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1.0   INTRODUCTION

Students learn in many ways. Some by seeing and hearing; reflecting and acting; reasoning logically and intuitively; memorizing and visualizing and drawing analogies. Teaching methods also vary. Some are instructors and teachers, others demonstrate or discuss; some focus on principles and others on applications; some emphasize memory and others understanding. How much a given student learns in a class is governed in part by that student's native ability and prior preparation but also by the compatibility of his or her learning style and the instructor's teaching style. While individual possess unique ways of learning which are woven inextricably into the fabric of their personalities, they also share many learning similarities. Knowing these similarities enables educators` structure general learning experiences in the curriculum but each student will approach these general learning experiences in a personal and individual way. As practicing teachers, our challenge is to draw classroom implications from all available resources in order to help students become better learners. The search for solutions to teaching and learning is what greatly influenced us into embarking on this research.

This paper reports on the teaching and learning styles at Luster High School and our teaching experiences in Zambia. The purpose of the study was to identify the teaching and learning methodologies used at Luster High School in Norway. The paper shall review the recent thinking and research on the teaching and learning styles and an attempt to show their relationship to classroom practice. The paper will further explore if teachers' teaching styles match with pupils' learning styles. The first chapter of this project report presents the background, statement of the problem, purpose of study and the research questions.

1.2   Background.

Students have different strengths and preferences in the way they take in and process information which is to say, they have different learning styles. Some prefer to work with concrete information such as facts and experimental data while others are more comfortable with abstractions, theories, symbolic information and mathematical problems. Moreover, some like partial presentations of information such as pictures, diagrams, flowcharts, schematics and many more semi-concrete

objects and others get more from verbal explanations. Some like to learn by trying things out and seeing and analysing what happens and others would rather reflect on things they plan to do and understand and as much as they can about them before actually attempting them. When the learning styles of most students in a class and the teaching styles of the teacher are seriously mismatched the students are likely to become uncomfortable, bored and inactive in class, do poorly on tests, get discouraged about the course, the curriculum and themselves, and in some cases change to other curriculum or drop out of school. Having this background, the aim of this current study is to investigate the teaching and learning styles at Luster high school in Norway in comparison with our experience as practicing teachers at Mukonshi, Chadiza and Naboye schools in Zambia. We will further explore whether these teachers' teaching styles match with pupils learning style.

1.2   Statement of a problem

To investigate the teaching and learning styles at Luster high school in comparison with our teaching experiences in Zambia. This will further help us look at the different teaching approaches that are being used in a classroom and see if they can help in the holistic development of a child. The research will be of great use in identifying the similarities and differences in the way knowledge, attitudes and skills are transmitted to the learners between Zambia and Norway. This research will also help us in discovering other approaches that could be of relevance in the teaching of the different subjects under study. Furthermore, the research will investigate whether students learn better and more quickly if the teaching methods used match their preferred learning styles.

1.3   Purpose of the study

The study will investigate the teachers' teaching style and pupils' learning style at Luster high school. Besides, comparison will be made with the experience of the researchers through years of practice at high schools in Zambia. The paper will further explore if teachers' teaching style matches with pupils' learning style.

1.4 Tentative research questions

1. What methods of teaching are considered to be more effective and why?
2. Are there standard teaching methods for all teachers in these four subjects of study?
3. What specific skills are targeted when conducting lessons?
4. How are learners motivated in this type of learning styles?
5. What materials are used in the classroom to suport the teaching?

1.5 Ethical Considerations

In this research our own personal biases and opinions will get in the way of the research. The on-site consideration will be conducted under the assumption that findings will be kept as anonymous as possible. The interviews will also be conducted under the condition of anonymity. The findings or the results of the research will accurately be representing by what our observation will be and what we be told.

2.0 LITERATURE

2.1 LEARNING THEORIES

There are basically two educational methods to knowledge, attitudes and skills acquisition namely; teacher centred learning and student centred learning. The traditional educational method of teacher-centred learning puts the teacher either at the centre or in the forefront in any learning situation. Hence, the teacher is active and the students are essentially passive and receptive.

The student-centred model, on the other hand, puts in the foreground the needs, capacities, interests, and learning styles of the students, makes the teacher into a facilitator of the students' learning, and makes students responsible for their own learning. In connection with these two approaches several learning theories have been developed. As a consequence, this section of the paper shall discuss the undergoing learning theories.

2.1.1 Constructivism

The most important of them is the constructivist theory of learning, first developed by the Swiss epistemologist Jean Piaget. Learners construct their own knowledge, Piaget in Pritchard(2005),argued, via two means: assimilation, through which they incorporate new knowledge into their already existing framework, and, more rarely, accommodation, in which they revise their frameworks in the light of new knowledge. He further said that a student may be able to memorize temporarily discrete and unrelated facts, but will learn something only if one can fit it into ones already existing frameworks of knowledge, or, exceptionally, if one reconfigure ones existing framework into a new shape in order to accommodate the new fact. This activity of reformulating old knowledge and generating new knowledge, constructing knowledge by connecting new ideas and material to old ideas and material, and making meaning for ourselves, is the path to remembering; students remember best what they have come to know for themselves. Similarly, Bruner (1960) in his work continued in the theory of Piaget by asserting the effective ways of education and proper creation of curriculum on the basis of constructivism theory. The main idea of Bruner's theory is that education is an active process in which pupil alone constructs new notions and conceptions in compliance with their existing knowledge and experiences. Teachers in constructivist classrooms engage students actively in the learning process. In these classrooms, students are more likely to discuss with other students their strategies for solving a problem instead of having the right strategy told to them by the teacher. They are more likely to be working cooperatively in small groups as they shape and reformulate their conceptions, rather than practicing skills silently at their seats. They are more likely to be engaged in hands-on activities than listening to lectures. In constructivist classrooms, teachers establish in students a sense of interest and confidence and a need for understanding.

Vygotsky in Pritchard (2005), on the other hand, believed that learning is shaped by social influence and that students' culture help shape their cognition. In other words, social and cultural influences are key components to developing intelligence because children learn through their social interactions and their individual culture.

Moreover, he pointed out that learning does not require a teacher. But learners learn faster and better if they have someone who can see how they can capitalize on the knowledge they already have, who can edge them forward into the next arena where they can expand their knowledge, their zone of proximal development. That was the term of the Russian psychologist Lev Vygotsky (1896–1934), who defined the lower limit of that zone as what the learner can do without help and its upper limit as what the learner can do with help.(Pritchard, 2005,p31)

A third strand in the theory of student-centred learning is the concept of "critical pedagogy," inspired by the work of the Brazilian educationist Paulo Freire, especially in his book Pedagogy of the Oppressed. Here Freire (2005), encouraged students to think critically about their experience of education, identifying and resisting the elements in it that reinforce the power structures of their society. Teachers ought to resolve to teach students nothing they can forget. That is, to teach them how to do things, to enable them to acquire skills rather than knowledge.

2.1.2 Behaviourism

The Behavioural Theory of Learning places great emphasis on the role of the teacher. In education, behaviourism relies on the dominant teacher for the purpose of behaviour modification. The primary role of the teacher is to decide what behaviour the students are to exhibit and reward them when they occur. Desired behaviours need to be clearly stated to the students, and appropriate behaviour must be reinforced as soon as possible. When students are learning new tasks, they will need to be reinforced frequently through every step (Slavin, 2006). Another role of the teacher is to provide immediate feedback when specific behaviour patterns are observed. Feedback is both informative and motivational as it informs the students what was done correctly (Slavin, 2006). Reinforces and feedback work in conjunction with each other stimulating students to learn new information, skills, and concepts. Students are expected to be active respondents in learning. Their role is to respond to stimuli for the purpose of modifying their behaviour. Learning only occurs when students have a chance to behave. (Pritchard, 2005, p19-20)

2.2   LEARNING STYLES

The way individuals teach and learn new information and their preferred teaching and learning styles have been subjected to a great deal of attention in recent years Research has not only provided a variety of ways in which teaching and learning styles are adopted in everyday classroom but also has provided teachers and students with a different view of learning and teaching within the classrooms. Consequently, it is relevant to study this topic due to the fact that understanding the different ways of learning and teaching can help the researchers modify the way they teach so that all students have an equal opportunity to succeed. The undergoing are some of the authors that have done research on this topic:

Firstly and foremost, Dunn and Dunn (1993) studied how people learn and they noticed that some students achieved knowledge only through selected methods. They mentioned many elements that influence learning styles: environment, emotional, sociological and physical elements. Identifying learning styles and adapting lessons can motivate, encourage students to succeed, and eliminate unfair labelling Similarly, Illeris (2009) pointed out that, because of students` biological and cultural backgrounds, personal histories and idiosyncratic experiences, they do not arrive in school as blank slates, nor as individuals who can be aligned undimensionally along a single axis of intellectual accomplishment. They pose different kinds of minds with different strengths, interests and modes of processing information.

Secondly, Keefe (1982) defined learning styles as characteristic cognitive, affective, and psychological behaviours that serve as relatively stable indicators of how learners perceive, interact with or respond to the learning environment. Besides, Dunn and Perrin (1994.2) described learning styles as "the way in which each learner begins to concentrate on, process, and retain new and difficult information. That interaction occurs differently for each individual". Gilbert and Han (1999) and Gilbert (2000) confirmed that learning preferences facilitate the way individuals learn when the learning environment considers the various learning styles of students, thereby impacting the comprehension of materials presented. Felder and

Spurlin (1995:1) describe learning styles as "characteristic strengths and preferences in the ways they take in and process information". Felder et al. (2002:3) indicated that learning styles are often reflected in "different academic strengths, weaknesses, skills, and interests".

According to Funderstanding (2008), some learners can be classified as:

1.   Concrete and abstract perceivers. He stated that concrete perceivers absorb information through direct experience such as, by doing, acting, sensing, and feeling whereas abstract perceivers take in information through analysis, observation, and thinking.

2.   Active and reflective processors. As regards active processors they make sense of an experience by immediately using the new information. In case of reflective processors they make sense of any experience by reflecting on and thinking about it.

On top of that Funderstanding (2008) maintained that learners have a tendency to both perceive and process information differently.

As it is clearly evident that learning styles are not fixed traits which an individual will always display. Learners are able to adopt different styles in different contexts. Nevertheless, for most students one or two styles are preferred above the others. Honey and Mumford in Pritchard (2005) advocated that learners needed to adopt one of four different styles in order for them to complete any given learning tasks satisfactorily. They classified these styles as activists, reflectors, theorists and lastly pragmatists. According to them, activists prefer learning by doing rather than by reading and listening. Students who fall in this category engage in a wide range of experiences and activities and like to work in groups so that ideas are shared and tested. Secondly, reflectors learn best by collecting as much information as possible. Thirdly, theorists prefer to learn by questioning and assessing the possible ways that new information might fit into their existing frameworks of understanding. The pragmatists, the last group according to Honey and Mumford, prefer to analyse any practical implication of any new ideas or theories before making a judgement on their value. Supportably, Ellis (1985) described a learning style as the more or less consistent way in which a person perceives, conceptualizes, organizes and recalls

information. He further emphasized that students' learning styles would be greatly influenced by their genetic make-up, their previous learning experiences, their culture and the society they live in. He also contended some elements that influence teaching styles such as attitudes towards instructional programs among others. Additionally, Coffied et al (2004:12) asserts, "individual learning styles appears to be offered when teachers notice that students vary enormously in the speed and manner with which they pick up new information and ideas and the confidence with which they process and use them." According to Felder et al. (2002:3), "people have different learning styles that are reflected in different academic strengths, weaknesses, skills, and interests. On top of that understanding learning style differences is thus an important step in designing balanced instruction that is effective for all students". Nonetheless, Tripp and Moore (2007), noted that students tended to focus on facts, data and algorithms. Some responded strongly to visual forms of information and many others preferred to learn actively.

Furthermore, Pritchard (2005) stipulated that each individual will adopt an approach to learning with which they are most comfortable and in doing so leave behind the approaches with which they are less confortable .It is helpful for learners if they are aware of their own particular learning preferences in order that they can use an appropriate learning style to suit the particular learning that is being undertaken, and take opportunities to improve their potential for learning when faced with a learning activity that might steer them towards one of their weaker or least one of their less favoured style.

Different individuals perceive and process experiences in different preferred learning styles. Students' unique learning styles are comprised of these preferences.

> *"Identified three basic types of learners; visual, auditory, and kinaesthetic. Visual learners process information through sight (pictures, models, diagrams, demonstration, and other visual aids). Auditory learners use hearing as their main source of information. Their preference is lecture, discussions, and listening to others.*

Kinaesthetic learners prefer hands on approaches to acquire knowledge. This type of learner likes to explore the physical world by touching and movement" (McCarthy, 1981, p. 25)

A learning style refers to the way individuals process information and learn. There is no better or best learning style, all are of value and represent different ways of gaining knowledge. Many ways of categorizing learning styles have been developed. Bandler and Grinder have developed an approach to learning styles based on Neuro-Linguistic Programming. Learning styles and learning modalities are often spoken of interchangeably. Modalities refer to how students use their senses in the learning process. He commonly considered four modalities: visual (seeing), auditory (hearing), kinaesthetic (moving), and tactile (touching). He went on saying that the more senses or modalities one can activate, the more learning will take place.

The great majority of students can learn using all four modalities, but we all have preferences that can be capitalized on, as well as weaker leanings that can be enhanced. In our classrooms, we must provide an environment that is conducive to all four. Traditional classrooms rely heavily on auditory stimulation with lecture and discussions. Now that we have considered the developmental characteristics of young adolescence, we realize that visual, kinaesthetic, and tactile modalities also play strong roles in adolescent lives (Pritchard, 2005).

2.3   TEACHING STYLES

Taking into account of students 'unique learning styles Duquette (1997) gave a detailed explanation that teachers needed to focus much on the process of helping students develop strategies which would help them cope with the real world. Hence, teachers needed to reduce the quantity of materials to be imparted so that students might progress at their own rhythm. In addition

Despite this topic attracting a lot of attention in recent years, it should be stated that the interest in how teachers ought to teach and how students should learn is not

new. The philosophers of ancient Greece developed ideas of how we learn that dominated educational thinking and are even influential today. For example, Keefe (1979) stated that Aristotle's mnemonic techniques of association and visual imaginary are used widely in education and training and the Greeks temperament classification of sanguine, choleric, melancholic laid to the basics for much of the work done in personality types during the past fifty years.

It is imperative that teachers recognize the fact that their students represent a vast array of individual interests and abilities. Coleman (2001) asserts that exemplary educators are driven by a need to see all of their students succeed. Clearly it is not easy in practice to respond to every student's individual motivational needs. However, much progress can be made if teachers use an assortment of different instructional strategies instead of limiting their practices to one or two (Holstein & Walberg, 1995; Theobald, 2006). Not only does varying the presentation methods reduce boredom and invigorate the classroom atmosphere, but multiple strategies also meet the various levels of cognition and learning styles present in students (Linnenbrink & Pintrich, 2002; Theobald, 2006).

2.4 MATCHING TEACHING AND LEARNING STYLES

In a similar manner, Peacock (2001) studied the correlation between learning and teaching styles based on Reid's hypotheses. He found out that a mismatch between teaching and learning styles causes learning failure, frustration and demotivation. He also found that learners favoured kinaesthetic and auditory styles and disfavoured individual and group styles, while teachers favoured kinaesthetic, group and auditory styles

Regarding the matching of teachers teaching styles with students learning styles Zhenhui (2001) reported that an effective matching between teaching and learning styles can only be achieved when teachers are aware of their learners´ needs, capacities, potentials, and learning style preferences. Besides, he indicated that it is necessary to alter the styles to create teacher-student style. In the same way Reid (1995) indicated that learning styles are internally based. All learners have

individual attributes related to the learning processes. Some people may rely on visual presentations, others prefer spoken language; still others may respond better to hands on activities. She also indicated that matching teaching styles with learning styles provides all learners an equal chance in the classroom and builds student self-awareness. She also categorizes learning styles into six types namely; Visual, Auditory, Kinaesthetic, Tactile, Group, and Individual.

Cornett (1983) advocated that students can not only use a style that is uniquely theirs but also make some adjustments based on the nature of the task and the teaching style being used. This suggests that the learning must not be studied in isolation but must consider the condition and the context in which the learning is taking place. As a matter of fact Preston and Robert (2003) also added their voices to this argument by stating that the differences that learners bring into their schools and classrooms must first be understood and then be used to benefit all learners and maximize their opportunity to learn.

Teachers aspire to have all their students learn. This aspiration of reaching all students spans discipline, age levels and a varieties of teaching styles by all who are involved in the initiation of the students.

> *Several other studies suggest that students 'approaches to learning relate to their preferences for teaching characteristics and behaviours for example "students who adopt deep approaches to learning show a clear preference for an environment which is likely to promote understanding while those with a surface approach prefer situations which are thoughts to facilitate rote learning" (Entwistle and Tait, 1990, p.187).*

Furthermore, Wiseman and Hunt (2001), argued that teachers who strive in matching instructional strategies to varying student learning styles have more interested students and an increase in student learning overall.

3.0   RESEARCH DESIGN AND METHODOLOGY.

Descriptive or qualitative research design will be used as it is found to be ideal in enabling an in-depth study of the variables that are to be investigated in order to establish whether teachers' teaching styles match with pupils learning styles. The data will be obtained through interviews, onsite or classroom observation and focus groups especially in classes taking Mathematics, Science, Civic Education and English. The findings of this research can be utilized by the researchers in improving their teaching styles. Researchers decided to use qualitative research methods of questionnaire and on site observation to conduct the study because they wanted to physically experience the different teaching and learning styles that are used inside classrooms at Luster High School. Researchers succeeded in observe in observing teachers of Civic Education, Mathematics, English and Natural Science at Luster school besides the questionnaires which were distributed to five teachers and twenty five students. The observations of teachers were conducted in their respective classrooms. (See attached appendix for the list of interview questions). The selection of teachers as well as students was based on the four subjects the research is conducted on.

3.1   Reliability and validity of the research

The possibility of making mistakes in the research process was very high especially that the researchers are from a different cultural and educational background. Nevertheless, to improve the reliability of this research the researchers made extensive consultation on varies issues from the researchers 'supervisor, Luster programme coordinator and Norwegian Global Knowledge students during the piloting phase. As result of these consultations, the findings of the research have shown that the objectives which were set in the research design were not only achieved but relevant for the study.

4.0   RESULTS

4.1   TEACHERS' RESPONSES

The data analysis in this project paper is based on the questionnaires and observations of some teachers in their respective classes and subject areas such as

Mathematics, Natural Science, English, and Civic Education. The questionnaires were given to both teachers and students.

Basing on the observation and questionnaire which were given to the teachers the following were the findings:

4.1.1 Teaching methods often used

Teachers indicated that exposition and problem solving were styles that have influenced most teachers in their teaching. They stated that short lectures coupled with questions are conducted before engaging the students in the discussion. It was observed that teachers at the school usually begun teaching by giving explanations on the topic of the day before proceeding to other methods.

4.1.2 Preference on teaching method

On the preference of teaching methods a variety of responses were given which ranged from practical work in classrooms and laboratory, learning by doing to the use of films and the internet. Those who preferred using practical work and learn by doing stressed that learning by doing motivates the students as they learn to discover things for themselves. The other group which was for internet use cited not only the interest students' display but lifelong skills that students develops. Observably, teachers preferred using films, radio cassettes and the internet in their teaching.

4.1.3 Factors considered in teaching methods selection

It was revealed that the factors that teachers consider in the selection of teaching methods were centred on the student as individuals and availability of equipment. Nevertheless, they stated that equipment and teaching and learning resources were not a challenge in Norway. Admittedly, it was observed that classrooms were well-equipped with modern equipment and teaching and learning resources.

4.1.4 Reasons for differences in student performance

On the issue of students doing well in certain subjects it was revealed that commitment on the part of the teacher and the student should be taken into serious consideration.

The reasons that came out as a result of students not doing well were students` lack of clear goals for education as some already have part time jobs. Others cited low interest in the students towards certain subjects. Some teacher further stated that failure on the part of the teachers to consider students as individuals may contribute to student not doing well. According to researchers` observation some student were either watching movies on YouTube or chatting with friends on Facebook instead of listening to the teachers.

4.1.4 Activities that enhance students` learning

The teachers revealed that specific activities that students engaged in show that students are engaged into a lot of practical work in classrooms and that browsing on the internet is part of students` everyday school life.

4.1.5 Technological age and skill development

The teachers reported that the purpose of engaging students in various practical activities is to inculcate in them lifelong tools that will enable them fit in and function effectively into the world of work. It was further stated that these skills will be of great help to them as they either further their studies or when they enter the labour market.

4.1.5 Teachers' recommendations on classroom strategies

Finally but certainly not the least, on classroom strategies, teachers at Luster High School recommended that teachers ought to engage students in practical activities and that teachers should always spare time to talk to students so that individual strengths and weaknesses are diagnosed and remedies rendered to them.

4.2 STUDENTS' RESPONSES

Basing on the researchers' observation and the questionnaires which were carried out at Luster High school among the twenty five students the undergoing were the findings:

Learning step by step

The majority of the students revealed that they occasionally learn step by step while others indicated that they rarely depend on step by step for their learning.

Response-first answer

Some students responded that they do not often answer to questions without thinking through during the learning process while a few indicated that they think through at times.

Challenging tasks

A number of students said that they occasionally prefer taking challenging tasks in their day to day learning and others do not.

Alternatives - suggesting

Many students responded that they learn occasionally through other alternatives of responding to questions or learning while some few stated that they frequently do so.

Reliance on the teacher

The results showed that some students stated that they rarely rely on the teacher in their daily learning and other respondents pointed out that they frequently depend on their teachers.

One to one learning with the teacher

A Good number of students stated that they occasionally learn one to one with the teacher while a few others said that they rarely use this type of learning.

Working individually

A number of students gave a response that they occasionally worked as individuals while a few others never used this type of learning.

Role play

Some students said they occasionally used role play in their learning and others rarely used this type of learning in their lessons

Group work

A good number of students responded that they occasionally used group work in their learning while a small group rarely used this method of learning.

Combination of senses

Majority of the students stated that they use a combination of senses in their learning while some few others said they frequently use this type in their learning.

Flexibility and adaptability

A good number of students said that they rarely use flexibility and adaptability in their learning while others never use this type in their learning.

Suitable learning style

A good number of responses were given from students where they said that they preferred dialogue, teacher exposition in their learning while a good number of them also stated that they also used problem solving and others were undecided, they did not know which one to choose.

5.0   DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1   Discussion on observations and responses

The discussion on the analysis will be sequential that is the responses by both the teachers and students will be discussed, analysed and compared to our own experience as teachers in relation to Zambian teaching and learning styles. At Luster High school, as it was observed and revealed by teachers, there were a variety and interesting teaching styles that teachers were using as they carried out their everyday tasks. Nevertheless, it's imperative to point out that a combination of direct instruction, verbal interactions and hands on activities to mention but some dominated the teaching styles at this school.

In the area of our focus that is English, Mathematics, Science and Civic Education, research findings show that the teaching styles that almost all teachers were displaying are models of constructivism. Findings have shown that each of the five teachers showed uniqueness in the way they discussed their topics with their students. Accordingly, it was discovered that the teaching styles focused on teaching in context which is a fundamental principle of constructivism. In contrast to this, teaching styles at Mukonshi, Naboye and Chadiza schools range from teacher exposition, repeated practical work and posing of questions requiring correct responses. Hence, it can be stated that behaviourism characterizes most teaching styles at the three schools in Zambia. Based on our observations at this school, one of the teachers that were observed was constantly engaged students in verbal interaction. Instead of just giving direct instruction to the students, she involved all the students in the discussion. At the beginning of the lesson, students were requested to individually give their reflections in connection with the movie they watched the previous lesson for some few minutes. This was done to allow students settle and be ready for the lesson of that day. She believed that she needed to try as much as she could to make the teaching process not only interesting but also real.

Furthermore, students were permitted to have an open discussion with her whenever they did not agree on a particular theme. This granted the students the opportunity to explore and develop a better understanding of the concepts on their own. One day during her English lesson on the Native Americans, she posed questions to students after watching a movie on the Native Americans that demanded pupils 'own personal views. This discussion continued for at least twenty more minutes, with several students participating and giving their emotional reaction to this movie. Later on students were left as individuals to write their own critique basing on this topic. In support of this, Freire (2005) advocated that students ought to think critically about the learning experiences by actively participating in the learning activities.

In comparison to our experience, students in most of our classrooms attentively take notes and raise their hands to ask questions when they need clarity on any part of the topic under discussion. The teacher would use the chalkboard to demonstrate diagrams, word problems as well as write notes for the students to copy. Moreover, the teachers may pose questions from time to time to students that require correct responses as they explain the problems. Many students would raise their hands and patiently wait to be called on and the teacher would also call on unexpected students to answer as well. Teachers may constantly monitor the room to assist any students who may need help. The teachers have so much information they are required to cover that they "have trouble getting beyond the 'just the facts' content coverage and into higher-level, critical historical thinking, especially because of the limited class time available" (Vogler and Virtue, 2007, p 55).

Secondly,research findings have shown that some teachers engaged students with limited direct instruction but with a combination of verbal discussion between them and their students and that they regular used games and role plays in their teaching styles. For instance one teacher of Mathematics who teaches regular classes and one special education class used interactive style where students in her special education class were constantly interacting with her. Hence, students learning needs were met as they constantly asked for clarification where they lagged behind. Later on both the teacher and the students played mathematical games. McMurray (2007:49) states "meaningful discussion should be promoted in a manner to ensure that learning is occurring, beliefs are substantiated by evidence, and minority opinions are protected,"

It is of importance to state that with our ten years of practicing as teachers in Zambia, it has been observed that most teachers have natural tendencies to teach in a style that suits them. Despite the dramatic transformations throughout our education system over the years, teaching styles in Mathematics, Science, English and civic Education have remained virtually unchanged. Usually teachers use styles that involve chalk and talk for a long period as they teach their classes. The students watch, listens, and copy what the teacher does. Observably, students generally have

difficulties in listening and copying problems from the board at the same time. Thus, when students are assigned some pieces of work to do at their desks some encounter difficulties. Additionally,Students may raise their hands for help as the teacher moves around the room trying to attend to students' questions. However, they cannot get to every student before time to leave. Students leave the classroom without having questions answered and unable to complete the assignment. The teacher is exhausted from moving about the room in her effort to answer all the questions, and one is discouraged that one cannot effectively meet the needs of the students. Teachers using this style have attributed this to among other reasons to lack of equipment, other teaching materials and huge teacher-student ratio. Slavin(2006) contended that the teacher's role is to provide immediate feedbacck when specific behavioral patterns are observed.

Truly, teachers have different teaching styles that they use in their teaching. As evidently indicated by teachers 'responses and researchers' observation, teachers displayed different styles in their teaching. As exemplified by one teacher who did a lot of talking as her style of teaching as she tried to explain the concepts of perimeter, surface area and volume. However, as the lesson progressed she involved students in a variety of activities that ranged from measuring the dimensions of the classroom to counting square units that composed geometrical blocks. This was another style of teaching where students were not involved from the beginning of the lesson but came to participate later in the lesson.

Based on researchers' experience in Zambia especially in the teaching of mathematics, some teachers spend more time on teaching computational skills rather than engaging the students in mathematically rich problem-solving experiences as their preferred teaching styles. They engage the students in the memorization of facts and practical procedures by working skill drill exercises and, sometimes, word problems. However, with the Ministry of Education's policy to shift to constructivist curriculum, a good number of teachers have started migrating to constructivist or contextual style. That is to say, in addition to skill drill and word problems, they assign experiential, hands-on activities and realistic problems through which students gain initial understanding and deepen their understanding of

concepts. Students should be provided with educational experiences that will nurture skills that will enable them to take charge of their learning. (Educating Our Future, 1996, p64)

The other teaching style which teachers at Luster High School extensively used was the internet and radio cassettes in their teaching. For instance three of the five of the teachers we observed liked conducting their lessons by integrating all the basic skills and competences in one lesson in the English classes. Teachers begun their English lessons by allowing students to listen to audio books and then they responded to sign post questions as they progressed in the lessons. Then, they embarked on group discussion as the teacher attends to individual group needs. This really helped the teacher to present their lessons in a more meaningful way, using different media elements. By incorporating the radio and the internet in their teaching styles, it was observed that the students were motivated since they used multiple sensory modalities.

Fleming in Pritchard (2005) stressed that when students gather information from the world around them they use all their senses. That is visual, auditory, reading and kinaesthetic. Secondly by working in a group, the students learnt to work cooperatively and collaboratively, using their group skills and a variety of activities to accomplish the work at hand. Several studies have linked cooperative learning to improved student achievement across grade levels and subject areas (Edvantia, 2007, p 90). Basing the analysis on the questionnaires and observations which were carried out at Luster High School, it was discovered that some learners learn step by step just the same as it is done in Zambia more especially in mathematics and science. The learners explained that they had a limited number of examples as they were not a machine to memorize all the information presented to them. This is based on the principle of effectively gaining knowledge and acquiring skills by starting with simple and basic principles before advancing to more complex information. They also explained that these concepts are directly related to child stages of maturity, brain development and capabilities of processing, retaining and apply new information based on previously acquired information.

Consequently, it was observed that some learners at Luster High School apply what they learn in their daily lives, this type of learning is also used by most learners in Zambia more especially those learners who learn practical subjects like Agriculture science and home economics. Through interaction with the learners, they expressed themselves that applying knowledge in real-life contexts can support deeper initial learning. At the same time, knowledge too closely tied to only one specific situation may not transfer to others unless general principles for its use are also understood. In short, transfer is affected by the context in which the initial learning takes place. They pointed out that if a fact is "learned" by simple memorization in a rote fashion and never applied to an authentic task that provokes understanding, they would be able to recite the fact when specifically asked, but unlikely to be able to call upon and use the information in new situations. The learners also stated that, "active" learning in which they are asked to use ideas by writing and talking about them, apply what they have learned to more complex problems, and construct projects that require the integration of many ideas has been found to promote deeper learning and stronger transfer.

According to responses by learners through questionnaires at Luster High School, it was discovered that influence on initial learning is motivation. Learners explained that motivation affects the amount of time they are willing to put into learning. They said motivation can be seen as a function of how learners see themselves, how they see the task at hand, whether they think they can succeed, and whether teachers help them engage with the material in productive ways. Motivation is enhanced when learners see themselves as being capable to undertake some task given to them. Teachers support this perception by choosing tasks at appropriate levels of difficulty, carefully supporting each learner's learning process, providing multiple entry points into the material, and creating opportunities for students to receive feedback and revise their work.

Motivation was also enhanced when learners valued a task and found it interesting to do or perform, something teachers supported by relating material to learners'

lives and experiences of their own. Allowing choice and assigning tasks that are active, authentic, and challenging can serve to engage students in the work at hand. Interest and value were also enhanced by having an audience for one's work, seeing the usefulness of an activity, and having an opportunity to influence others (Motivation and Learning). Learners further said that due to lack of motivation, they opted doing other things like being on Facebook whilst in class.

However, through the responses by the students at Luster high School, it was discovered that most Learners at Luster High School learn better through group work. They said that group work helps them to become more active in their learning. Learners said that working with peers in a group, they were encouraged to articulate their ideas and question the ideas of others. When it worked, this led to a social process of constructing ideas and developing possible solutions to problems. The active engagement with peers led to "deeper learning" in which they really understood the meaning of theories. Group discussion is one of the most used teaching styles in Zambia, students tend to interact freely with their fellow students and it also promotes self confidence in students.

Despite most learners learning better through discussion, they also learn best through a combination of senses from concrete, semi concrete to abstract. Combination of senses is one of the learning styles which Zambian learners also use. They pointed out that this approach to learning emphasises the fact that individuals perceive and process information in very different ways. The learning styles theory implies that how much individuals learn has more to do with whether the educational experience is geared towards their particular style of learning than whether or not they are smart.

The concept of learning styles is rooted in the classification of psychological types. The learning styles theory is based on research demonstrating that, as the result of heredity, upbringing, and current environmental demands, different individuals have a tendency to both perceive and process information differently. The different ways of doing so are generally classified as concrete and abstract. Concrete

perceivers absorb information through direct experience, by doing, acting, sensing and feeling. Abstract perceivers however, take in information through analysis, observation and thinking. This is alluded to by a theoretical approach of behaviourism according to Slavin (2006).

Consequently, through observation and questionnaires, research showed that most learners at Luster High School don't entirely depend on a teacher for their teaching and learning perspectives but they also depend on other facilities that enhance learning like the internet, text books and also through discussions with their peers. This is usually made possible through the use of computer were learners are made to do their own research after the teacher has introduced the lesson. Mostly they tend to ask their friends when the task is not so clear or get more information from the internet to help them in the learning process. The teacher prepares the learners for the discovery for learning task by providing the necessary knowledge needed to successfully complete the task. The teacher not only provides knowledge required to complete the task but also provide assistance during the task. This preparation of leaners at times required some direct instruction. It allowed learners to generate ideas about a topic along the way and then having them explain their thinking. By working through a combination of learning strategies to discover the nature of a problem, understanding the constraints and options to its resolutions, defining the input variables and understanding the view point involved, learners learnt to negotiate the complex sociological nature of the problem and how competing resolutions may inform decision making.

Research findings showed that some students learn better through problem posing methods at Luster High School this kind of teaching and learning style is also applied in some Zambian schools as it demonstrate understanding of the problem. It was pointed out that this type of learning style helped learners to develop flexible knowledge, effective problem solving skills, self-directed learning, effective collaboration skills and intrinsic motivation. The learners were put in groups, identify what they already knew, what they needed to know and how and where to access new information that may lead to a solution of the problem. The role of the

teacher was just that of a facilitator of learning who provided appropriate task and topic of the day and support of the process, modelling of the process, and monitoring the learning. The teachers provided confidence to take on the problem, encourage the learners, while also stretching their understanding; this is the constructivist way of learning.

Nevertheless, learners were not provided with an exact answer but rather the materials in order to find the answers themselves. The learning took place in problem solving situations where the learners drew on their experience and prior knowledge which is a method of instruction through which they interact with their environment by exploring and manipulating objects, wrestling with questions and controversies or performing experiments.

The internet helps learners investigate some challenging tasks, whereby this is not the case with some Zambian schools due to the fact that some schools in Zambia do not have access to internet. However learners sometimes depend on textbooks and their fellow learners for other information.

On the other hand, learners can sometimes adapt to other learning styles thereby engaging in dialogue , through the observation which was done at Luster High School and also through the questionnaires, it was indeed observed that learners learn best through dialogue with their teachers as well as their fellow students, it was also observed that problem posing method was widely used in that learners were being given tasks to research on their own and also learners made classroom presentation of their researches. Through the use of problem posing method, learners referred to themselves as active and reflective processors, active processors make sense of an experience by immediately using the new information. Reflective processors make sense and experience by reflecting on and thinking about it. This is alluded to by Pritchard (2005) through the theory of constructivism.

However, research findings showed that a well-planned discussion can encourage and stimulate student learning and add variety to a class. Dialogue helped them to

develop self-confidence as it exploits the power of talk to shape learners' thinking and secure their engagement, learning and understanding and it also enhances boldness in learners. It was also discovered that through dialogue, learners become good debaters and they also tend to become independent thinkers through problem posing. This type of approach is widely used in English lessons. This method of inquiry based on instruction and is considered a constructivist approach. Usually the pedagogical aims at threefold: it promotes "deep" learning, promotes meta-cognitive skills develop problem solving skills, creativity and it also promotes student engagement. The learners design their experiments in the domain themselves they are actually constructing their knowledge. This makes them understand the domain at higher level than when the necessary information is just presented by a teacher or an expository learning environment. This is according to Freire (2000).

It was noticed that the approach of problem posing teaches the learners to acquire information in a way that make that information readily available in problem posing (learn by doing) as learners discover facts and relationships for themselves .As a result they are able to remember concepts and knowledge discovered on their own. It was also observed that problem posing was one of the learning styles that was widely used at Luster High school in almost all subject areas. On the other hand, problem posing is not very much used in a Zambian context due to the fact that there are huge numbers of learners in one class which makes it almost impossible to use problem posing as a method of teaching but the method is used in some schools where there are limited numbers of learners in a class.

In the classroom, if students learn how to go about finding information, rather than just learn information we set before them, it will be a transferable skill they can apply through all their life. If we have a class structure where students mentor other students and show them how to become critical, saying as well as doing, they will be learning more effectively. If they practice writing critique to each other's work, they will have a skill they will use over and over again. Information can be passed on to the learner by someone else; but understanding is something that a learner has to achieve for oneself.

5.2   Conclusion

It is of utmost importance for teachers to consider a revolutionary classroom where understanding, rather than knowledge, is the goal. Despite every student being different, in a typical classroom they are treated as equal and are all the same. If students spent listening to the teacher's voice, some students will be bored because the pace will be too slow for them and others will become anxious because they are being left behind. However, if the lecture or exposition is the principal mode of delivery of the course of study, those who learn through the teacher centred methods will do well, and those who learn when they are actively involved or child centred methods will not do well, even though the two kinds of student might be intellectually equal.

To know and use learning style pedagogy supports an environment that supports lifelong learning. When people are involved in the process to discover how they learn, they can better build on their strengths and preferences. Therefore, they can overcome barriers to learning and achievement, improve behaviour and attitudes to learning and develop motivation for lifelong learning. For teachers knowledge of learning styles give them powerful tools to reach all children in their classrooms. It is only when teachers feel that the pedagogical approach has different consequences for different students, that it can lead to a change in outlook on how students acquire knowledge, attitudes, values and skills. This in turn will result in the improvement in students learning and so do their self-esteem.

It can consequently, be concluded that the students in classes are unique in their personalities, culture experience, upbringing and values. Nevertheless, students learn better through many ways like hearing, reflecting and acting, reasoning logically and intuitively, memorizing and visualizing and also by building mathematical models. Different students prefer different learning environments, learning styles and they all exhibit unique strength, talents and weaknesses. If we are to be successful in leading our students through the task of learning we must provide a variety of learning approaches so that these differences can be recognized and provided for in every classroom.

It was observed that teaching and learning styles at Luster High School are basically based on student centred while a teacher only acts to facilitate the teaching and learning process. This is not the case with the Zambian schools due to the fact that there are large numbers of students in classes hence resulting into the use of lecture method and also discussion.

The use of internet and also computers at Luster High School has resulted in the student centred teaching approach which can also be referred to as problem posing or dialogue which is usually taken to be the most appropriate approach in that it instils the sense of discovery and independent thinking in the learners.

5.3   Recommendation

In order to do well in life in general, it is important to broaden the teaching and learning styles especially in developing countries like Zambia.

- The teacher not only needs to know who is in the classroom but also should be devising a variety of learning projects that enable all students to benefit.
- Students should of course be encouraged to expand their repertory of learning styles and not remain content with the styles they instinctively prefer.
- There should be a possibility of ensuring that students become less dependent on authority figures and build lifelong learning styles.
- The teaching and learning styles in higher education need to be reoriented to developing the skills of autonomous where students can take responsibility for their own learning and become independent learners.
- Teachers need to redefine their roles away from that of transmitters and controllers of instruction to that of facilitators
- There should be variation in the activities that teachers use in their lessons as a sure to cater for students with different learning styles.

- The teacher-student ratio should be improved so that all student learning needs could be addressed.

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APPENDICES

<u>TEACHERS QUESTIONNAIRE</u>

1) Which teaching methods do you often make use in your subject area?

   ……………………………………………………………………………………

2) Which method of teaching do you prefer? Give reasons for your preference of this method…………………………………………………………………………………

3) What other factors do you consider when choosing the method to use in your teaching?

   …..

4) Give reasons why some students do well in school in your subject area .Exclude effort and ability as factors

   ……………………………………………………………………………………

5) Give reasons why some students do not perform well in your subject area

   ……………………………………………………………………………………

6) Identify at least two specific activities which help students learning in your subject area………………………………………………………………………………………

7) In the selection of your teaching methods ,what skills do you want to develop in the learners?..

8) Knowing that we are living in the technological age, what specific skills are you inculcating in the learners?

   ……………………………………………………………………………………

9) Give two classroom strategies that you would recommend as a result of your experience as a teacher.

   ……………………………………………………………………………………

Questionaires for Students

Read the statement below and answer the questions that follow.

Assess the frequency of your classroom behaviour learning by circling the number which best describes it.

Below are the options that you can use to describe your learning behaviour.

1. Never   2. Rarely   3. Occasionally   4. Frequently

(a) I learn step by step

    1.   2.   3.   4

(b) I tend to give the first answer that comes to my mind.

    1.   2.   3.   4

(c) When I face challenging tasks, I do not give up.

    1.   2.   3.   4

(d) I propose alternative ways to solve a problem.

    1.   2.   3.   4.

(e) I rely upon the teacher to make things easy.

    1.   2.   3.   4.

(f) I learn best in one to one situation with the teacher.

    1.   2.   3.   4.

(g) I learn best by working alone at my own rate.

    1.   2.   3.   4.

(h) I learn best by role-playing.

    1.   2.   3.   4.

(i) I learn best by group work.

    1.   2.   3.   4.

(j) I learn best by using a combination of senses (seeing, listening touching etc.)

    1.   2.   3.   4.

(l) Flexible and adapts easily to change.

    1.   2.   3.   4.

(l) Which of the learning styles give you the best results?

(A) Problem posing method (b) dialogue (c) teacher exposition (d) constructivism