

Approaches to Studying among Students with Disabilities at the University of Education, Winneba, Ghana

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Abstract

There is a dearth of empirical studies on the learning approaches of students with disabilities in the University of Education, Winneba. So this paper explored the learning approaches of students with disabilities (i.e. Visually Impaired, Deaf and Hard of Hearing, Physically Disabled) in the University of Education, Winneba (UEW). This quantitative study surveyed 78 participants randomly from a population of 125. The study adopted the Approaches and Study Skills Inventory for Students (ASSIST, 1998) from Fobi (2015). Descriptive statistics using means, standard deviations, percentages, tables, and ANOVA were used to analyze data collected. These results suggested that the respondents most preferred approach to learning was the strategic approach followed by the deep and surface approaches respectively at the University of Education, Winneba (UEW). The results indicated that there was a significant difference in the strategic approach to learning among the students with disabilities at the $p < .05$ level for the three cohort of students with disabilities [$F(2, 75) = 4.17, p = 0.019$]. The study recommended that lecturers at the tertiary level have in mind the preferred learning approach of students with disabilities so that teaching and learning activities can be channeled to meet the needs of their students with disabilities.

Keywords: Learning, learning approaches, disability, Deaf and hard of hearing, Visual Impairment, Physical disability, Tertiary

1. Introduction

Approaches to studying among students with disabilities may differ from one student to the other because of their diverse conditions, individual uniqueness, personal and contextual factors. In Ghana, the widely considered cohorts of persons with disabilities are those who are Deaf and hard of hearing (DHH), visually impaired, intellectually disabled, and physically disabled. However, only three of the categories (visually impaired, DHH, and physical disability) are able to progress academically to the tertiary level in Ghana. At the tertiary level in Ghana, University of Education, Winneba (UEW) is known for admitting a large number of students with disabilities to learn with their regular peers on different programs for the awards of Bachelors of Art, Education, and Science degrees. However, at UEW, there is a dearth of empirical study on the approaches these students adopt to learn. Fobi and Oppong (2015) explored the learning approaches of DHH students at UEW and found that the preferred learning approach among DHH students was the strategic approach. A gap that was filled in Fobi and Oppong's study was that, Fobi and Oppong did not include other students with disabilities such as students with visual impairment and physical disability. Also Fobi and Oppong did not include DHH students who were in level 100 (first year) of their study.

This study when successfully conducted would highlight the various approaches students with disabilities adopt in learning so that it can aid stakeholders in special needs education to plan curriculum and teaching methods that would facilitate their learning in tertiary institutions in Ghana. The study also explored the differences in learning approaches among the three categories of disability (visual impairment, DHH, and physical disability). The research questions in this study were: 1. What learning approach do students with disabilities employ to study at UEW? 2. What differences exist in learning approach among the three categories of disability (visual impairment, DHH, and physical disability)? In this study the terms "approaches to studying" and "approaches to learning" were used in different parts to refer to the strategies students with disabilities employed to study. DHH students refers to any individual students, who, in addition to not perceiving auditory input naturally, functions by choice as a member of a cultural minority group with their own values, language, and traditions. Students with visual impairment are the categories of students who were blind and low vision who depend on support from the Resource Center for Students with Special Needs (RCSSN) for academic and social activities. Students with physical disability are students who have limitations on their physical functioning, mobility, and dexterity.

There have been numerous studies conducted on students' approaches to learning since 1976 when the concept was first identified by Marton and Saljo (1976). Biggs (1987) introduced the strategic approach to learning after Biggs had studied the surface and deep approaches to learning identified by Marton and Saljo (1976) (Fobi & Oppong, 2015). Biggs (2003) explained the deep approach to learning as characterized by a preference to work conceptually and are driven by intrinsic curiosity Biggs further posited that the strategic approach is also a type of learning approach which focuses on obtaining high marks and organized studying. The surface approach is recognized by an intention to achieve a pass, avoid too high a workload, misunderstanding

requirements, and/or thinking that factual recall is all that is required. Felder and Brent (2005) contend that students who adopt the deep approach to learning are motivated intrinsically to learn with intellectual curiosity while those who adopt the surface approach commonly exhibit and extrinsic motivation to learn. Thus students adopt varying approaches to studying based on personal factors (for example, student gender, age, disability, prior experiences) and contextual factors (for example, teaching/learning activities/methods, perceived workload, assessment procedures, and institutional values) (Biggs, 1987; Zeeger, 2001).

Researchers have long been interested in how students go about learning, what strategies they use, and why they choose particular approaches (Vermunt, 2007). Quite a number of studies have been conducted recently on the approaches students adopt to learn. Gürten, Turan and Senemoğlu (2013) explored prospective teachers' learning approaches, learning preference and the relationship between learning preference, learning approaches with achievement, and students' perception of achievement. The study used the Approaches and Study Skills Inventory for Students (ASSIST) to determine the approaches to learning and study skills among participants. Findings of Gürten et al. (2013) study indicated that majority of the respondents preferred the strategic approach to learning, followed by the deep and surface approach in that order. The current study is set apart from the study of Gürten et al. because the current study will focus on students with disabilities in a tertiary institution in Ghana.

In Nigeria, Ladan, Balarabe, Sani, Musa, Salihu, and Salihu (2014) explored the learning approaches as predictors of academic performance of undergraduate students in Ahmadu Bello University, Zaria. The objectives of the study were to determine the predominant learning approach, identify factors that influence the choice of students learning approach and explore the relationship between approaches to studying and academic achievement of undergraduate students of Ahmadu Bello University, Zaria. The study revealed that 81.1% of the students were aware of learning approach and the predominant learning approach among the undergraduate students was surface approach. The current study is adding to the work of Landan et al. by exploring into details the preferred approaches to learning among students with disabilities, and establishing the differences that exist in learning approaches among the DHH, visually impaired, and the physically disabled students. The current study was conducted in Ghana.

To explore the approaches to learning among DHH students at the University of Education, Winneba, Fobi and Oppong (2015) employed the Approaches and Study Skills Inventory for Students (ASSIST, 1998) to gather data from 31 undergraduate deaf students. Data was analyzed using descriptive statistics. Findings of the study indicates that participants preferred strategic approach to learning followed by the deep and surface approaches to learning in that order. The current study is different from the work of Fobi and Oppong (2015) because the current study considered the approaches to learning among students with disability, thus, students with visual impairment, students with physical disabilities and DHH students. It involved 73 participants.

2. Methodology

2.1 Research Design

This quantitative study employed survey research design to explore the learning approaches of students with disabilities in the University of Education, Winneba. The population this study consist of 125 undergraduate students with disabilities in UEW. Seventy-eight students were randomly chosen because all the students with disabilities have been enrolled on different undergraduate programmes of study in the university hence could give information about their learning approaches. Fraenkel and Wallen (2009) noted that the key to obtaining a random sample is to ensure that each and every member of the population has an equal and independent chance of being selected. Seventy-eight "IN" and forty-seven "OUT" were written on paper so that only students who chose "IN" were given the opportunity to participate in the study. The sample was made up of 31 DHH students, 35 students with visual impairments and 12 students with physical disabilities. The sample consists of 49 males and 29 female students with disabilities between the ages of 21 and 49 years with an average of 26 years. Seventeen of the participants were in level 100, 22 in level 200, 30 in level 300 and 19 in level 400. The participants were offering Bachelor's degree programmes in Departments of Special Education, Social Studies Education, Political Science Education, Information and Communication Technology and Graphic Design. Sixteen participants had post-Secondary education in some public Colleges of Education in Ghana. The remaining 52 participants had only Secondary School education before gaining admission into the university.

The Approaches and Study Skills Inventory for Students (ASSIST) was adopted for the study from the work of Fobi and Oppong (2015). Fobi and Oppong adapted the ASSIST (1998) and administered on a group of students who were deaf and hard of hearing (DHH) at UEW. The ASSIST was developed specifically for use in educational settings and has been previously used in determining the approaches to studying among tertiary students with disability in many countries such as the UK, USA and Canada (Richardson, 2005). ASSIST has shown excellent reliability and stability (Richardson, 2009). Fobi and Oppong modified the ASSIST by selecting three out of the four sections of the original ASSIST. The three selected sections measure the three approaches to learning (Deep, Strategic, and Surface). Question items on the ASSIST were fifty-two (52) and rated (1 = strongly disagree, 2 = disagree, 4 = agree and 5 = strongly agree). The question items are grouped under three

main learning approaches (surface, strategic and deep learning). Surface approach to learning has four subscales. They are lack of purpose, unrelated memorising, syllabus-boundness and fear of failure. Each of these sub-scales has four question items. They are: lack of purpose (3, 16, 29 and 42), unrelated memorising (6, 19, 32 and 45), syllabus-boundness (12, 25, 38 and 51) and fear of failure (8, 22, 35 and 48). Surface approach to learning has four subscales. They are lack of purpose, unrelated memorising, syllabus-boundness and fear of failure. Each of these sub-scales has four question items. They are: lack of purpose (3, 16, 29 and 42), unrelated memorising (6, 19, 32 and 45), syllabus-boundness (12, 25, 38 and 51) and fear of failure (8, 22, 35 and 48). Deep approach to learning has four sub-scales. The sub-scales are seeking meaning, relating ideas, use of evidence and interest in ideas. Each sub-scale has four question items. They are: seeking meaning (4, 17, 30 and 43), relating ideas (11, 21, 33 and 46), use of evidence (9, 23, 36 and 49) and interest in ideas (13, 26, 39 and 52). ASSIST as a standardized instrument has been validated. The ASSIST contained 16 items that measure surface approach to learning, 20 items that measure strategic approach to learning and 16 items that measure deep approach to learning. The surface approach had a Cronbach Alpha of 0.87, strategic approach had Cronbach Alpha of 0.80 and deep approach had a Cronbach Alpha of 0.84 (Fobi & Oppong, 2015).

2.2 Procedure for Data Collection

In addition to the researchers, four Sign Language interpreters and three braillists were employed and trained to administer the ASSIST in sealed envelopes to participants. The purpose of the study was explained to the Sign Language interpreters and Braillists. The researchers explained each question item of the ASSIST to the Sign Language interpreters and the Braillists to ensure they understood each question item. At least one researcher was present each time the Sign Language interpreters and Braillists administered the ASSIST to the participants. This was to ensure that the Sign Language interpreters and the Braillists explained each question item to the participants. The Braillists embossed the questionnaire before it was administered to the visually impaired participants. The administration of the questionnaire to the visually impaired participants was done in three batches at the resource centre for students with special need in the university. This took the Braillists three days, after which they transcribed the brailed responses for the researchers. Each Sign Language interpreter was assigned as an interpreter in one of the departments where there was a participant. Each of the Sign Language interpreters hence administered the questionnaire to deaf students in the department assigned to them. The researchers administered the questionnaire to the physically disabled students in their halls.

2.3 Data Analysis

The researchers employed descriptive statistics using means, standard deviations, percentages, and tables to analyse collected data on the predominant learning approaches of students with disabilities at UEW. Descriptive statistics helped to identify the learning approach with highest mean and for that matter the predominant approach. In order to establish the differences in learning approaches that exists among students with disabilities, an ANOVA was employed.

2.4 Ethical Consideration

The researchers sought permissions from the heads of departments whose students were sampled to participate in the study. The participants were assured of confidentiality of information given and were told that such information would be used only for research purposes. The researchers negotiated with participants who are deaf, physically disabled, and those with visual impairment on the time and day that will be appropriate for them to meet and respond to the questionnaire. Participants were promised that they could have access to the findings of the study if they so desire.

3.0 Analysis and Discussion of Findings

This section presents analysis of data on the predominant learning approaches among students with disabilities at the University of Education, Winneba. Two main strands were raised to guide the study, namely: Predominant learning approach among students with disabilities at UEW, and the differences that exist in learning approach among the three categories of disability.

3.1 Predominant Learning Approach among Students with Disabilities at UEW

In establishing the predominant learning approach among students with disabilities at UEW, a descriptive statistical analysis which employed a simple frequency counts, mean, mean of means, percentages, and standard deviation. Table 1 presents the data for the predominant learning approaches among the students.

Table 1: Descriptive Statistics of Learning Approaches of Students with Disabilities at UEW

Approaches to learning	Mean (M)	Std. Deviation (SD)	Frequency	Percentage (%)
Strategic approach	78.73	9.72	75	96.2
Deep approach	61.76	7.96	2	2.6
Surface approach	53.17	7.93	1	1.3
Mean of Means	64.55		N = 78	100

Source: Authors' Computations from field Data, June 2017

From Table 1, results of the respondents were used to estimate mean of means of approaches to learning. The mean of means was 64.55. Comparing the mean of means of 64.55 to the individual means of the students' preferred approaches at UEW in Table 1, it can be seen that the strategic approach (M = 78.73, SD = 9.72) was higher than the mean of means. This clearly indicates that the predominant learning approach among the students with disabilities at UEW was the strategic approach. The deep approach (M = 61.76, SD = 7.96) and surface approach (M = 53.17, SD = 7.93) were lower than the mean of means. However, comparing the means of the deep approach and the surface approach, it can be deduced that the deep approach was the second most preferred approach followed by the surface approach. In frequency and percentage terms, 75 respondents representing 96.2% employed the strategic approach, 2 participants representing 2.6% employed the deep approach and 1 participant representing 1.3% employed the surface approach to learn. Figure 4.1 illustrates the learning approaches employed by deaf students at UEW. These results suggest that the respondents most preferred approach to learning was the strategic approach followed by the deep and surface approaches respectively at the University of Education, Winneba (UEW). Findings of this study were supported by Fobi and Oppong (2015), Fox, McManus and Winder (2001), Gürlen et al. (2013), Nordin, Wahab and Dahlan (2013), and Subasinghe and Wanniachchi, (2009) who found that students most preferred learning approach to learning was the strategic approach followed by the deep and surface approach.

Table 2: Sub-scales in Approaches to Learning Employed by Students with Disabilities at UEW

Approaches to learning	Mean	Standard deviation
<u>Deep approach</u>		
Seeking meaning	3.74	0.74
Relating ideas	3.69	0.64
Use of evidence	3.51	1.37
Interest in ideas	4.20	0.59
<u>Strategic approach</u>		
Organized studying	3.66	0.91
Time management	4.11	0.84
Alertness to assessment demands	3.50	1.34
Achieving	3.80	1.14
Monitoring effectiveness	3.98	1.03
<u>Surface approach</u>		
Lack of purpose	3.11	0.80
Unrelated memorizing	3.06	1.27
Syllabus boundness	2.80	1.36
Fear of failure	3.26	1.28
Mean of means	3.57	

Source: Authors' computations from field data, June 2017

Table 2, presents the data on further descriptive analysis of the sub-scales in the learning approaches students with disabilities employed at UEW. Comparing the means of the various sub-scales under the three approaches to learning the mean of means (3.57), the results revealed that the sub-scales of strategic approaches shows higher mean scores namely; Monitoring Effectiveness (M = 3.98, SD = 1.03), Organised Studying (M = 3.66, SD = 0.91), Time Management (M = 4.11, SD = 0.84) and Achieving (M = 3.80, SD = 1.14). Also, Alertness to Assessment Demands (M = 3.50, SD = 1.34) indicated a means score which was slightly below the mean of means. The result also indicated that the three subscales of deep approaches show high mean scores namely; Seeking Meaning (M = 3.74, SD = 0.74), Relating Ideas (M = 3.69, SD = 0.64), and Interest in Ideas (M = 4.20, SD = 0.59). However, Use of Evidence shows a mean score below the mean of means of the subscales (M = 3.51, SD = 1.37). On the other hand, all the sub scales of surface approaches showed lower mean scores as compared to the mean of means of the different sub-scales. Their means and standard deviations were: Syllabus Boundness (M = 2.80, SD = 1.36), and Fear of Failure (M = 3.26, SD = 1.28). Unrelated Memorising (M = 3.06, SD = 1.27) and Lack of Purpose (M = 3.11, SD = 0.80). These results revealed that the most preferred learning approach among students with disabilities at UEW is the strategic approach, followed by the deep approach and surface approach.

3.2 The differences that exist in learning approaches among the three categories of students with disability (visual impairment, DHH, and physical disability)

This theme was raised to elicit data of the differences that exist in the learning approach among the three categories of students with disabilities in UEW.

Table 3: One Way ANOVA

Learning Approaches		Sum of Squares	df	Mean Square	F	Sig.
DEEP APPROACH	Between Groups	1.107	2	.553	2.313	.106
	Within Groups	17.949	75	.239		
	Total	19.056	77			
STRATEGIC APPROACH	Between Groups	1.825	2	.912	4.174	.019
	Within Groups	16.396	75	.219		
	Total	18.221	77			
SURFACE APETHETIC APPROACH	Between Groups	.258	2	.129	.518	.598
	Within Groups	18.683	75	.249		
	Total	18.941	77			

Source: Authors' Computations from field Data, June 2017

A one-way ANOVA was conducted to explore the differences in learning approaches among the students with visual impairment, DHH, and physical disability. The results as stated in Table 3 indicated that there was a significant difference in the strategic approach to learning among the students with disabilities at the $p < .05$ level for the three cohort of students with disabilities [F (2, 75) = 4.17, $p = 0.019$]. The deep and surface approaches on the other hand did not exhibit any significant difference among the students with disabilities. For the deep approach to learning, at a P-value of $p < .05$ level, recorded [F (2, 75) = 2.31, $p = 0.106$]. The surface approach also, at a P-value of $p < .05$ level, recorded [F (2, 75) = 0.518, $p = 0.598$]

Post hoc comparisons using the Tukey HSD test as indicated in Table 4 revealed that DHH students does not differ significantly from the students with physical disabilities in employing the strategic approach to learn. However, there is a significant difference between the DHH students and students with visual impairment in using the strategic approach to learn.

Table 4. Post Hoc Tests

Dependent Variable	(I) Disability		(J) Disability	Mean Difference (I-J)	Sig.	95% Confidence Interval	
		Of				Lower Bound	Upper Bound
Strategic Approach	Deaf/Hard Hearing	Of	Visually Impaired	.30687*	.026	.0311	.5826
			Physically Disabled	-.00242	1.000	-.3825	.3777
	Visually Impaired	Of	Deaf/Hard Hearing	-.30687*	.026	-.5826	-.0311
			Physically Disabled	-.30929	.125	-.6833	.0647
	Physically Disabled	Of	Deaf/Hard Hearing	.00242	1.000	-.3777	.3825
			Visually Impaired	.30929	.125	-.0647	.6833

Source: Authors' Computations from field Data, June 2017

4.0 Conclusion

In conclusion, it can be noted that students with disabilities are unique and come to the university with the intention of making good grades for successful graduation. So they put in every effort to adopt a learning strategy which would aid them successfully pass their exams. Employing the strategic approach to learning requires that, one is flexible in learning for meaning and also where necessary learn by the route approach. In this study, it was seen that students with disability generally preferred the strategic approach to learning followed by the deep and surface approaches respectively. Also, a significant difference was observed between the deaf and hard of hearing (DHH) students and students with visual impairments in choosing the strategic approach but no such significance was recorded for students with physical disability and their counterparts. This study recommend that, lecturer at the tertiary level who teach students with disabilities should put in effort that will ensure that equal opportunity is given to students with disabilities in their teaching so that the students can learn with ease. Also, it is imperative to have in mind the preferred learning approach of students with disabilities so that teaching and learning activities can be channeled to meet the needs of the students. It is also recommended that future researchers compare the differences that exists learning approaches among students with and without disabilities.

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**APPENDIX A
 ASSIST**

Introduction

This questionnaire is designed to allow you describe, in a systematic way, how you go about learning. This questionnaire asks you to indicate your relative agreement or disagreement to each statement. Please work through the comments, and give your **immediate** response by **circling** the response which is most suitable to you. In deciding your responses, think in terms of **a particular lecture course**. It is also very important that you respond to **all** the questions. **Your responses to the questionnaire will be treated confidentially and used only for academic and research purposes. Do not write your name**

Background information

Age..... years

Gender M / F

Department:

Level of study:

Type of Disability:.....

5 means strongly agree (✓) 4 = agree (✓?) 2 = disagree (x?) 1 = strongly disagree (x).

A. Approaches to learning

	✓	✓?	x?	x
1. I manage to find conditions for learning which allow me to learn easily.	5	4	2	1
2. When working on an assignment, I keep in mind how best to impress the marker.	5	4	2	1
3. Often I find myself thinking whether the work I do in the university is really important .	5	4	2	1
4. I usually try to understand the meaning of what I have to learn.	5	4	2	1
5. I organise my study time carefully to make the best use of it.	5	4	2	1
6. I concentrate on just memorising most of what I have to learn.	5	4	2	1
7. I go over the work I've done carefully and see if the work is meaningful.	5	4	2	1
8. Often I feel the amount of material I have to learn are too much for me	5	4	2	1
9. I look at evidence in books carefully and try to reach my own conclusions.	5	4	2	1

10. It's important for me to feel that I'm doing the best I can on the courses.	5 4 2 1
11. I try to relate ideas I come across to those in other topics and courses whenever possible.	5 4 2 1
12. I read very little beyond what is actually required to pass exams.	5 4 2 1
13. Regularly I find myself thinking about ideas from lectures when I'm doing other things.	5 4 2 1
14. I think I'm quite systematic and organised when it comes to revising for exams.	5 4 2 1
15. I look carefully at lecturers' comments on course work to see how to get higher marks next time.	5 4 2 1
16. I find much of the work in the university not interesting.	5 4 2 1
17. When I read a book, I try to find out for myself exactly what the writer means.	5 4 2 1
18. I'm pretty good at working whenever I need to.	5 4 2 1
19. Much of what I learn is not important to my course.	5 4 2 1
20. I think about what I want to get out of this course to keep my studying well focused.	5 4 2 1
21. When I'm working on a new topic, I try to see in my own mind how all the ideas fit together.	5 4 2 1
22. I often worry about whether I'll ever cope with the work properly.	5 4 2 1
23. Often I find myself questioning topics lecturers teach.	5 4 2 1
24. I feel that I'm getting on well, and this helps me put more effort into the work.	5 4 2 1
25. I concentrate on learning information I have to know in order to pass my exams.	5 4 2 1
26. I find that studying academic topics can be quite exciting at times.	5 4 2 1
27. I'm good at doing reading assignments given by lecturers.	5 4 2 1
28. I keep in mind who will mark my assignment and what their expectations are.	5 4 2 1
29. When I look back, I sometimes wonder why I ever decided to come to university.	5 4 2 1
30. When I am reading, I stop from time to time to think about what I am trying to learn from it.	5 4 2 1
31. I work little by little through the semester, rather than leave it all until the last minute.	5 4 2 1
32. I'm not really sure what's important in lectures so I try to write all I can.	5 4 2 1
33. Ideas in course books make me form new ideas.	5 4 2 1
34. Before I start to work on an assignment and exam question, I think first how best to answer it.	5 4 2 1
35. I often seem to panic if I am late to submit my work.	5 4 2 1
36. When I read, I examine the details carefully to see how they fit in with what's being said.	5 4 2 1
37. I learn hard in order to pass my exams.	5 4 2 1
38. I plan my learning closely to just what seems to be required for assignments and exams.	5 4 2 1
39. Some of the ideas I come across on the course are really interesting.	5 4 2 1
40. I usually plan out my week's work in advance, either on paper or in my head.	5 4 2 1
41. I pay attention to what lecturers seem to think is important and concentrate on that.	5 4 2 1
42. I'm not really interested in some courses, but I have to take them for other reasons.	5 4 2 1
43. Before working on an assignment, I first try to know why that assignment was given.	5 4 2 1
44. I generally make good use of my time during the day.	5 4 2 1
45. I often have trouble in making sense of the things I have to remember.	5 4 2 1
46. I like to play around with pieces of idea of my own even if they don't get me very far.	5 4 2 1
47. When I finish a piece of work, I check through to see if it really meets the requirements.	5 4 2 1
48. Often I awake up from sleep thinking about work I won't be able to do.	5 4 2 1
49. It's important for me to be able to follow the argument, and see the reason behind things.	5 4 2 1
50. I don't have any difficulty in motivating myself to learn.	5 4 2 1
51. I like to be told precisely what to do in essays and assignments.	5 4 2 1
52. I sometimes get attached on academic topics and feel I would like to keep on studying them.	5 4 2 1