



Views of blind students and their academic work memorization

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ABSTRACT

This manuscript aimed at establishing how students who are blind manage to remember what they are taught during the lecture hours at Kwame Nkrumah University. The objectives which guided this study aimed at determining how students who are blind remembered their academic work, establishing what helped students who are blind remembered their work and the consideration of what was most helpful to students who are blind in remembering their academic work. The researcher used semi-structured interview, document study and observation checklist to collect qualitative data from the sample of 3 (three) students.

Through this study it was discovered on how learners who were blind remembered their academic work and this was through the use of internet, voice recorder, mobile phones and laptops with speech output, the use of group discussions and ordering of the work according to topics and subtopics. The study also revealed what helped the blind to remember their academic work and this was done through attending of lectures, recording of lectures, writing of notes, dictation by lecturers, practical examples given by lecturers during lecture hours, by being given summarized notes by lecturers, help from sighted students and the use of braille and use of their braille equipment. The study further found two most important things which helped learners who were blind remember academic skills, concepts and information being taught and these were done through **hearing** and **listening attentively** and it was aided by **neural plasticity**.

Keywords: Students, Visually Impaired, Remembering and Academic Work.

1. INTRODUCTION

It has been always amazing to see students with visual impairment especially those who are blind

remembering what they are taught even if they were unable to see everything the lecturer was using while teaching them. The researcher

was interested into knowing how these learners remember academic work by taping from their experiences. Remembering is a skill which calls for a number of issues in a life of a human being such as the use of sight, hearing, practicing of what is taught through experiments, attentiveness, attention and intellectual aspect of an individual.

Statement of the Problem

Students with visual impairment in particular those who are blind always do well academically and graduate and obtain similar grades with others who are not visually impaired. However, it is not known how these students remember their academic work and what helps them to do so and there is no written record to confirm this scenario. Therefore, this study aimed at establishing how students with visual impairment especially those who are blind remember their academic work.

Objectives of the Study

The following objectives guided this study

- 1) To determine how students who are blind remember their academic work.
- 2) To establish what helps students who are blind remember their work.

- 3) To consider what was most helpful to students who are blind in remembering their academic work.

Study Questions

- 1) How do students who are blind remember their academic work.
- 2) What helps students who are blind remember their work.
- 3) What is most helpful to students who are blind in remembering their academic work.

Purpose of the Study

The purpose of the study was to discover on how students who are blind remember their academic work.

Significant of the Study

This study was significant because it hoped to discover how students who are blind remember their academic work. It also hoped that the findings of this study may be added to the body of knowledge on how students with visual impairment especially those who are blind manage to remember their academic work.

Delimitations

The study population comprised of students who are blind. The delimitation was that, only the students who are blind studying at Kwame Nkrumah University were involved. The scope of the study was delimitation because the study did not

involve all other students who are not blind and all the lecturers lecturing at the university.

Limitations of the Study

This study used semi-structured interview and participants were not responding accurately. However, the use of semi-structured interview, document study and observation checklist covered up what was not answered accurately during the semi-structured interview.

2. Literature Survey

This literature was discussed in line with the aspect of remembering academic work by students especially those who are blind. To start with learners with visual impairment are learners who are either totally blind or partially sighted and are unable to make use of their sense of sight during academic activities in the classroom and onlookers suspect that it affects their participation and remembering of the academic concepts. Classroom participation is an active involvement of learners in the whole process of education that is building where the individual needs are met Ministry of Education [4]. Due to lack of sight students who are blind are faced with a number of challenges however their performance proves that they are resilient and are able to remember their academic work because they do manage and do well academically in their condition.

The factors that contribute to good performance among learners who are blind are quite many but one of them is the aspect of memory. There are many ways which students with visual impairment use to remember their work and some of them are a combination of the use of varying methods such as readers, tape-recorded books and attending of lectures. Sometimes blind students use braille materials, raised line drawings of diagrams, charts, illustrations. The blind students also use technology such as the use of talking calculators, speech time compressors, computer terminals with speech output, braille printers and three dimensional of models of physical organs, shapes and microscopic organisms. It was stated by Ali, T., Engin, Y., Burcu, K, K., Dilay, Z.K Merve, Mamd Asli, A. E. [1] that what helps academic information to be remembered by learners who are blind is by the use of digital media which change show they think Memory work requires higher order cognitive tasks which include language processing, verbal memory recall and imagery recall. It has been discovered that when it comes to higher order cognitive activities learners who are blind retrieve fewer memories but higher auditory imagery Ali, T., Engin, Y., Burcu, K, K., Dilay, Z. K Merve, Mamd Asli, A. E. [1]. This implies that students remember more of what

they hear in terms of academic activities.

Ali, T., Engin, Y., Burcu, K, K., Dilay, Z. K Merve, Mamd Asli, A. E. [1]. Further stated that ability to remember lies in having no error in perceptual decisions or having no confused sensory input not because of noise or randomness in the cognitive processing. In other word sit is not the noise in the brain processes it is the noise in the input that affects the ability to remember academic work. This discovery call for the teachers to train the learners who are blind to have better hearing in order for them to remember higher order cognitive activities and overcome negative repercussions that results from failing to remember their academic work Ali, T., Engin, Y., Burcu, K, K., Dilay, Z. K Merve, Mamd Asli, A. E. [1].

Another way which helps learners who are blind remember their work lies in their ability to read loudly which improve their self-involvement and boost recall Leo, F [3]. Then the other way of recalling the academic work by learners who are blind is by not being over-confident, being realistic in prediction of performance Ali, T., Engin, Y., Burcu, K, K., Dilay, Z. K Merve, Mamd Asli, A. E. [1]. Yet another way that helps academic information to be remembered by learners who are blind is by having

encoding strategies Ali, T., Engin, Y., Burcu, K, K., Dilay, Z. K Merve, Mamd Asli, A. E. [1]. It implies that at times learner who are blind can use mnemonics to store and retrieve information.

It was also discovered by scientists that, people born blind have more accurate memories because they have no visual experience at all as such they have best verbal and memory skills in tests than those with sight Daily Mail [2]. For instance according to Proulx, M J [5] **scientific research results indicated that, the importance of adaptive neural plasticity or the capacity of nervous system or brain to modify itself functionary and structurally in compensation to injury or disease in congenitally blind, do help the brain to enhance their memory retrieval mechanism.** It was also noticed by the Hebrew proverb belief , where the blind were the most trustworthy source for quotations Proulx, M J [5]. In other wards the reason why the blind have the best memory is because people with no visual experience can recall much of the information. This was confirmed by Withagen, A [6] who found that visual experience has a significant negative impact on both the number of items remembered and the accuracy of semantic memory. This implies that having the sense of sight affects the ability to remember.

3. Proposed work

Presentation of the finding

The findings are presented in line with the research objectives in which the research determined how blind students remember their academic work, established what helps blind students remember their work and considered what was most helpful to blind students in remembering their academic work.

Determining how students who are blind remember their academic work

When the question was asked on how the students remember their academic work during examination and when the test is being administered, the response from one of the blind students was that, I do order answers according to topics and subtopics. It was also echoed by another blind respondent that, 'I study hard and I have created my personal study time-table and stick to it'. The other response from another blind student was that, I have joined a study group where we have set time and days on which to meet especially after lecture hours and before bed time and we discuss content of the course topic by topic and during discussions I learn a lot of ideas from other students. It was also revealed by one of the blind student that, the use of internet on the mobile phone and laptops helps greatly in further understanding of the topics being delivered during the lecture hours.

Establishing what helps students who are blind remember their academic work

During the interview the blind students were asked on what helps them remember information concerning their academic work during examinations and when the test is being administered to them. The response from one blind student was that, 'what helps me remember academic information during examinations and during tests is that I do attend lectures and record using my smart mobile phone or voice recorder the lecture while the lecturer is lecturing and after I listen to the lecture over and over. Another blind student stated that, 'I write the notes while the lecture is going on and use these notes to understand the topic further'. The other view was narrated by one blind student that, 'dictation of notes by lecturers during the lecture hours is what helps me remember my academic work'. The other response was that, 'what helps me remember academic information most is when the lecturer gives out the practical example as a way of explaining the points being delivered during lecture hours'. Another blind student stated that, what help me to remember academic work are the summarized notes given to me by lecturers after every lecture either electronically or using hard copies. Then another response from one blind student was that, 'what helps me

remember my academic work is the reader or human help and these are my fellow students who helps me by reading for me the lecture notes from the lecturers or information from the internet or any text books in sighted version'. The other response was that, what helps me remember my academic information and concepts are the use of braille materials such as hand frame and braille materials and the use of computers with speech output. The last response from a blind student was that, what helps me remember my work is that I create mnemonics for all the subtopics and it helps me remember my academic work easily.

Considering what was most helpful to students who are blind in remembering their academic work.

When the question was asked about what was most helpful to them in terms of remembering their academic work due to them having no experience of sighted world. One of the responses from one student who was congenitally blind was that, 'I remember most of what I hear from the lecturers during lecture hours, from friends during group discussion and from computers and smart mobile phones with speech output.' The other blind student narrated that, 'what helps me most to remember my academic work is my ability to listen attentively during lecture hours, group discussion and while listening to

computers with speech output, I listen attentively because I have no experience of the sighted world and what I hear for the first time it stick to my mind and I do not forget about it'. The student went on to explain the point further by saying it is compared to you who are sighted if you are about to visit a new place where you have never been before and if someone tries to give you accurate directions and some other explanations about the place, you tend to be attentive and will remember every direction and explanations about that place.

4. Results and Analysis

The discussion is based on the research objectives of determining how students with visual impairment remembers their academic work, establishing what helps students with visual impairment remember their academic work and considering what was most helpful to students with visual impairment in remembering their academic work.

Determined how students who are blind remembers their academic work

The study found on how students who were blind remember their academic work when the examinations and tests were being administered to them. For example, it was discovered that, they order answers according to topics and subtopics. It was also echoed by one

blind student that, it was through studying hard and creating of personal study time-table and sticking to it as another way that helps them remember their academic work. The other example was that, they joined a study group where they came up with time and days on which to meet especially after lecture hours and before bed time to discuss content of their courses, topic by topic and during those discussions they learnt a lot of ideas from other students. The last example was that, blind students used internet their voice recorders, mobile phones and laptops and these helped them greatly in further understanding of topics being delivered during the lecture hours. This current finding was in line with what was discovered by Ali, T., Engin, Y., Burcu, K., Dilay, Z. K. Merve, MamdAsli, A. E. [1]. who stated that what helps academic information to be remembered by learners who are blind is by the use of digital media which changes how they think. However, the study did not specify the type of digital media being used as compared to the current study which pointed out the use of internet, voice recorder and mobile phones. The current study also brought to light the use of group discussions and ordering of the work according to topics and subtopics which blind students used in order to remember what they were taught when they were examined or

tested which was not discovered by Ali and others.

Basing on these findings from the blind students' point of view, the empirical finding has revealed on how the blind students remember their academic work and manage to do well academically.

Established what helps students who are blind remember their academic work

This study established what helps students who were blind remember their academic work. For instance they were attending lectures and recording using their smart mobile phone or voice recorder the lecture while the lecturers were lecturing and afterwards they listened to the lecture over and over. Another example was that, they were able to remember their academic work through writing of the notes while the lecture was going on and use these notes to understand the topic further'. The other example was that, the dictation of notes by lecturers during the lecture hours made them remember their academic information and concepts. The other way which was also helpful was when the lecturer gave out the practical example while giving an explanation to the points being delivered during lecture hours. Another example was that of the use of the summarized notes given to them by lecturers after every lecture either electronically or using hard

copies. Then another way was through the help they received from their fellow students who were sighted who helped them by reading for them the lecture notes from the lecturers or information from the internet or any text books in sighted version'. The other way which helped them to remember academic work, was with the use of braille materials such as hand frame and braille materials and the use of computers with speech output. Lastly, what helped blind students remember their academic work was through the creation of their mnemonics for all the subtopics. This discovery was similar to the finding of Ali, T., Engin, Y., Burcu, K., Dilay, Z. K Merve, MamdAsli, A. E. [1]. who stated that, the other way that helps academic information to be remembered by learners who are blind is by having encoding strategies. Nevertheless, the study by Ali and others did not discover other ways which helped students remember academic information and concepts being taught when they were writing their examinations and tests such as attending of lectures, recording of lectures, writing of notes, dictation by lecturers, giving of practical examples, by being given summarized notes by lecturers, help from sighted students and the use of braille which the current study have discovered.

Basing on these findings the study established what helps students who

are blind remember their academic work. The researcher's point of view was that, the blind students need a lot of help from their lecturers and their fellow students for them to remember the academic skills, concepts and information being taught which help them make it academically.

Considered what was most helpful to students who are blind in remembering their academic work.

This study discovered what was most helpful to students who were blind in remembering their academic work. For instance, it was found that, they remembered most of what they heard from the lecturers during lecture hours, from friends during group discussion and from computers and smart mobile phones with speech output. This was in agreement with what was discovered by Ali, T., Engin, Y., Burcu, K., Dilay, Z. K Merve, MamdAsli, A. E. [1]. that when it comes to higher order cognitive activities learners who are blind retrieve fewer memories but higher auditory imagery. This implies that, the blind students remember mostly of what they hear. Nevertheless, the current study specified the auditory aspects such as hearing from lectures, during group discussion and computers, smart phone speech outputs which was not mentioned by the Ali and others.

Basing on these findings the researcher's point of view was that,

learners who are blind their success depend heavily on what they hear especially where the main method of teaching was through lecturing.

The other way that helped blind students was their ability to listen attentively during lecture hours, group discussion and while listening to computers with speech output, because of having no experience of the sighted world and what they hear for the first time stuck to their mind and they did not forget about it. This is what was also discovered by scientists that, people born blind have more accurate memories because they have no visual experience at all as such they have best verbal and memory skills in tests than those with sight (Daily Mail, [2] For instance according to Proulx, MJ [5] **scientific research results revealed that, the importance of adaptive neural plasticity in congenitally blind brain enhance their memory retrieval mechanism.** It was also noticed by the Hebrew proverb belief, where the blind were the most trustworthy source for quotations Proulx, M J [5]. In other wards the reason why the blind have the best memory is because people with no visual experience can recall the most information due to neural plasticity. The blind are said to remember most of the information because this was confirmed by Withagen, A [6] who found that visual experience has a significant negative impact on both

the number of items remembered and the accuracy of semantic memory. This implies that having the sense of sight affects the ability to remember.

The researcher's point of view basing on this finding was that, the ability to listen attentively and remembering of academic concepts, skills and information by students who were born blind was supported by neural plasticity.

5. Conclusion

Basing on the findings of this study it was discovered on how students who were blind remembered their academic work and this was through the use of internet on their mobile phones and laptops with speech output, the use of group discussions and ordering of the work according to topics and subtopics. The study also revealed what helped the blind student to remember their academic work and this was done through such as attending of lectures, recording of lectures, writing of notes, dictation by lecturers, giving of practical examples, by being given summarized notes by lecturers, help from sighted students and the use of braille and use of their braille equipment. The study further found two things which mostly helped students who were blind remember academic skills, concepts and information being taught and these were done though hearing and listening attentively and this was aided by neural plasticity.

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