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EDITORIAL

Our first article asserts that despite the abundance of literature on learning styles in research, there does not appear to be much research on the characteristics and dominant learning styles of students enrolled in a degree in teaching and non-teaching programme at a public university in Ghana. This study, therefore, set out to investigate the learning styles of third-year university students who are training to become teachers at the senior high schools. Descriptive survey research design was employed and 94 students were randomly sampled. The findings revealed that the most dominant learning style of the students was the kinaesthetic style and the least the visual style. The study recommended that lecturers in the department where the study was conducted should design their instruction to facilitate the kinaesthetic learning style.

Our second paper examined the importance of translation studies to English literature students of Nepal. This study consulted data from both primary and secondary sources. The researcher purposefully chose fifty English major stream students from the Mahendra Multiple Campus, Nepalgunj, who were pursuing *translation* as part of their program of studies. The researcher gathered data using questionnaires. The findings of the study revealed that linguistic diversity negatively impacted development. Another finding was that students thought

translation bridged linguistic gaps and helped reduce the negative impact of linguistic diversity. Thirdly, the findings showed that students believed the course prepared them to be employed nationally and internationally. The study concluded that *translation* as a subject is useful for university students of Nepal that participated in the study.

IJOPPIE does not necessarily subscribe to the author's recommendations. Reading would apply these recommendations on experimental bases and draw their own conclusions.

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Learning Styles of University Students

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Abstract

Individual differences exist in the way people learn at school. This is because day-in-day-out individuals experience the world in unique ways, and with that comes variations in the ways they learn best. Despite the abundance of learning styles research, however, there appears not much research on the characteristics and dominant learning styles of students enrolled in a degree in teaching and non-teaching programme at a public university in Ghana. This study, therefore, set out to investigate the learning styles of third-year students who are training to become teachers at the senior high schools and occupy non-teaching positions in any academic institution in a Ghanaian university. Descriptive survey research design was employed, and 94 students were randomly sampled. The findings revealed that the most dominant learning style of the students was kinaesthetic style followed by reading/writing style, the auditory style and the visual style. It was therefore recommended that lecturers in the department where the study was conducted should design their instructions and activities in ways that would engage their students more in hands-on and practical and or experiential learning (kinaesthetic).

Key Words: visual learning style, auditory learning style, kinaesthetic learning style, reading and writing learning style, Ghana.

Introduction

Differences in the way individuals learn are central to the teaching and learning process. This is because day-in-day-out, one experiences the world in unique ways, and with that comes variations in the ways one learns best (Callie, 2020). The way one learns affects teaching and learning processes in terms of teachers and students (Anand & Rajendraprasad, 2016). Learning has been a central topic in educational research since the conception of education as an independent science (Houwer, Barnes-Holmes, & Moors, 2013). Learning is seen as a process of achieving knowledge, skill, and performance (Elfaki1, Abdulraheem, & Abdulrahim, 2019). It can also be seen functionally as changes in behaviour that result from experience or mechanistically as changes in the organism that result from experience (Houwer, *et al.*, 2013). Learning can also be seen as ontogenetic adaptation, that is, as changes in the behaviour of an organism that result from regularities in the environment of the organism (Houwer, *et al.*, 2013). Thus, learning is ultimately considered one of the fundamental pillars of society (Elfaki1, *et al.*, 2019).

Learning style refers to a range of competing and contesting theories that aim to account for differences in individuals' learning and the processing of information based on how they

understand it (Coffield, Moseley, Hall, & Ecclestone, 2004; Moneva, Arnado, & Buot, 2020). Learning style is both a characteristic which indicates how a student learns and likes to learn, as well as instructional strategy informing the cognition, context and content of learning (Rachmah, 2018). Learning style is another accentuated element in point of individual differences (Anand & Rajendraprasad, 2016). Learning style is not in itself ability but rather a preferred way of using one's abilities (Hatami, 2012). Learning styles are typically bipolar entities (for example reflective versus impulsive, random versus sequential), representing two extremes of a wide continuum; however, where a learner falls on the continuum is value neutral because each extreme has its own potential advantages and disadvantages (Hatami, 2012).

Understanding these different types of learning style can drastically impact the way teachers handle their students, set up group projects and adapt individual learning (Callie, 2020). Significantly, upon knowing and diagnosing students' learning styles, educators will have the chance of implementing the best strategies in making their daily activities. Consequently, the students will also identify their strengths and weaknesses and have the chance of coping up or adapting to the different learning styles (Moneva, Arnado, & Buot, 2020). It is also suggested that a successful learner learns using various learning styles. Therefore,

students who know their learning styles can perform different tasks successfully such as solving problems and creating various strategies (John, Shahzadi, & Khan, 2016). However, learning styles evolve over time as students adapt to different changing environments and new cognitive experiences (Olivus, Santos, Martin, Cañas, Lazaro, & Maya, 2016). The most important use of learning styles is that it makes it easy for teachers to adapt their teaching to meet the needs of different learners (Anand & Rajendraprasad, 2016).

In August 2015, a public university in Ghana started running both Bachelor of Arts in Education (non-teaching), Bachelor of Arts (English Education) and Bachelor of Science in Education programmes in one of its departments to train both teachers and nonacademic professionals in an educational institution. Its fifth cohort, who are currently in Level 300 (i.e., third year) are supposed to graduate in May 2025. In order to know how this fifth cohort of students learn, and how their learning needs can be better met, the students' styles of learning need to be investigated as it will lead to the design of effective learning and teaching materials and strategies (Ismaila, Hussaina, & Jamaluddina, 2010). Without understanding and acknowledging the different ways in which students learn, teachers might end up not being able to help

students to learn effectively because the students' unique learning style have not been identified and activated (Callie, 2020).

Research on learning styles is quite extensive but inconclusive at the same time. Kirschner (2017) for instance, argued that it is wrong to assume that since different people prefer to learn differently, teaching, learning situations and learning materials should be tailored to those preferences. Kirschner considers the notion as merely a myth. Although, there is ample evidence that individuals express preferences for how they prefer to receive information (Pashler, *et al.*, 2008), few studies have found any validity in using learning styles in education (Willingham, Hughes, & Dobolyi, 2005). Well-designed studies contradict the widespread "meshing hypothesis" that a student will learn best if taught in a method deemed appropriate for the student's learning style (Pashler, *et al.*, 2008). They further show that teachers cannot assess the learning style of their students accurately (Papadatou-Pastou, Gritzali, & Barrable, 2018). Many theories share the proposition that humans can be classified according to their 'style' of learning, but differ in how the proposed styles should be defined, categorised and assessed (Willingham, *et al.*, 2005).

To the best of our knowledge, research on the learning styles of level 300 undergraduate Education students in Ghana is non-existent. The

few studies that investigated learning styles within the Ghanaian context at the university level differ in focus to our study which focused on kinaesthetic, reading/writing, auditory and visual learning styles (Afrifa, Quartey, & Kwakyee, 2022; Amponsah, 2020; Zuberu, Gunu, & Issaka, 2019). For example, Amponsah (2020) conducted a study on exploring the dominant learning styles of adult learners in higher education. This study centered on pragmatist, reflector, theorist, and activist learning styles. Afrifa, Quartey, and Kwakyee (2022) conducted a study on learning style preferences among clinical year physiotherapy students in Ghana. This study centered on accommodating, diverging, assimilating and converging learning styles. Zuberu, Gunu, and Issaka (2019) conducted a study on choice of learning styles among tertiary students in the Tamale Metropolis. This study centered on visual references (Reading and graphic displays), verbal explanation of ideas and hand on task (practical).

In view of these problems in learning styles and based on Pritchard's (2014) recommendation that teachers have to run needs analysis to assess the learning styles of their students and adapt their classroom methods to best fit each student's learning style, this study set out to investigate the learning styles of Level 300 undergraduate Education students at a public university in Ghana. The purpose is to

identify the dominant learning style(s) of the students and use that information to help faculty members to redesign teaching activities so as to meet the needs of their students.

It is hoped that findings from this study will help the students to know and activate their most dominant learning style. This should help the students to learn and achieve better. Findings from the study will also help lecturers in the university to do periodic learning style assessments and to tailor their teaching to meet the needs of the different learners. Ultimately, this study will contribute towards the provision of quality education for all as stipulated in Sustainable Development Goal 4. The rest of the paper presents review of related literature and describes the methodology employed. It is followed by the presentation and discussion of findings. Finally, conclusions as well as the implications, contributions, limitations and future research directions are presented.

Literature Review

The Concept of Learning Style

The idea of individualised learning styles became popular in the 1920s and 1970s. This has greatly influenced education, despite the criticism it received from some researchers (Pashler, McDaniel, Rohrer, & Bjork, 2008). Proponents of the individualised learning styles recommend that teachers have to run a needs analysis to assess the

learning styles of their students and adapt their classroom methods to best fit each student's learning style (Pritchard, 2014). Critics say there is no consistent evidence that identifying an individual student's learning style and teaching for specific learning styles produces better student outcomes (Pashler, McDaniel, Rohrer, & Bjork, 2008; Vasquez, 2009). For example Dekker et al (2012) and others argue that identifying student's learning style and using that to design teaching strategies to produce better student outcomes is neuromyth in education (Dekker, Lee, Howard-Jones, & Jolles, 2012; Ratoa, Abreu, & Castro-Caldasa, 2013). The application of learning styles theory and research has long held great promise for practitioners in both education and training as a potentially powerful mechanism for enabling pupils, students and trainees to better manage their learning throughout their educational and working lives (Evans, & Sadler-Smith, 2006).

Different Learning Styles

There are different learning styles. For example, Kolb (1985) identified four learning styles namely divergers, convergers, assimilators, and accommodators. Kolb based these learning styles on a 4-stage cyclic structure that begins with a concrete experience, which leads to a reflective observation and subsequently an abstract conceptualization that allows for active experimentation. Some researchers argue that three of

the most popular learning styles are visual, auditory and kinaesthetic (Anand & Rajendraprasad, 2016). Some students are visual learners, while others are auditory or kinaesthetic learners. VARK Learn Ltd (2019) and Callie (2020) added one more learning style to that of Anand and Rajendraprasad (2016), and that is the reading/writing learners.

The VARK Learning Style Model

The present study is based on Neil Fleming's (1987) VARK model. In the VARK model, there are four types of learners, namely visual learners (V), auditory learners (A), kinaesthetic learners (K) and reading/writing learners (R). 'V' learners learn best through the use of symbolic devices such as diagrams, graphs, flow charts and models that represent information in printed form. 'A' learners prefer "heard" information and so they learn best through discussions, lectures, tutorials and talking through material with themselves or others. 'R' learners prefer printed information and texts and thus prefer textbooks, lecture notes, handouts, lists and glossaries. 'K' learners prefer simulations of real practices and experiences, lessons that emphasize performing an activity, field trips, exhibits, samples, photographs, case studies, "real life examples," role-plays, and applications to help them understand principles and advanced concepts. Learners are described as uni-modal,

bi-modal, tri-modal or quad-modal if they prefer to learn through only one, two, three or four of the learning modes respectively (Ahmed, 2013).

While students use all of their senses to take in information, they seem to have preferences in how they learn best. In order to help students learn, teachers need to teach as many of these preferences as possible. Teachers can incorporate knowledge about these learning styles into their curriculum activities so that students are able to succeed in their classes (Anand & Rajendraprasad, 2016). In fact, studies carried by Callie (2020) and others estimate that somewhere between 50 and 70 percent of the population have affinities to several different styles of learning (Callie, 2020; VARK Learn Ltd, 2019). These people are called “multimodal learners” and tend to succeed in classroom settings that engage them with multiple learning styles alternately or in concert with one another (Callie, 2020). Various preferences are interesting and quite varied. For example, individuals may have two strong preferences V and A or R and K, or they may have three strong preferences such as VAR or ARK. Some people have no particular strong preferences, and their scores are almost even for all four modes. For example, one student had scores of V=9, A=9, R=9, and K=9. She said that she adapted to the mode being used or requested. If the teacher or supervisor preferred a written mode, she switched into that mode for her responses and for her learning (VARK Learn Ltd,

2019). Multiple preferences give individuals choices of two or three or four modes to use for their interaction with others. Some people have admitted that if they want to be annoying, they stay in a mode different from the person with whom they are working. For example, they may ask for written evidence in an argument, knowing that the other person much prefers to refer only to oral information. Or they may ask for “concrete” examples knowing that the other person has a low preference for kinaesthetic input and output. These are what some people do when they intend to be negative. Positive reactions mean that those with multimodal preferences choose to match or align their mode to the significant others around them (VARK Learn Ltd, 2019).

Khongpit et al. (2018) used the VARK learning style model to study the learning style of students in a computer course from Sripatum University, Chonburi Campus, Thailand, and Burapha University, Thailand. They found that the preferred learning styles of the students are kinaesthetic, visual, aural and reading/writing. The study also found that overall, 45 (31.03%) of the learners had preference for a single learning style, 77 (53.1%) had preference for the bi-modal 22(15.17%) had preference for the tri-modal and only 1 learner or 0.7% had preference for the quad-modal.

In a similar study to examine the preferred learning styles of undergraduate medical students at King Saud Bin Abdul Aziz University for Health Sciences, King Fahad Medical College, Saudi Arabia, Nuzhat et al. (2011) discovered that the mean VARK scores for aural (6.6) and kinesthetic learners (6.4) were more than that for visual (5.3) and reading/writing learners (4.7). The study further reported that only 27.4% of the students preferred to learn by a single sensory modality (visual, auditory, reading/writing, or kinesthetic) while 72.6% of them preferred to learn by multiple sensory modalities.

Using the VARK model to ascertain the learning styles of the students of the business schools of a private university in the Department of Lambayeque, Espinoza-Poves, et al. (2019) reported that the students' styles of learning are reading/writing (29.4%), kinaesthetic (19.3%), auditory (17.4%) and visual (8.3%). The study also found that 25.3% of the learners preferred to learn in a multimodal way.

Balasubramaniam and Indhu (2016) analysed the learning styles and approaches to learning among first year undergraduate students of a tertiary care teaching hospital using the VARK questionnaire. The study found the multi-modal learning style as the dominant mode (52%). The uni-modal style came second with 48% and kinaesthetic and auditory learning styles followed with 35% and 34% respectively. Among

multimodal learning style preferences Kinaesthetic, Aural (KA) and Visual, Aural, Kinaesthetic (VAK) styles were predominant. The study however found no difference in the learning preferences among the sexes ($p = 0.208$).

Gappi (2013) conducted a study on relationships between learning style preferences and academic performance of students, where he explored the student's preferred styles of learning and their academic achievements. The specific objectives of the study were to: describe the learning style preferences of the students; to find out whether learning style preferences of the students differ with age, gender and academic program; and determine the relationship between the learning style preferences and the students' academic performance. Results showed that there was no significant effect of gender, age and academic programme on the learning style preferences of the students. This means that there was no statistically significant correlation between the academic achievement and the learning style preferences of the students. Anand and Rajendraprasad (2016) conducted a study on learning styles and their impact on science teaching among primary school pupils in Karaikal district. The findings showed that the most preferred learning style of the learners was visual.

From the foregoing, it can be concluded that indeed, there is no permanent learning style for anyone, and learners differ in terms of context, socio-cultural milieu, and learning styles (Amponsah, 2020). In view of this, research on learning styles should continue to be conducted in different settings and on different populations in order to shed more light on the phenomenon and bring clarity to the issues.

Methodology

Research Design

The study employed a descriptive survey research design (Aggarwal, & Ranganathan, 2019; Wyk, 2019). This design was appropriate for this study because it helped the researchers to observe and measure the variables on learning styles (i.e., visual, auditory, kinaesthetic and reading/writing learning strategies). It also prevented the researchers from manipulating any of the variables on learning styles (i.e., visual, auditory, kinaesthetic and reading/writing learning strategies). The data of this research was quantitative data obtained through the use of a three-point rating scale responses i.e., often, sometimes and seldom.

Population Sample and Sampling Procedure

The population of the study was 324 fifth cohort (level-300) education students. The sample size of the study was 94. Simple random sampling technique was employed in selecting the sample. To randomly

select the sample, the population was divided into two and Yes/No was written on pieces of paper (i.e., 162 for 'Yes' and same for 'No'). Each student was made to select one piece of paper from the box. Students who selected the 'Yes' pieces constituted the sample; and were used in the study. However, 68 students who were part of the 'Yes' group declined participation. Eventually, 94 fifth cohort (level-300) education students participated in the study. The 94 students constituted 29% of the target student population. The 29% sample size of the study is good for a study of this nature (Creswell, 2015).

Research Instrument

The instrument for this study is a 12 item questionnaire that measures students learning style on four construct i.e., visual, auditory, kineasthetic and reading/writing styles. Each construct (i.e., visual, auditory, kineasthetic and reading/writing styles) has three probing questions. Also, each probing question has three Likert scale responses i.e., often, sometimes and seldom. The 12 item questionnaire was adapted from the National Council from Special Education (NCSE) and VARK Learn Ltd (2019). 8 items of NCSE were used and added to 4 items on reading/writing learning strategies from VARK Learn Ltd (2019) all amounting to the 12-item questionnaire measuring visual, auditory, kinaesthetic and reading/writing learning strategies. The 8 items of NCSE

were categorised into visual, auditory and kinaesthetic learning strategies. Each learning strategy i.e., visual, audio, kinaesthetic and reading/writing learning strategy has 3 items on learning abilities or strengths. All the 12 items were reshuffled and put together in a questionnaire format for the students to fill. The Cronbach's Alpha Reliability coefficient for the 12-item questionnaire of the study is 0.994, a mean of 67.9700, standard deviation of 25.56728 and variance of 653.686 (Appendix B).

Data Collection Procedure

The purpose of the study was discussed with the level 300 students and written consent sought from the students (Appendix A). Out of 162 students, 68 students opted out of the study and the remaining 94 students were used for the study. The researchers distributed the questionnaire to the 94 Level 300 students to fill.

Data Analysis Procedure

Means, were used in analysing the research questions.

Results

Research question one sought to identify the dominant learning styles among the students.

Before looking at the dominant learning styles of students. Table 1 shows the various means of preferred learning style of students

Table 1: Preferred learning styles of students (N = 94)

Items	Learning Style	Mean	Std. Deviation	Variance
Bear down extremely hard with pen or pencil when writing.	Reading and Writing style	2.1489	.81594	.666
Require explanations of diagrams, graphs or visual directions.	Visual style	1.6559	.68357	.467
Am skilful and enjoy developing and making graphs and charts.	Kinesthetic style	2.3830	.73479	.540
Can better understand and follow directions using maps.	Visual style	2.1809	.65522	.429
Play with coins and keys in pockets.	Kinesthetic style	2.5957	.62766	.394
Learn to spell better by repeating the letters than by writing the word on paper.	Reading and Writing style	2.0638	.78711	.620
Can better understand a news article by reading about it in the paper than radio.	Reading and Writing style	1.9894	1.38731	1.925
Chew gum, smoke or snack during studies.	Kinesthetic style	2.4839	.77478	.600

Feel the best way to remember a picture is in my head.	Visual style	1.6383	.66963	.448
Would rather listen to a good lecture or speech than read about the same material.	Auditory style	1.8191	.78921	.623
Prefer listening to the news on the radio than reading about it in a newspaper.	Auditory style	1.7766	.79182	.627
Follow oral directions better than written ones.	Auditory style	1.8830	.77399	.599

Table 2: Dominant learning styles of students (N = 94)

Statistics	Visual style	Auditory style	Kinesthetic style	Reading style/ writing style
Mean	1.8250	1.8622	2.4675	2.0673
Std. Deviation	.6695	.7905	1.0686	.9968
Variance	.448	.613	.5113	.1.0703

From Table 2, looking at the mean values of visual, auditory, kinaesthetic and reading/writing styles of the education students, one could observe that kinaesthetic style has the highest mean value, followed by reading/writing style, then auditory style and then visual style visual style.

Discussion

The VARK learning style inventory measures four sensory modalities used for learning, namely visual, aural, read/write and kinaesthetic. Based on an individual's preferences, learning styles can be classified as uni-modal (where learners use predominantly one learning style), multimodal (where a learner uses two or more learning styles). In this study, we set out to investigate the learning styles of third-year students who are training to become teachers in a selected department in a public university in Ghana.

We found that the learning styles of the students and their mean values are kinaesthetic (2.4675), reading/writing (2.0673), auditory (1.8622) and visual (1.8250). From these results, kinaesthetic learning style has the highest mean value of 2.4675. This implies, therefore, that the most dominant learning style among the students is kinaesthetic style. This suggests that the students would learn better when they are engaged in activities that require them to perform practicals and or experiments with their own hands. Generally, kinaesthetic learners are good at activities that involve the use of their hands such as practicals and or experiments. This finding corroborates a number of researchers findings: Khongpit et al. (2018) who arrived at the same conclusion. This suggests that if such students are engaged in kinaesthetic, their mastery levels will

be higher. However, the finding contradicts the findings of Anand and Rajendraprasad (2016) who found that most students preferred visual learning style. Similarly, it contradicts {Callie (2020), Espinoza-Poves, et al. (2019) and VARK Learn Ltd (2019)} who found the dominant learning style to be reading/writing.

The VARK model has been used by a number of researchers to determine the learning preferences of students. In the present study, the revelation by the students that their preferred learning style is kinaesthetic in line with the studies of Khongpit et al. (2018) is interesting because the students involved are specialising in four programme areas namely science, mathematics, English language and non teaching education. The findings would therefore not have been surprising if the participants were specialising in only science and mathematics programs which are known to be hands-on programs. But the fact that English language and non teaching education students were involved calls for further research.

Conclusions

This study sought to investigate the dominant learning style of the students who are training to become teachers in a public university in Ghana, and use that information to help faculty members to tailor their teaching activities towards meeting the needs of students. Based on the findings, it can be concluded that the most dominant learning style among

the level-300 education students is kinaesthetic style. This finding has implications for teaching and learning as well as for guidance and counselling.

Implications for Practice

This study has made some significant contributions to teaching and learning, and the practice of guidance and counselling. The finding that the students' dominant learning style is kinaesthetic suggests that lecturers should design their instructions and activities in ways that would engage their students more in hands-on activities. That way, the students are likely to perform better, all other things being equal. This is an important contribution given the existence of individual and cultural differences and institutional idiosyncrasies which exist in different contexts, particularly in developing country such as Ghana.

The finding also suggests that lecturers in the department should be assisted with the needed funds, teaching and learning resources and the requisite technical support to be able to design and teach their lessons to coincide with the students' learning style. Lecturers in the department, on their part, have to embrace the need to meet the learning preferences of the students they teach.

Limitations

Some limitations however need to be acknowledged and used to guide users of the findings and future research. Firstly, the study focused on only level 300 education students from a selected department and therefore the findings cannot be generalized to all education students in the department since the levels 100, 200 and 400 students were not involved. Future research should therefore consider involving all year groups of students. Also, this study is limited to Fleming's (1987) VARK model i.e., visual, auditory, kinaesthetic and reading/writing learning strategies. Other learning style models were not used. There may be some interesting insights if a similar study was conducted in other departments in the same or other universities using a different learning style model.

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Appendix A

Learning Styles Questionnaire

Complete the following questionnaire by ticking the appropriate box to discover your preferred learning style. **NB: By filling this questionnaire, I agree to take part in the study.**

S/N		Often	Sometimes	Seldom
1	Bear down extremely hard with pen or pencil when writing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Require explanations of diagrams, graphs or visual directions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Am skilful and enjoy developing and making graphs and charts.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Can better understand and follow directions using maps.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Play with coins and keys in pockets.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Learn to spell better by repeating the letters than by writing the word on paper.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7	Can better understand a news article by reading about it in the paper than radio.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Chew gum, smoke or snack during studies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Feel the best way to remember a picture is in my head.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Would rather listen to a good lecture or speech than read about the same material.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11	Prefer listening to the news on the radio than reading about it in a newspaper.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Follow oral directions better than written ones.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Adapted from NCSE and VARK Learn Ltd (2019)

Appendix B

Cronbach's Alpha Reliability Co-efficient and Scale Statistics of UG education students learning styles

Table 6: Reliability statistics of UG education students learning strategies (N = 32)

Cronbach's Alpha
.994

Table 7: Scale statistics of UG education students learning styles (N = 12)

Mean	Variance	Std. Deviation
67.9700	653.686	25.56728

INTERNATIONAL JOURNAL OF PEDAGOGY, POLICY AND ICT IN EDUCATION

CALL FOR PAPERS

The Journal invites articles that address research, theory or practice in pedagogy, Language Policy and ICT in education. In addition to articles that would reflect the multidisciplinary nature of the journal, we will also be interested in the use of Artificial Intelligence (AI) in education and its regulation. The Call is open from 10th September to 30th November 2024. Accepted articles are expected to be published in the last quarter of 2024 i.e. by 31st December 2024. Depending on response rate, the publication could be earlier. In 2025, priority would be given to articles on AI in education.

Preliminary requirements: All articles should have the following subheadings in the body as the organizing principle: *topic, abstract, the problem, objectives/purpose, research questions or hypotheses, significance of the study, methodology, the results/findings, discussion of findings, conclusion and recommendations* (may include suggestions for further research) and *references*. **NB:** Articles that disregard these preliminary requirements would be deleted, with no further action taken.

1. A cover letter should accompany each article. **It should include all authors' names and institutional affiliation.** The cover letter should have the **email of the corresponding author**, to whom all correspondence regarding the article would be directed. The mailing address, to which copies of the journal, after publication, would be shipped should also be provided.
2. **Every effort should be made to see that the manuscript itself contains no clues to the authors.** The cover page should contain the title of the manuscript, names and addresses of the authors.

3. Manuscripts should not exceed 18 pages including the references. The abstract should not exceed one hundred and fifty (150) words. Typescripts should be Times New Roman on A4 paper, double-spaced and typed on one side only, if printed. Pages should be numbered. About five keywords that best describe the article should be provided.
4. Letters to the Editor are encouraged to promote interactivity and healthy debate on current research issues regarding AI. Such letters should not be more than 1000 words. **They should include all authors' names, degrees, institutional affiliation and contact address.** Again, letters should use references to strengthen arguments being made.
5. Articles must be original, coherent, logical and devoid of typographical errors.
6. Referencing should follow the American Psychological Association (APA 7th Edition, 2020) manual of publication. Authors to must painstakingly match in-text citations with end references to ensure **that authorities cited are referenced and that all references on the end reference list are cited in the body of the manuscript. Manuscripts that fail to comply may be rejected and deleted.**
7. After initial submission, if it is determined that the article is worth reviewing, the author will be asked to pay a **non-refundable, review fee** of GH¢200.00 for Ghanaians and USA\$100.00 for all foreigners. These fees would pay our assessors and also cater for prevailing internet as well as cost of printing and photocopying.
8. We follow a double-blind review process and offer a fee for each article reviewed. In principle, we pay two reviewers per article.
9. If an article is accepted for publication the author(s) will be asked to respond to comments by our reviewers and send a soft copy of the

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The publication fee, referred to above, will be communicated only to authors whose articles are accepted for publication.

10. Authors need to be patient after payment of publication fees, since we only publish after meeting our publication targets and standards. It is in the interest of authors to be patient because when we maintain high publication standards, they would be joint beneficiaries of our excellent final product. Please bear in mind that one article will not be accepted as a journal by most institutions for assessing staff. The quality of the journal is also assessed.
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12. The decision of the journal's reviewers to either publish a manuscript or not is normally communicated without delay. Over the years, our average acceptance rate is 90%. Even so, in the past, some rejected articles that were substantially revised according to reviewers' suggestions and resubmitted were eventually published.
13. After publication, the journal is accessible on the site of African Journals Online.

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**REVUE INTERNATIONALE DE PÉDAGOGIE, DE POLITIQUE ET
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APPEL À CONTRIBUTIONS

Le journal invite les articles qui traitent de la recherche, de la théorie ou de la pratique en matière de pédagogie, de politique linguistique et de TIC dans l'éducation. En plus des articles qui reflètent la nature multidisciplinaire des articles, nous serons également intéressés par l'utilisation de l'intelligence artificielle (IA) dans l'éducation et sa réglementation. L'appel est ouvert du 20 février au 30 septembre 2024. Les articles acceptés devraient être publiés au cours du dernier trimestre 2024. En fonction du taux de réponse, la publication pourrait intervenir plus tôt.

Exigences préliminaires : Tous les articles devraient avoir les sous-titres suivants dans l'organisme comme principe d'organisation : sujet, résumé, problème, objectifs/but, questions ou hypothèses de recherche, importance de l'étude, méthodologie, résultats/résultats, discussion des résultats, conclusion et recommandations (peuvent inclure des suggestions pour des recherches postérieures poussées) et des références.

NB : Les articles qui ne tiennent pas compte de ces exigences préliminaires seraient supprimés, sans que d'autres mesures ne soient prises.

1. Une lettre doit accompagner chaque article. Il devrait inclure tous les noms des auteurs et leurs l'affiliation institutionnelle. La lettre d'accompagnement devrait avoir l'adresse courriel de l'auteur correspondant, à qui toute correspondance concernant l'article serait dirigée. L'adresse postale, à laquelle des copies du journal, après publication, seraient expédiées devrait également être fournie.
2. Tout effort doit être fait pour que le manuscrit lui-même ne contienne aucun indice des auteurs. La page de couverture doit contenir le titre du manuscrit, les noms et les adresses des auteurs.
3. Les manuscrits ne doivent pas dépasser 18 pages, y compris les références. Le résumé ne doit pas dépasser cent-cinquante (150) mots. Les scripts de type doivent être Times New Roman sur papier A4, à interligne double et tapé sur un seul côté, s'ils sont imprimés. Les pages doivent être numérotées. Environ cinq mots clés qui décrivent le mieux l'article doivent être fournis.
4. Les lettres adressées au Rédacteur en chef sont les bienvenues pour promouvoir l'interactivité et un débat sain sur les questions de l'IA. Ces lettres ne devraient pas dépasser 1000 mots. Ils doivent inclure le nom, les diplômes, l'affiliation institutionnelle et l'adresse de contact de tous les auteurs. Encore une fois, les lettres devraient utiliser des références pour renforcer les arguments avancés.
5. Les articles doivent être originaux, cohérents, logiques et dépourvus d'erreurs typographiques.

6. Le style de référenciassions doit suivre l' « American Psychological Association » (édition 7, 2020). Les auteurs doivent soigneusement faire correspondre les citations en texte avec les références de fin pour s'assurer que les autorités citées sont référencées et que toutes les références sur la liste de référence finale sont citées dans le corps du manuscrit. Les manuscrits qui ne se conforment pas peuvent être rejetés et supprimés.
7. Après présentation initiale, s'il est déterminé que l'article mérite d'être examiné, l'auteur sera invité à payer des frais de révision non remboursables de 200,00 GH pour les Ghanéens et de 100,00 \$US pour tous les étrangers. Ces frais couvriraient également l'Internet en vigueur ainsi que le coût de l'impression et de la photocopie.
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9. Si un article est accepté pour publication, l'auteur(s) sera invité à répondre aux commentaires de nos examinateurs et à envoyer une version électronique de l'article révisé au format du fichier « Word Document », avec des frais de publication non remboursables, au Rédacteur en chef. Les frais de publication, mentionnés ci-dessus, ne seront communiqués qu'aux auteurs dont les articles sont acceptés pour publication.
10. Les auteurs doivent être patients après le paiement des frais de publication, puisque nous n'imprimons/publions qu'après avoir atteint nos objectifs de publication et nos normes. Il est dans l'intérêt des auteurs d'être patients parce que lorsque nous maintenons des normes de publication élevées, ils seraient les bénéficiaires conjoints de notre excellent produit final. Veuillez garder à l'esprit qu'un article ne sera pas accepté comme journal par la plupart des institutions pour

évaluer le personnel. La qualité de la revue est également à évaluée.

11. Les articles ne peuvent pas être soumis ou publiés simultanément ailleurs. Cela aurait des répercussions sur le droit d'auteur. Les manuscrits doivent être accompagnés d'une lettre indiquant que le manuscrit n'a pas été publié ou soumis ailleurs.
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