

Art Education Teaching Method for Learners with Visual impairment: How it enhances their classroom participation and academic performance.

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Abstract

This manuscript is an extract from my PhD study entitled teaching method for learners with visual impairment: how Art Education Teaching Method enhances their classroom participation and academic performance in Zambia. Teaching is a process of impacting knowledge and skills into the learners. There is a problem of how to teach learners with visual impairment in the teaching fraternity. According to [15] problem of how to teach is due to lack of appropriate teaching method resulting into poor classroom participation and academic performance of learners with visual impairment. The five study sites were Magwero, Ndola Lions, Sefula, Saint Mulumba schools for the visually impaired and Munali girls' secondary school and the schools were from five provinces of Zambia. These sites were selected because they had learners with visual impairment. The main instruments that the researcher used were questionnaires, focused group discussions and

observation checklist. Use of these instruments provided a triangulation of the data collected for the study. This helped the researcher to collect data that was valid and reliable and a gap in one of the research instruments was supplemented by the other research instruments. The study found that, Art Education Teaching Method using its four elements namely perception, cognition, touch and creativity can be effective when teaching learners with visual impairment. The work was an attempt to address the problem of how to teach learners with visual impairment which result into the problem of poor classroom participation and academic performance of these learners in Zambia. The recommendation was that, teachers need to be trained in the use of Art Education Teaching Method as key persons.

Keywords: *perception, cognition, touch, creativity, classroom participation and academic performance.*

INTRODUCTION

Teaching is a process of imparting knowledge and skills into the learners. There is a problem of how to teach learners with visual impairment in the teaching fraternity resulting in poor classroom participation and academic performance [15]. This problem is due to lack of using appropriate teaching methods when teaching the learners with visual impairment.

Historically John M. Kennedy discovered the method on how to teach learners with visual impairment. It aimed at assisting persons with visual impairment to perform better academically. Kennedy was born in Belfast in 1942 and was raised in one of the few Unitarian families in Northern Ireland. He attended the Royal Belfast Academical Institution and Queen's University of Belfast, where his interests included fencing and theater. He completed his Ph.D. in perception at Cornell University and began his research with the blind shortly thereafter as an assistant professor at Harvard University [8]. Kennedy as a cognitive psychologist studied the **drawings** created by persons with visual impairment as well as the **process** they used in order to understand things [6]. During his study, Kennedy applied his ideas on a good number of learners with visual impairment for a good number of years. He made some remarkable findings over 20 years his findings were that learners with visual impairment rely on their remaining senses such as sense of touch, hearing taste and smell and they can perceive objects using raised-line drawings and real objects, and use of their ideas and imaginations to be creative. Thus, *Kennedy argued and concluded that people with visual impairment, perceive and understand things such as pictures and textures better through perception, cognition, touch and creativity in place of the sense of sight which is lost.* The Art

Education Teaching Method or vision beyond sight was the method born out of a study in New York by [9]. Art Education Teaching Method is a vision beyond sight because the learners with visual impairment are able to learn or see or understand and acquire academic concepts, skills and knowledge using this method even without using their sense of sight. [6] stated that, Art Education Teaching Method helps learners with visual impairment to gain skills crucial for their education.

SIGNIFICANCE OF THE STUDY

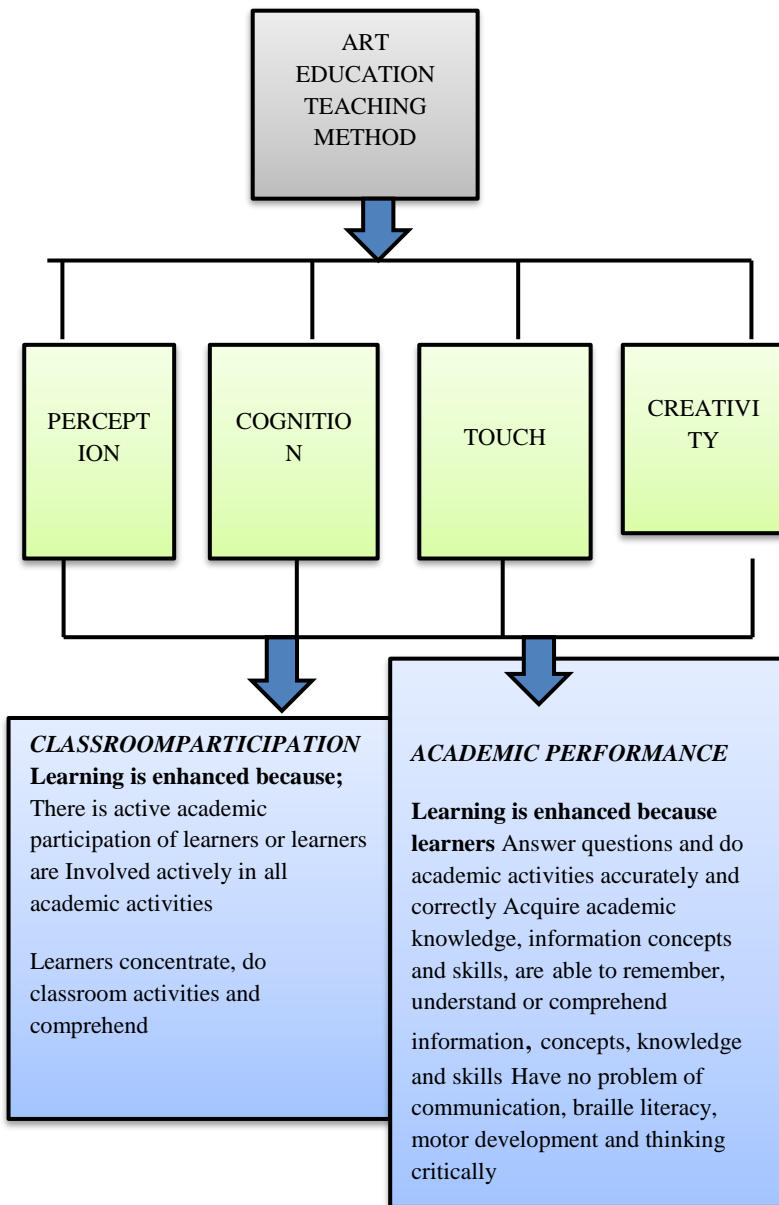
The study is of significance in the sense that by involving perception, cognition, touch and creativity, Art Education Teaching Method might help the learners easily grasp concepts, skills and knowledge learnt.

LITERATURE REVIEW

The review of the literature is mainly based on the four elements of Art Education Teaching Method as well as classroom participation and academic performance and is explained using conceptual frame work.

Conceptual frame work

Figure 1: A diagrammatic representation conceptual framework of Art Education Teaching Method



This conceptual framework is on understanding Art Education Teaching method. The arrows show a reflective path that the researcher adopted throughout research process. The framework starts with exploring the meaning of Art Education Teaching Method, followed by its four elements namely perception, cognition, touch and creativity. Thereafter, end with the

benefit that derived from using the four elements when teaching learners with visual impairment and these are good classroom participation and academic performance.

Art Education Teaching Method and the Four Elements

Art Education Teaching Method or vision beyond sight is a holistic teaching method for learners with visual impairment and is composed of four elements namely perception, cognition, touch and creativity [9]. Perception is an awareness of how things or concepts are in reality. Cognition is the gaining of knowledge using the thoughts and residue senses. Touch is the use of hands and fingers to examine or explore and learn different concepts. Creativity is the practical aspect of using or doing things and being innovative using imaginations and ideas [13]. The subsequent paragraphs therefore, try to explain how (involving perception, cognition, touch and creativity) can be used in teaching the learners with visual Impairment.

Element of Perception

As regard teaching using perception, the learners with visual impairment are made aware of how things and concepts are in reality by using raised pictures and materials such as maps and diagrams, graphs as well as real objects or textured objects these help them perceive concepts and how things are in reality and make them acquire academic information [1].

Element of Cognition

The element of cognition attention is focused on how the learners with visual impairment can acquire knowledge and skills using *residue senses* such as smell, hearing and taste as well as

thoughts [9]. By using the sense of smell the learners with visual impairment can know names of some items even after a long period of time. By using the sense of hearing the learner with visual impairment can make use of or listen to audiotaped text books, using a live reader, CDs, and MP3 players, voice recorders, speech synthesizer, Job Access With Speech (JAWS) a computer screen reader which converts electronic text into speech. Learners can use the sense of hearing in this manner and acquire academic knowledge and skills. By using the sense of taste the learner with visual impairment for example can know the amount of salt to be used when cooking relish during cookery lessons.

Element of Touch

The element of touch, concentration is on how the learners with visual impairment can use hands and fingers to acquire information and skills. As stipulated by [7] that, the learners can use hands and fingers as searching tools to acquire information and skills. The learners with visual impairment can acquire academic information and skills about objects by holding, examining and exploring real objects. They can also acquire academic information and skills by using their finger-tips which gives them feedback and allow them to identify different thousands of textures of objects and materials [11]. For example by using finger tips they can read braille, know the smooth and rough ground floors. This is because their visual cortex has been hijacked for tactile tasks [9].

Element of Creativity

The fourth element is creativity. Under this element, the focus is on how creativity can help the learners with visual impairment do things practically and imaginatively. As [14] and [9] found that, the learners with visual impairment can do things practically in the following ways. By using their imaginations and ideas and put them into practice or make new things. For

example, by using their imaginations and ideas the learners with visual impairment can use computers, type using the key board, can emboss using Perkins braille, write and read braille, use cell phones, orient themselves and move in environment alone or with minimal help from others, compose braille, stories, songs, play musical instruments. Evidence for creativity can be seen in the work of Louis Braille a blind person who invented braille we use today.

The learner with visual impairment requires this method in order to participate actively in the lesson and perform well academically using the four elements.

Classroom Participation

Classroom participation is an active involvement in the whole process of education that is building where all learners are welcomed and feel safe, as they are respected, valued and their individual needs are met in the classroom [9]. Further, [16] elucidated that classroom participation is the “active process of engagement in learning.” Classroom participation is defined as taking part actively in the classroom activities either orally or in written form [2]. Learners are actively involved in all academic activities, do concentrate, comprehend the learning content and do all classroom activities with the use of Art Education Teaching Method.

Academic Performance

Academic performance is defined as evidence of child's concrete or abstract thinking skills, literacy skills such as reading and writing skills, attention focus, academic success, language development, proficiency with sequencing, proficiency with categorization, and proficiency in identifying logical arguments [12]. Academic performance is further defined as accuracy or correct manifestation of performance in oral and written work of learners in terms of brailled

literacy of reading and writing skills, critical thinking, remembering, understanding, applying, analyzing, evaluating and creativity [2]. In other words, if learners are performing well indicators are that they are able to acquire academic knowledge, information concepts and skills and are able to remember, understand or comprehend information, concepts, knowledge and skills being taught and have no problem of communication, braille literacy, motor development and thinking critically.

METHODOLOGY

Target population

Kombo and Trop [5] describe a target population as a group of individuals relevant to the study that the research focuses on from which samples are taken. Further, [5] define target population as a specific group of people identified from the general population to whom the researcher plans to generalize the findings. The study population comprised of all learners with visual impairment and their teachers from both special and inclusive schools and these were Magwero, Ndola Lions, Sefula School for the Blind, Saint Malumba Special School and Munali Girls Secondary School.

The common characteristic of individuals in the target group for this study was that they were all pupils from grades one to twelve with visual impairment and the teachers were those who were teaching them from grades one to twelve. The researcher choice of this population was based on the belief that it could provide to some extent the necessary data for the study.

Research instruments

To collect the necessary data for this study, the main instruments that the researcher used were questionnaires, focused group discussions and observation checklist. Use of these instruments provided a triangulation of the data collected for

the study. This helped the researcher to collect data that was valid and reliable and a gap in one of the research instruments was supplemented by the other research instruments.

Ethical consideration

The researcher obtained permission from the Ethics Committee, School of Humanities and Social Sciences, University of Zambia. Informed consent to participate was obtained from the participants through signing of the consent form. Participants were assured that all the information shared would remain confidential, would be used solely for the purpose of the study and that anonymity would be observed. Anonymity and confidentiality were assured by not allowing the participants to write their names on the questionnaires. [4] point out that, participants need to be assured of confidentiality and preservation of anonymity in order to mask their identity in the report to minimize any negative repercussion in the light of the outcome of the study. This helped to minimize fears of victimization and promoted honest among the respondents in the way they responded to the questions.

FINDINGS

The responses in the use of some elements of Art Education Teaching Method were as follows;

Teachers teaching learners with visual impairment were not aware about Art Education Teaching Method. In addition, the four elements of Art Education Teaching Method were not known. For instance; the element of perception was not used. Under the element of cognition thoughts such as the use of mnemonics and residue senses such as taste, smell were not used in line with Art Education Teaching Method except for sense of hearing. The element of touch was not used because oral work was preferred; this is so because raised and real

materials were not used as teaching aids such as raised maps, shapes, diagrams and the real objects. The element of creativity or the use of learners' ideas and imaginations were not used during the lessons. It was observed by the researcher and reported by teachers that, there was poor classroom participation and academic performance among learners with visual impairment. For example, in terms of academic performance learners had difficulties to acquire academic knowledge, concepts and skills while accuracy and correctness were lacking in their answers. Learners were unable to remember, understand or comprehend concepts, knowledge and skills; there was a problem of communication, braille literacy, motor development and thinking critically among learners. Then in terms of classroom participation it was observed that, learners did not participate actively in classroom activities, concentrate and comprehend the content being taught.

Figure 1: Teachers' responses on the use of the Element of Perception (n = 70)

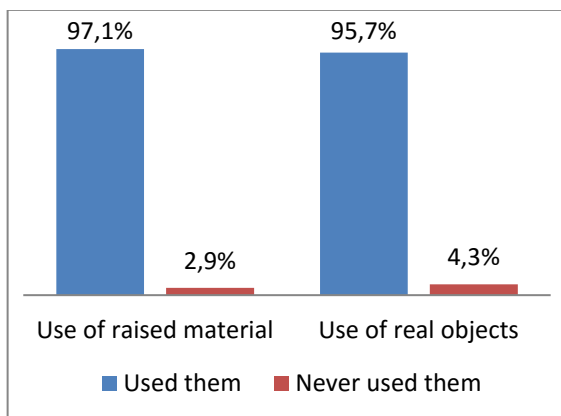
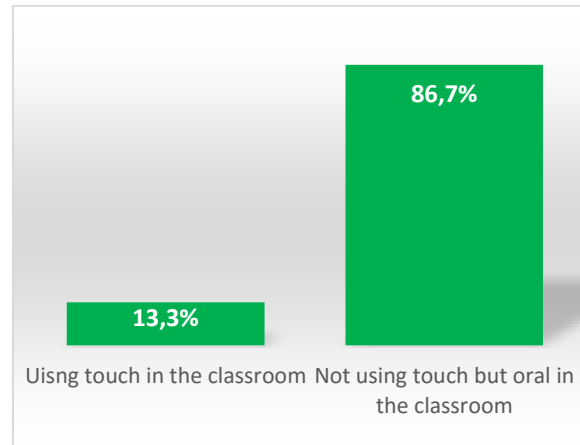


Figure 2: Teachers' responses on teaching learners with visual impairment using touch or oral (n = 70)



DISCUSSION OF FINDINGS

Since the findings were that Art Education Teaching Method was not used and learning of learners with visual impairment was not enhanced in a *Zambian context*, when discussing the findings the researcher used two scenarios, that is : the *current senario of teaching without using Art Education Teaching Method* and the envisaged - *future senario of teaching learners with visual impairment using Art Education Teaching Method*. The responses are explained in relation to the conceptual framework of Art Education Teaching Method, classroom participation and academic performance and Art Education Teaching Method for this study.

Based on the findings, the current study found that the four elements of Art Education Teaching Method, that is, perception, cognitive, touch and creativity were not fully known and used by teachers for the benefit of the learners with visual impairment in terms of academic performance and classroom participation. This finding is not peculiar to the *Zambian situation* only but also to *New York* where the elements were not used until they were discovered by [9]

However, in the future scenario if learners with visual impairment would be taught using Art Education Teaching Method, their learning would be effective and enhanced because learners with visual impairment would participate actively in the academic activities and perform well academically. This assertion can be justified by briefly illustrating how each of the four elements of Art Education Teaching Method could be used to enhance or for effective classroom participation and academic performance as backed by works of other researchers as discussed below.

The current scenario of teaching learners with visual impairment without using Art Education Teaching Method highlights that, perception was not used because raised and real materials such as raised maps, shapes, diagrams and the real objects were not used as teaching aids when teaching the learners with visual impairment in order to help them to be aware of how things and concepts are in reality. This means that, Art Education Teaching Method was not used and the learning of learners with visual impairment was not effective.

However, if the Art Education Teaching Method were to be used in a Zambian context in future, it is envisaged that through for instance, the use of perception where raised and real materials such as raised maps, shapes, diagrams and the real objects are used as teaching aids when teaching the learners with visual impairment in order to help them to be aware of how things and concepts are in reality, the method would be effective and classroom participation and academic performance might be enhanced. This is because learners will be actively involved in the lesson and may be responding with accuracy to academic activities. This is in agreement with what was postulated by [6] who observed that use of raised materials by the teacher when teaching learners with visual impairment history

subject, it helped these learners to learn better the visual world and easily acquire the visual knowledge to understand the learning situation.

It is the researcher's view point that should the perception element of the Art Education Teaching Method as illustrated above, be used in Zambian schools to teach learners with visual impairment, the method would enhance their classroom participation and academic performance.

The result of the current scenario is that, Art Education Teaching Method was not used when teaching learners with visual impairment. This was evident because thoughts such as the use of mnemonics and residue senses such as taste, smell were not used in line with Art Education Teaching Method except for sense of hearing. For instance, with regard to thoughts, the learners with visual impairment were not made to think critically. In addition, the learners with visual impairment were not given ample time to reflect on the concepts the teachers were teaching in order for them to store and retrieve academic information using retrieval cues such as mnemonics, songs during the lessons in their classrooms.

Nonetheless, if Art Education Teaching Method was to be used in a Zambian context the future scenario would show the evidence of using thoughts such as the use of mnemonics and residue senses such as taste, smell as well as hearing in line with Art Education Teaching Method. For instance, with regard to thoughts, the learners with visual impairment will be made to think critically. In addition, the learners with visual impairment will be given ample time to reflect on the concepts the teachers would be teaching in order for them to store and retrieve academic information using retrieval cues such as mnemonics, songs during the lessons in their classrooms. In this way, Art Education Teaching

Method would be effective and enhance the learning of learners with visual impairment because learners would be actively involved in the

learning activities and think critically as well as give correct answers in their academic endeavors. For instance, this is confirmed by the research of [6] who stated that, during the study in New York the element of cognition was used to teach learners with visual impairment and it enhanced their learning because the teachers used books recorded on tape and learners were allowed to record the lesson being taught to enhance their understanding and memory of their academic work. In addition, teachers helped learners to identify foods such as chocolate, vanilla, orange peel and beef using the sense of smell and taste as well as use of mnemonics to enhance the acquisition of the academic skills.

It is with this background empirical finding that the researcher similarly feels the use of the element of cognition of the Art Education Teaching Method in Zambia if and when adopted, might be effective and enhance the classroom participation and academic performance of the learners with visual impairment.

The current study or scenario's indicators are that, Art Education Teaching Method was not used since the element of touch was not fully used. This is because the teachers did not use the element of touch in order to make the learners with visual impairment understand shapes, sizes and the general texture of objects, floors and different surfaces; oral work was mostly preferred by the teachers probably because they did know it fully. For example, only few teachers helped the learners with visual impairment use the element of touch. This was

only done during reading and writing and not for knowing smooth, rough, ground or surfaces, holding, examining and exploring objects.

However, in a future scenario in a case where Art Education Teaching Method might be used in a Zambian context the finding would indicate the element of touch being used by teachers to help learners with visual impairment. For example, learners with visual impairment may be given opportunities to hold, examine and explore the learning and teaching items and materials as well as real objects. Using the element of touch in this manner might help learners to read and write tactile or brailed materials, know smooth, rough, ground or surfaces as well as real objects. Additionally, it is assumed that learners may use their finger-tips which give them feedback and allow them to identify different thousands of textures of objects and materials in order to acquire academic information and skills. In this way learning of the learners with visual impairment could be enhanced with the use Art Education Teaching Method by using the element of touch which can help them acquire the needed academic knowledge and skill and participate actively in classroom's activities and perform better academically by acquiring knowledge accurately. This will be in line with the study of [7] and [11] who stated that, during their research learners with visual impairment used hands, fingers and finger-tips as searching tools to acquire information and skills through holding, examining and exploring objects and teaching materials for feedback or identification of different thousands of textures of the real objects and materials. In addition [6] discovered that the element of touch enhanced the learning of learners with visual impairment by enriching learners with braille literacy skill, fine motor development, communication and understanding of what was being taught to them. For instance,

it was reported by one learner with visual impairment that, the teacher gave me brailled notes before the lesson which I read using the most sensitive part of my index finger tips in which I was trained to distinguish and identify dots, texture, shapes and it enhanced my communication and understanding of the lesson and acquisition of academic skills such as reading skills, vocabulary and communication.

Thus, depending on the above research results the researcher's point of view was that if Art Education Teaching method can be used in Zambia it can be effective and academic performance and classroom participation for learners with visual impairment can be enhanced and the learners can be actively be involved in classroom activities and encourage to do tactile exploration or learning.

The current scenario has indicated that, Art Education Teaching Method was not used because the element of creativity was not used. This was because the learners' ideas and imaginations were not used during lessons. This was evident because the study showed that learners with visual impairment were not helped to be creative with the use of their imaginations and ideas through doing practical activities on their own. For instance, the learners were not seen embossing using Perkins-braille, playing musical instruments, learning on how to use a phone, computers and use of Job Access with Speech (JAWS) a computer screen reader which converts electronic text into speech during lesson observations. In this way learning for learners with visual impairment was not enhanced because learners were unable to use their creative ideas.

Nonetheless, it is envisaged that in the future scenario if Art Education Teaching Method could be used to teach learners with visual

impairment in a Zambian context, the finding could show Art Education Teaching Method having being used because the element of creativity will be used. This is because the learners' ideas and imaginations is hoped to be used during lessons. There might be evidence to show that learners with visual impairment have been helped to be creative with the use of their imaginations and ideas through doing practical activities on their own. For instance, the learners may be observed playing musical instruments, learning on how to use a phone and computers and software synthesizers during lessons and composing songs. In this way learning for learners with visual impairment can be effective and enhanced because learners can be able to use their creative ideas and imaginations. This is in line with the finding of [3] who discovered through the study that, teaching creative ability enhances learning of learners with visual impairment because of activating the learners inborn ideas and imaginations for hand on activities such as reading and writing of braille work, typing, using computers and playing of musical instruments as well as compose stories, songs and orient themselves and move in environment alone or with minimal help from others because of teachers creating a conducive learning environment for the learners with visual impairment.

The researcher's understanding based on the finding on the element of creativity favorably supports that classroom participation and academic performance and would lead to learning being effective and enhanced if it will be implemented in Zambia.

CONCLUSION

The conclusion of the study as with regard to how Art Education Teaching Method enhances classroom participation and academic performance of learners with visual impairment was that learning was not effective; because the findings were that, the method was not known and the element were not used and the findings were not in line with the conceptual framework for this study. For example, the findings revealed that, in terms of academic performance learners had difficulties to acquire academic knowledge, concepts and skills, accuracy and correctness were lacking in their answers. Learners were unable to remember, understand or comprehend concepts, knowledge and skills; there was a problem of communication, braille

literacy, motor development and thinking critically among learners. Then in terms of classroom participation learners did not participate actively in classroom activities, concentrate and comprehend the content being taught. The recommendation was that, teachers need to be trained in the use of Art Education Teaching Method as key persons in order to realize its effectiveness. If Art Education Teaching Method will be used in future to teach learners with visual impairment perhaps it could be effective and enhance learning of learners with visual impairment.

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