



Investigating Undergraduate Students' Learning Styles and Preferences in English as a Second Language: The Case of a Public University in Ghana

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ABSTRACT

This study examines selected undergraduate students' learning styles and preferences at a public university in Ghana. These participants were Level 100 students pursuing the Bachelor of Information Technology programme. The study sought to answer three research questions: What are the students' learning styles? What are the students' preferred learning styles? What characteristics do students demonstrate to establish their learning styles? Thirty participants (30) were purposefully sampled from the Faculty of Computing and Information Systems of a public university in Accra, Ghana. In this study, the research instruments used for the data collection were Fleming's questionnaire on learning styles and semi-structured interviews. The outcome of this study revealed that the participants used all the learning styles such as Visual, Auditory, Read and Write, and Kinesthetic (VARK). The most favoured learning style indicated by the questionnaire responses was Auditory. The interview responses indicated that they used different learning styles, but each participant had the most preferred learning style. The study concluded that learners should be allowed to integrate varied learning styles to improve their learning and make learning interesting and relaxed. The study will be beneficial in formulating policies (at the tertiary education level) that seek to provide different opportunities for students regarding learning styles and preferences for studying English as a second language.

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INTRODUCTION

Learning styles are essential in the life of every learner. Individuals may have a unique learning style that rarely aligns with their teachers' teaching methods. The diverse socioeconomic and cultural backgrounds influence students' learning and understanding of concepts.¹ This uniqueness is established when learners

¹ Lung-Hsiang Wong, *Essential Study Skills*, 8th ed. (Nelson Education Ltd., 2015); Nasreen Hussain and Nadia Ayub, "Learning Styles of Students and Teaching Styles of Teachers in Business Education: A Case Study of Pakistan," *Procedia-Social and Behavioral Sciences* 69 (2012): 1737–40; Hussain and Ayub, "Learning Styles of Students and Teaching Styles of Teachers in Business Education: A Case Study of Pakistan"; Edward Owusu, John Agor, and Evershed Kwasi Amuzu, "Second Language Learners' Family Background and Their

demonstrate their learning styles to achieve learning objectives. For instance, while some learners grasp concepts better through drills, the visual learner prefers to learn from pictures, charts, graphs, and tables used to explain those concepts. Other learners also learn better if they spend time reading extensively and synthesising what they read. They extend it by putting together what they have learnt into writing and practice to confirm the internalisation of the concept. The auditory learner becomes active in discussing issues on board and also yearns, for instance, to be told how a new machine works and asks questions, unlike the read-and-write learner, who will read the instructions on how to operate it by themselves. The kinesthetic learner prefers to demonstrate the concept to understand it better when given the opportunity. Such learners engage in hands-on activities. Different learning styles indicate that no learner learns the same way as another. Incorporating activities characteristic of their learning styles and preferences attracts learners' attention to achieve the lesson's objectives. This helps to meet the needs of the students. A person's learning style preference does not limit him to process and understand information through other means.² Other learning alternatives serve as a means of processing and understanding information. The different learning styles and preferences explain why some students grasp information more readily while others struggle to understand new information. To do well in school, the learner should vary and adjust his learning styles and preferences in various learning situations.

Learning style refers to the learner's learning culture, which helps him understand what he sets out to do with the mindset of success.³ Every student perceives information differently and processes and retains it at different times. Therefore, systematic processing of information and retention is related to the learning style. For example, learners with visual learning styles who visualise and retain information can function effectively and progress academically. In addition, learning style is defined as all the inputs a learner makes to collect information about the concept that he learns, processes, and retains for use.⁴ For instance, if a learner writes and highlights the salient points, he does so to facilitate his learning. Students reflect on the preferred learning styles that will meet the learning objectives. The different learning styles allow learners to produce quality work.⁵ The learner selects the preferred learning styles and integrates activities that optimise learning.

Learning is an individualised process. Different educational and background experiences, personality traits, levels of motivation, and numerous other variables affect the way we learn.⁶ This brings about the way each person chooses to learn. Either through visual, auditory, read-and-write, or kinesthetic modality. The preferences of the learning style reflect people's preferred ways of doing various tasks and processing information to solve problems and remember new information. It encourages efficient and effective learning with less stress.

A student's preferred learning style influences his learning and performance.⁷ Therefore, teachers should situate teaching so that learning styles are varied to accommodate and satisfy all students who are part of the class. Research has confirmed that the learning environment has the power to strengthen or weaken the learning styles of learners.⁸ Learning styles play significant roles in the quality of learning and academic success. Also, learning styles contribute to academic performance of students.⁹ The style a learner adopts increases his retention rate because learning is done in a natural sense. He does not learn

English Writing Competence: The Case of a Private Tertiary Institution in Ghana," *Studies in English Language Teaching* 3, no. 4 (December 29, 2015): 466–86, <https://doi.org/10.22158/selt.v3n4p466>.

² Wong, *Essential Study Skills*.

³ Maryam Rao et al., "Effect of Preferred Learning Styles on Academic Achievements: A Cross Sectional Descriptive Study," *The Professional Medical Journal* 28, no. 11 (October 31, 2021): 1673–77, <https://doi.org/10.29309/TPMJ/2021.28.11.5668>.

⁴ Gilbert Magulod, "Learning Styles, Study Habits and Academic Performance of Filipino University Students in Applied Science Courses: Implications for Instruction," *Journal of Technology and Science Education* 9, no. 2 (March 1, 2019): 184, <https://doi.org/10.3926/jotse.504>.

⁵ Magulod, "Learning Styles, Study Habits and Academic Performance of Filipino University Students in Applied Science Courses: Implications for Instruction."

⁶ Wong, *Essential Study Skills*.

⁷ Elvia Rachmah Ajeng, "Preferred Learning Styles Of The Students Of SMK Muhammadiyah 2 Surakarta" (Universitas Muhammadiyah Surakarta, 2018).

⁸ Simon Cassidy and Peter Eachus, "Learning Style, Academic Belief Systems, Self-Report Student Proficiency and Academic Achievement in Higher Education," *Educational Psychology* 20, no. 3 (2000): 307–22.

⁹ Carmencita L Castolo and Lizyl R Rebusquillo, "Learning Styles of Sophomore Students of PUP Laboratory High School (SY 2006-2007)," *Journal on Educational Psychology* 1, no. 3 (2008): 21–35.

by the rote approach but rather puts in mechanisms to internalise the materials learnt and recall them when needed. This maximises his potential and abilities to achieve learning objectives.

The problem is that since the learning environment contributes to developing learners' learning styles, poor environmental learning condition is a hindrance for learners to identifying and develop their learning styles and preferences.¹⁰ For instance, a visual learner who learns in a classroom that is not text-rich and does not have markerboards to write on and projectors to display the teaching-learning materials will be slow in processing information to make sense. Consequently, this study investigates the learning styles and preferences of 100 undergraduate students with a Bachelor's degree in Information Technology at a public university in Ghana. The objectives for this paper are:

1. To explore undergraduate students learning styles
2. To identify the student's preferred learning styles
3. To determine the learning style strategies of the students

The findings are presented in the subsequent sections.

LITERATURE REVIEW

In Pakistan, a study was conducted on the learning styles of students and the teaching styles of teachers in business education.¹¹ The participants were two hundred and sixty-two (262) final-year students and 12 faculty members who taught different business subjects to the same cohort of students. The study integrated the Canfield Learning Styles Inventory (1992) model and the Staffordshire Evaluation of Teaching Styles (2007) model to ascertain the learning styles of the students and the teaching styles of the teachers. The Canfield's Learning Style Inventory had a 30-item scale and four major types, and Modes of Learning to which the participants responded. The Staffordshire Evaluation of Teaching Styles was administered to twelve faculty members and had 24 items on the questionnaire with a Five-Likert scale. The questionnaire assessed six styles of teaching. The result showed a positive correlation between student learning style and teacher teaching style.

Similarly, some researchers studied some medical students' diverse learning styles and predominant learning approaches.¹² In that study, one hundred and twenty-one (121) students responded to the questionnaire on learning of Fleming's learning styles: visual, auditory, read/write, kinesthetic (VARK).¹³ The conclusion was that teaching methods that aligned with students' learning styles contributed to successful learning.

A study was also conducted on students' preferred learning styles and the teachers' awareness of the students' learning styles and how they influence teaching and learning skills.¹⁴ In this study, the researcher used a questionnaire to elicit the preferred learning styles of forty-three (43) students and two (2) English teachers. The study reported that teachers should incorporate different learning styles that motivate learners to learn comprehensively and acknowledge learning in its natural form.

In another context, a study investigated the learning styles of students in high school.¹⁵ The researchers used the perceptual modality theory, which is the primary way our bodies take information. For example, a learner can take in information when it is spoken for him to listen. The findings of this study align with Kolb's theory of learning styles, based on the principle that learning style is a continuum.¹⁶ Thus, the learner engages in concrete learning experiences, reflects on his learning, develops abstract conceptualisation, and becomes active in experimentation. Another study examined the learning style preferences, study habits, and level of academic achievement of students who study applied science courses in a public higher education institution in the Philippines.¹⁷ The researchers

¹⁰ Castolo and Rebusquillo, "Learning Styles of Sophomore Students of PUP Laboratory High School (SY 2006-2007)."

¹¹ Hussain and Ayub, "Learning Styles of Students and Teaching Styles of Teachers in Business Education: A Case Study of Pakistan."

¹² Krishnamurthy Soundariya, Velusami Deepika, and Ganapathy Kalaiselvan, "A Study on the Learning Styles and Learning Approaches among Medical Students," *National Journal of Physiology, Pharmacy and Pharmacology* 7, no. 10 (2017): 1020.

¹³ Neil D. Fleming, "I'm Different; Not Dumb. Modes of Presentation (VARK) in the Tertiary Classroom," in *Research and Development in Higher Education, Proceedings of the 1995 Annual Conference of the Higher Education and Research Development Society of Australasia (HERDSA)*, HERDSA, vol. 18, 1995, 308–13.

¹⁴ Ajeng, "Preferred Learning Styles Of The Students Of SMK Muhammadiyah 2 Surakarta."

¹⁵ Castolo and Rebusquillo, "Learning Styles of Sophomore Students of PUP Laboratory High School (SY 2006-2007)."

¹⁶ David A Kolb, *Experiential Learning: Experience as the Source of Learning and Development* (FT press, 2014).

¹⁷ Magulod, "Learning Styles, Study Habits and Academic Performance of Filipino University Students in Applied Science Courses: Implications for Instruction."

used a purposive sampling technique to sample seventy-five (75) participants for the study. They were third-year students studying Bachelor of Science in Electronics and Bachelor of Information Technology at Cagayan State University in Lasam, Philippines. The study employed a descriptive correlational research design. Reid's Perceptual Learning Style Preference Questionnaire and the study habits inventory, adapted from Gilbert Wrenn of Stanford University Press were used in the study. The questionnaire consisted of thirty items with five questions equally distributed to six learning style preferences. The results of the study revealed that the students of applied sciences courses most preferred learning styles were the group style followed by the visual and kinesthetic, while the tactile, auditory, and individual learning styles were recorded as the minor learning styles of the participants.

Self-assessment research was conducted of the learning styles of primary school pupils and an assessment of the pupils by their teachers.¹⁸ The study focused on one hundred and ninety-nine (199) fifth and sixth-grade pupils. It focused on the visual, auditory, and kinesthetic. It was evident that the learning preferences of the pupils varied on the assessment from the teachers.

Again, a study of Vark's Learning Styles and student performance in principles of Micro-vs. Macroeconomics was investigated.¹⁹ The findings of the study stated that Micro-Economics shows how individuals and businesses make decisions and tend to follow logical sequences that are highly structured, while Macro-Economics, concerned with understanding the aggregate behaviour of the economy, tends to encourage debates over diverse viewpoints generated by different schools of thought. The study examined the relationship between the students' learning styles in micro and macroeconomics and their performance. Learners typically usually exhibit different learning styles to achieve learning goals. However, the visual approach is the dominant learning style that enhances their performance in Economics.

METHODOLOGY

The study participants were drawn from level one hundred (Level 100) Bachelor in Information Technology (BIT) students at the Ghana Communication Technology University, Accra. These students read a course called Study Skills in the second semester of their programme. One of the concepts introduced in the course was the learning styles of students in Higher Education. Some ethical considerations were made before the researchers sampled the participants and subsequently collected data from them. Firstly, the researchers sought the participants' informed consent before they were included in the study. Here, the sampled participants were informed of the study objectives. Also, the participants willingly provided the data needed, and no one did so under coercion. Again, data confidentiality and anonymity were maintained at all levels of the study. Finally, their right to opt out of the study was respected.

Therefore, the researchers purposefully sampled thirty (30) BIT level one hundred students for this study. The research approach was a mixed method that incorporated both quantitative and qualitative methods. The research instruments used were Fleming's questionnaire and a semi-structured interview.²⁰ The face-to-face interview sessions were recorded and later transcribed for analysis.²¹ Also, version 7.1 of the Visual-Auditory-Read and Write and Kinesthetic (VARK) questionnaire was selected for the participants to respond to because of its straightforwardness, clarity of wording, and extensive use in research studies related to learning styles.²² The items in the questionnaire were sixteen with four possible choices that imply preferences for visual, auditory, reading and writing, and kinesthetic learning styles. In the classroom, the participants were taken through the items to select carefully and meaningfully.²³

¹⁸ Nchindo Richardson Mbukusa, "Perceptions of Students' on the Use of WhatsApp in Teaching Methods of English as Second Language at the University of Namibia," *Journal of Curriculum and Teaching* 7, no. 2 (November 18, 2018): 112, <https://doi.org/10.5430/jct.v7n2p112>.

¹⁹ Ambrose Leung et al., "VARK Learning Styles and Student Performance in Principles of Micro-vs. Macro-Economics," *Journal of Economics and Economic Education Research* 15, no. 3 (2014): 113.

²⁰ Omolola A Adeoye-Olatunde and Nicole L Olenik, "Research and Scholarly Methods: Semi-structured Interviews," *Journal of the American College of Clinical Pharmacy* 4, no. 10 (2021): 1358–67.

²¹ Rwamahe Rutakumwa et al., "Conducting In-Depth Interviews with and without Voice Recorders: A Comparative Analysis," *Qualitative Research* 20, no. 5 (2020): 565–81.

²² Rao et al., "Effect of Preferred Learning Styles on Academic Achievements: A Cross Sectional Descriptive Study."

²³ Hadi Peyman et al., "Using VARK Approach for Assessing Preferred Learning Styles of First Year Medical Sciences Students: A Survey from Iran," *Journal of Clinical and Diagnostic Research: JCDR* 8, no. 8 (2014): GC01.

This gave a true reflection on the type of learners they were and their learning preferences. Participants were instructed to choose all the answers that applied to them and not limit their options to just one answer to each question. Afterwards, they filled out the VARK questionnaire scoring chart to find the VARK category to which each of their answers corresponded and the participants circled the letters that matched their answers. In the end, the most preferred learning styles were identified. For example, the first three items on the questionnaire were: 1. *'You are helping someone who wants to go to your airport, town centre, or the railway station. You would*

- a) go with her.
- b) tell her the directions.
- c) write down the directions.
- d) draw or give her a map.

2. *You are not sure whether a word should be spelled 'dependent or dependant.' You would*

- a) See the words in your mind and choose according to the way they look.
- b) think about how each word sounds and choose one.
- c) find it in a dictionary.
- d) write both words on paper and choose one.

3. *You are planning a holiday for a group. You want some feedback from them about the plan. You would*

- a) describe some of the highlights.
- b) use a map or website to show them the places.
- c) give them a copy of the printed itinerary.
- d) phone, text or email them.

In these three items from the questionnaire given above, for instance, participant one selected 'b' and 'd' in item one 'c' and 'd' in item two, and 'a' and 'd' in item three. At the end of responding to all sixteen items, the participants had to go back to the VARK questionnaire scoring chart to score. The scoring chart had the question number column and the VARK column labelled categories a, b, c, and d. The 'a' category was represented by Kinesthetic K, the 'b' category was Visual, the 'c' category was Read and Write and the 'd' category was Auditory. The 'b' and 'd' in item one which the participant selected represented Visual and Auditory learners. On the other hand, the 'c' and 'd' which the same participant selected in item two meant he is a read-and-write and Auditory type of learner. The third item had 'a' and 'd' being selected. This represented Kinesthetic and Auditory learning. In the end, he circled the various learning styles according to the choices he made about the questions. The learning styles with the highest number corresponded to his preferred learning style. A participant who scored V=5, A=9, R=7, and K=8 used all the learning styles, but the most preferred one was the Auditory approach. The data was analysed based on the VARK scoring chart.²⁴ Also, the participants were interviewed to determine their learning style strategies and preferences.

PRESENTATION OF RESULTS AND DISCUSSION

This section presents the learning style preferences of the study participants which were obtained using the VARK questionnaire. In an attempt to answer research question one, which explores the students' learning styles, the results showcased in Table 1 were obtained:

Table 1. Learning Styles of the Participants

Number of Participants.	Visual Learner	Auditory Learner	Read and write Learner	Kinesthetic Learner
1	5	9	7	8
2	4	10	4	7
3	10	11	10	9
4	2	7	4	5

²⁴ Fleming, "I'm Different; Not Dumb. Modes of Presentation (VARK) in the Tertiary Classroom."

5	3	8	6	4
6	4	6	5	7
7	11	13	7	11
8	7	7	6	6
9	2	5	4	5
10	4	6	6	10
11	10	9	9	6
12	7	8	8	8
13	2	6	4	4
14	7	12	13	10
15	2	9	3	7
16	6	2	7	8
17	4	13	5	7
18	5	11	5	9
19	2	8	6	8
20	8	3	6	4
21	4	3	7	7
22	3	8	4	7
23	10	13	9	11
24	4	9	13	11
25	3	4	5	5
26	8	6	4	3
27	6	11	6	10
28	4	6	2	4
29	3	4	5	5
30	5	7	8	2

Source: Field Data, 2024

The students' responses indicated in Table 1 show that the participants had multiple learning styles with varied learning preferences. This is to say that no participant used only one learning style. The result is similar to a study on self-assessment of the learning styles of primary school pupils and assessment of the pupils by their teachers.²⁵ The outcome emerged that the pupils used different learning styles in class to enhance comprehension of the concepts learnt. These had a significant impact on their learning and success. Also, in a certain study, 41.6% of the participants preferred only one learning style.²⁶

²⁵ Loredana R Diaconu-Gherasim and Cornelia Măirean, "Perception of Parenting Styles and Academic Achievement: The Mediating Role of Goal Orientations," *Learning and Individual Differences* 49 (2016): 378–85.

²⁶ Peyman et al., "Using VARK Approach for Assessing Preferred Learning Styles of First Year Medical Sciences Students: A Survey from Iran."

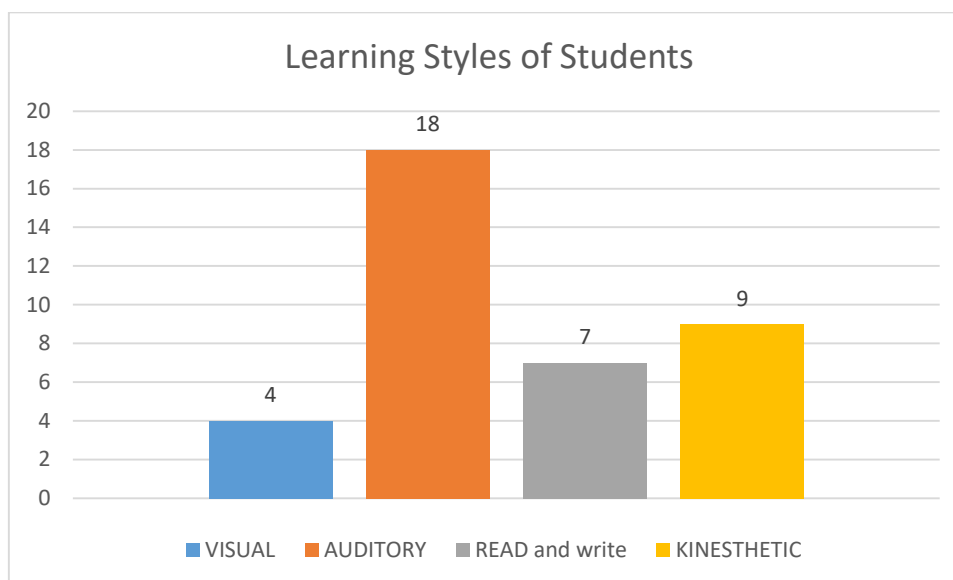


Figure 1: A Bar Chart of the Preferred Learning Styles of the Participants
Source: Field Data, 2024

The result of this study confirmed that every learner has a preferred learning style. This is similar to surveys conducted by some researchers.²⁷ The outcome of this study showed that the learning style most participants preferred was the auditory approach, as shown in Figure 1. This contradicts the findings of a study on the outcome of the effect of preferred learning styles on the academic achievements of selected undergraduate participants.²⁸ In this research, one hundred and seventy (170) undergraduate students' responses revealed the most preferred learning style as kinesthetic. Again, the least learning style was visual, although a study carried out in Economics confirmed visual learning style as the most preferred style.²⁹

To address research question three (i.e. How do you determine the learning style strategies of the students?), semi-structured interviews were used to solicit the participants' views. Five of the participants were randomly and systematically selected for the interview on the learning strategies.³⁰ The first individual was selected randomly and others were selected using a fixed 'sampling interval'.³¹ These were participants (P) 6, 12, 18, 24, and 30. The following were the responses collected by the researchers. Interviewer (I): *I am happy that you agreed to be interviewed to obtain your views on the strategies you use in learning. Let us listen to participant six after that we listen to participant twelve in that order to the last participant, thirty. Thank you. So, which learning style strategies help you learn best?*

Participant 6: *When I am learning, I record the key things I learn and play back later. This makes me understand better. It also serves as a record of what I learnt so that in the future I can retrieve the information. At times too, I highlight the text in the textbook if only the book belongs to me. I also highlight my notebooks on important things I want to remember quickly. But what I preferred most was learning by doing. The practical aspect is the best for me. It doesn't make me bored. It keeps me focused and active, So I enjoy learning by that method.*

I: That is excellent. Are there any other styles you use apart from what you have mentioned?

P 6: Yes, please.

I: Go ahead and tell us, please.

²⁷ Peyman et al., "Using VARK Approach for Assessing Preferred Learning Styles of First Year Medical Sciences Students: A Survey from Iran."

²⁸ Rao et al., "Effect of Preferred Learning Styles on Academic Achievements: A Cross Sectional Descriptive Study."

²⁹ Magulod, "Learning Styles, Study Habits and Academic Performance of Filipino University Students in Applied Science Courses: Implications for Instruction."

³⁰ Clive Roland Boddy, "Sample Size for Qualitative Research.," *Qualitative Market Research: An International Journal* 19, no. 4 (2016): 426–32, <https://doi.org/10.1108/QMR-06-2016-0053>.

³¹ Robert T Trotter II, "Qualitative Research Sample Design and Sample Size: Resolving and Unresolved Issues and Inferential Imperatives," *Preventive Medicine* 55, no. 5 (2012): 398–400.

P: Okay. I also like to pay attention and listen to people when they talk. I learn a lot from that. Besides, I like to read and sieve information myself based on how I understand it.

I: Any other?

P: For now, no madam. I will add if I remember other styles I sometimes use.

I: Thank you P6.

I: Now, let us listen to P12 as well. Tell us the strategies for the learning styles that you also use.

P 12: Madam, as for me, I like to study in groups and take part in discussions. It makes me remember what and others and I said during the discussions so it makes it difficult for me to forget the things discussed in the group. Also, I try to participate in everything. Whether I learn alone or with others, I get involved. I make sure that my presence is always felt. One secret is that I hate to read, but I started reading because when you come to class, you encourage us to read to be better students. And by that, we will go far. So, I read this time hm. Among the learning styles, I prefer auditory, read and write, and kinesthetic. I like to save what I write on my phone or my computer in a cloud.

I: I see. That is great. Please keep it up.

I: P.18, which learning style strategies do you use?

P 18: Learning style strategies, well I am all in one.

I: What do you mean by I am all in one?

P 18: I use almost all four learning styles discussed in class.

I: How did you know this?

P 18: When I am learning, I want to write the relevant things I come across in my reading. This helps me refer to them and read them later for more understanding. I understand better if I put what I learn into action. I also colour some of the things I read that I may need later. If I do that, I don't struggle to find them when I am looking for them at any time. As soon as I glance through it, I can capture them immediately, yes. I also like the discussion group because different people have their views on the topic. This makes me learn faster than I would alone. If I am alone learning and I don't understand something, I don't have anybody to explain it to me at that time. Unlike learning in a group. By all means, somebody will be there to explain it to me.

I: So, which of the strategies is your preferred one?

P 18: The learn-by-doing approach or the hands-on learning type.

I: P 24 You should also tell us the strategies you use when learning and which help you to understand and enjoy your studies.

P 24: Okay, madam. I am used to reading. Outside of the coursework, I read materials that are not related to the course. As for reading, I like it. When I read too, depending on what I am looking for, I write in my notebook and other times, I type on the notepad on my computer so I can test myself if I have grasped the concept. I try to summarize what my peers and lecturers say in class in my own words. For me, any style that will help me to do well, I use it.

I: Good. What about your preferred learning style?

P 24: Please, madam, I prefer reading and writing. As I said earlier, I love to read and I think it is something I developed from infancy.

I: Thank you. That is brilliant.

I: P 30, tell us the learning style strategies you use and the one you prefer most.

P 30: Madam, I can say that I used all the learning styles in the questionnaire that we responded to. For instance, I am the type of learner who understands well when information is represented in graphs and tables. In Computational Maths, for example, I can identify the rules of mapping easily in class. I read also, and one thing about me is that when I read, I try to write the salient points down. This helps me to refer to it anytime I need information. Sometimes I save that information on my laptop. When I am learning with my friends, I also like to listen to them when they talk. Because I have come to realise that I learn a lot from people. I mean those in my class and outside my class. But in all, I can say that I am a reading type of learner. I also like to ask questions when I don't understand something. My classmates can attest to this. I know someone in class who if he doesn't understand a concept, he feels shy to ask. Not myself. As for me, I will ask for an explanation. I wouldn't even be comfortable if I didn't ask. Yes. Thank you.

The responses were put under themes and analysed descriptively.

The responses on the questionnaire from participants 6, 12, 24, and 30 corresponded to the interview responses. They affirmed that their preferred learning styles were kinesthetic, auditory-read, and write-kinesthetic. The preferences of Participant 12, (i.e. read and write) is a preferred style for Participant 24. This is the same in the case of participant 30, except for participant 18 whose responses in the questionnaire differ from the interview data at a point. In Participant 18, the preferred learning style was auditory. However, in the interview session, P.18 stated that his preferred learning style was kinesthetic.

Table 2: Learning Strategies Used by Participants

Visual Learners	Highlight textbooks and notes of important information. Write notes in textbooks. Copy textbook information into notes. Visualise information. Write to remember and make writing a habit. Summarise and recall information using graphs, pictures, sketches, and tables that depict the information. Observe a lot in class. Review concepts taught. Use colour coding with interpretations.
Auditory Learners	Participate in discussions. Ask questions. Listen to recorded lectures. Explain the information read in my own words. Recite frequently. Create study recordings of self. Paraphrase and summarise text verbally. Use of technology for audio materials in learning.
Read And Write Learners	Summarise text through reading and writing. Use dictionaries to find information to read for meaning. Rewriting notes. Reduce information read to retain comprehension. Take notes in class. Read at leisure hours.
Kinesthetic Learners	Hands-on learning. Action-based activities to comprehend concepts taught and learnt. Use computers and other electronic devices to improve my studies. Unable to sit in one place for long during tasks.

Source: Field Data, 2024

Discussion Summary

In a research study conducted in Ghana, it was found that, to help students overcome Glossophobia, lecturers should adopt an interactive approach combined with apt communication strategies to encourage positive attitudes and create a required environment for enhancing students' confidence.³² This required environment allows students to explore their learning styles and preferences in an ESL classroom. Consequently, this current research revealed that the respondents used all the VARK learning styles – Visual, Auditory, Read and Write, and Kinesthetic.

³² Solomon Ali Dansieh, Edward Owusu, and Gordon Abudu Seidu, "Glossophobia: The Fear of Public Speaking in ESL Students in Ghana," *Language Teaching* 1, no. 1 (2021): p22–p22.

RECOMMENDATIONS

This study identified that students incorporate all learning styles to enhance their understanding of concepts. Understanding students' learning styles will help curriculum developers, teachers, and parents tailor educational materials and experiences to suit individual needs since every student or learner is unique and learns at a different pace or interval. However, the findings revealed that some students had limited learning styles.

Therefore, it is recommended that curriculum developers create teaching and learning materials that are interactive and engaging for students to integrate and develop other styles to existing ones. Language curricula should also be reviewed at intervals to fit current trends in education. It is also recommended that teachers employ different teaching methods and activities that will enable the students to explore other learning styles to heighten students' interest in the subject matter and consequently enhance comprehension, remembrance, and achievement of the learning goals.

It is further recommended that the students develop the habit of change and adopt new learning styles to transform their learning experiences.

Lastly, parents should play a significant role in students' learning and academic progress by providing relevant learning resources and conducive spaces for them to explore at home, as home is the first and immediate learning environment. This could reinforce their natural learning styles so that they can become better learners.

CONCLUSION

The study investigated students' learning styles and preferences in an English as a Second Language Classroom. The researcher had three objectives to achieve; to explore undergraduate students' learning styles, identify the students' preferred learning styles, and determine the learning style strategies of the students. Based on Fleming's questionnaire, the study revealed that the participants used different learning styles to achieve their learning objectives. Again, the most preferred learning style was found to be auditory. The interview also revealed that the participants used different learning style strategies to achieve their learning objectives. It concluded that learning styles should be varied to stimulate learning and that learners should be supported to develop these styles.

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