)] Personal Learning Styles. Centre for Teaching and learning. www.ucd.ie/ teaching/printableDocs/GoodPracticesinT&L/Person allearningstyles, O’ Geraldine , Neil . 2003. June, 2009.
- [Montgomery and Groat (ed.) (1998)] Student Learning Styles and their Implications for teaching. The Center for Research on Learning and Teaching CRLT Occassional Paper No 10. the University of Michigan 3300 School of Education Bldg Ann Arbor, S M Montgomery , L N Groat . www.editlib.orgld/21207/proceedings_21207.pdf26th MI B/F 48109-1259 Constance E Cook and Lisa A. Mets (ed.) 1998. June, 2009.
- [Davies ()] ‘The Discursive Production of the Male/ Female Dualism in School Settings’. B Davies . Oxford Review of Education 1989.
- [Amanda (1996)] ‘Words of Comfort for Males’. Barton Amanda . Times Educational Supplement dated 1996. 22 March, 1996.