**BINDURA UNIVERSITY OF SCIENCE EDUCATION**

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**FACULTY OF SCIENCE EDUCATION**

**DEPARTMENT OF SCIENCE AND MATHEMATICS EDUCATION**

**INVESTIGATION ON THE EFFECTIVE IMPLEMENTATION OF CONTINUOUS ASSESSMENT IN TEACHING AND LEARNING OF COMBINED SCIENCE. A CASE OF ONE SCHOOL, HURUNGWE ZIMBABWE.**

**BY**

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**A PROJECT SUBMITTED TO THE DEPARTMENT OF SCIENCE AND MATHEMATICS EDUCATION, BINDURA UNIVERSITY OF SCIENCE EDUCATION, IN PARTIAL FULLFILMENT OF THE REQUIREMENTS OF THE BACHELOR OF SCIENCE EDUCATION HONOURS DEGREE (BIOLOGY)**

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## **DECLARATION OF AUTHOURSHIP**

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## 

## **DEDICATION**

I dedicate my project work to my family, special mention to my mother and to everyone who gave support in the process of this educational research.

**Abstract**

The study sought to assess on how one secondary school in Masanga cluster in Hurungwe district implement continuous assessment learning activities (CALA), to the teaching and learning of combined science at form three level. This study was motivated by the outcry of teachers who were finding CALA activities difficult to execute. Meanwhile, learners reported that teachers were also finding it difficult to guide students, changing goal-post each time students sought for assistance. One of the objective was to assess the teachers’ knowledge of CALA, because with a clear cut understanding of the meaning they would be in a position to assist their learners. The other objective was to identify strategies teachers use to carry out continuous assessment. Finally the researcher also wanted to find out the support structures that were in the schools to assist teachers. This study was guided by a post-positivism paradigm, which stipulates that knowledge is not objective but comes from a variety of sources, as opposed to quantitative research paradigm. A qualitative research approach was used by the researcher, which sought to elicit quality data from a variety of sources. The study used a case study research design, where data was collected from one secondary school. The researcher used interview schedules, documents (policies, statutory instruments and circulars) and focus group discussion as tools to gather the data for the study. The findings of the study showed that there was poor planning by the Ministry of primary and secondary education in the implementation of CALA, as teachers stated that as implementers of the curriculum they were not informed before the implementation process. Furthermore, teachers reported of sporadic workshops that were done at district and circuit level, which also were not very informative. Furthermore, teachers stated that CALA was implemented through the trial and error methods and in most cases everyone was confused. The researcher recommended the involvement of teachers, more workshops and in service training for all stakeholder so that they could make informed and critical decisions.

**Key words**

*CALA, Effective, Implementation*

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# Chapter one

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# 1.1 Introduction

The study focuses on implementation of CALA, in one secondary school in Hurungwe District, Mashonaland West in Zimbabwe.Continuous assessment of learning activities (CALA) is a new educational assessment criterion in Zimbabwe’s Education system. It is basically driven from the concept that, aim of every education system is to assist learners acquire a framework of knowledge and concepts that should lead to the total development of the individual’s education. Through continuous assessment procedures the teachers are able to identify learning gaps, as well as establishing the extent to which educational goals are attained (Wade, 2016). In the learning of sciences, it is critical to establish the means through which teachers in particular schools contact continuous assessment processes, as it is at its infancy stage in Zimbabwe, its establishment has seen lots of questions than answers in various media platforms. Nonetheless, the researcher wishes to investigate answers to raised questions. Specifically this chapter focuses on the background of the study, statement of the problem, research questions, and significance of the study, limitations, delimitation, assumptions and definition of key terms.

## 1.2Background of the study

CALA is a philosophy on assessment in Zimbabwe of learning in the Zimbabwean school curriculum. The philosophy requires learners to perform and demonstrate their knowledge, understanding and proficiency, which is scientifically demonstrated by a way of the desired skills and competencies as spelt out in the subject national syllabus. Continuous aassessment of learners is therefore one way of ensuring that educational goals are attained and students possess the desired competencies. One of the significant element in the process of teaching and learning. Alvin (2016) indicates that, CALA mainly focuses on the teacher assessing the progress of learners in terms of competencies, skills and knowledge that they should acquire in the progress of learning at each level. The expectations are that the teacher provides feedback to the students and to himself for the improvement of the teaching processes. This is however, more theoretical in schools that have limited resources, high teacher turn over and large class sizes (Linn & Gronlund, 2001). What and how schools carry out their assessment to ensure there are more regular checks and balances in combined science teaching and learning, classes can provide answers regarding the implementation of CALA. Thus, the study will focus on how teachers effectively implement the assessing methods to their students.

CALA focuses on the activities that enhance the significance of the feedback procedure to confirm an optimism learning processes. Bennet (2011), defines CALA as the assessment of pupils progress throughout course of study rather than exclusively by examination at the end of it (summative). Bryman and Bell (2007), also define CALA as frequently conducted assessment activities for the purpose of understanding the improvements of the learners while summative assessment as a summary of student’s performance. It is mainly conducted by teachers. Therefore, it is vital to understand the mission and value of CALA so as to come up with goals as well as the objectives. Thus, the study aims on strategies and means through which effective implementation of CALA in combined science are assessed in one secondary school in Hurungwe district.

The interpretation of continuous assessment is very critical to the understanding of all the process that should be involved in the teaching and learning of a particular subject. Appreciation of the axiological value of the subject taught, the metaphysical nature of the subject and most vital the epistemological nature of the subject envisaged is paramount to continuous assessment of a particular subject. The present philosophy of continuous assessment is embedded in transformative education which is characterized by creating innovate minds which is the knowing how and not limited to what. Hence, the assessment carried out in school must be meaningful and carefully designed to achieve its purpose (Linn and Ground (2011). The goal of the present educational philosophy is to produce a competent someone who has the means to survive and also to push the society and the nation ahead regardless of the challenges. Hence, as rightfully given by (Dewey, Freire and Mizerow) the fore runners of continuous assessment, learners need to be equipped with skills to solve problems, make decisions and to critically think.

Dewey (1998) pointed out that the school is the living environment of the community, so school and society cannot be separated. Thus the effective implementation of CALA in schools brings about a living environment to both the teachers and learners, where teachers always seek to find out the missing competency and skills gap, so that he/she improves the needs of society. Meanwhile the students are also continuously made cognisant of the needs of society to be aware that the skills and competencies schools equip them should be used to improve society. Progressivism believed that education should focus on the whole child, rather than on the content or the teacher (Alvin 2016). The teacher should focus on molding the child, so is considered a facilitator who assist learners on what they already know. Mezrow as an educational philosopher stresses that students should test ideas by being actively involved in the learning process and utilisation of the learner centered teaching and learning methods (experimentation) thus, new national policy in education of Zimbabwe introduced CALA, so as to produce a competence student who is innovative.

The teaching and learning process requires continuous follow up to ensure there is educational progress of learners’ needs frequent. The observation by Alausa (2004) that teachers should use the various assessment of dimensions of learning activities through utilisation of the learners in assessed by various methods, such as field trips, experiments and problem solving is critical. The understanding is that a variety of assessment strategies would offer the quality of education and provide the path through which education should move. The practice of CALA continues at Primary and Secondary schools of Zimbabwe as it constitutes 30% of the final mark, policy makers and educational administrators view assessment scores as a measure of educational quality. However, as observations show, the quality of education is related to how well facilitators implement a specified philosophy. Thus, this study would investigate what the school, the responsible authority ensure that the CALA philosophy is fulfilled in an appropriate manner and design strategies that enhance the implementation of CALA.

CALA is a learning strategy evaluation that assess learner’s development or performance during the course of program. This is done to avoid the evaluation of summative tests at the conclusion of the academic term. It is a technique for evaluating final grades in cognitive, affective and mastering of content through the performance over a particular time. According to Marley (2012), continuous assessment learner activities CALA as a means of determining what the child received during active learning in terms of understanding, problem solving, reasoning characterization and industry. Aboni et al. (2005) defines continuous assessment as a way of evaluating a learner’s competence in acquiring knowledge, cognition, understanding and character learning activities utilizing various instruments such as examination, tasks, projects, observations, and interviews even quizzes. The results of continuous activities (CALA) are used at conclusion of each course and the results are put into consideration once student leave school. Buchanan and Bryman (2009), explains that in continuous assessment, the emphasis is on assigning grades to any piece of work depending on performance of every student. CALA as the type of assessment considers many ways of evaluation with the goal of guiding and improving students learning capacity and their accomplishment.

According to Saunders et al. (2007), continuous assessment is a key to determine students’ learning achievement and identify their learning difficulties for special supports, to improve teacher’s pedagogical practices, and to improve quality of education in general. In line to this, Zimbabwe School Examination Council (ZIMSEC, 2021) pinpointed in New Education and Training Policy of Zimbabwe that continuous assessment in academic and practical subjects will be conducted to ascertain the formation of all round profile of students at all levels (Alausa, 2004). Moreover, Ministry of Education pointed out that an essential element of the move to personalized learning is the use of assessment for learning (formative assessment) as well as assessment of learning (summative assessment). Teachers are encouraged to use a range of assessment techniques that are appropriate to the learning activities of the students in order to fulfill the primary aim of assessment which is to support learning

According to Kapambwe (2010), the objectives of the CALA are twofold: firstly, to promote the use of formative assessment so as to improve the quality of learning and teaching and secondly, to establish a regular system of managing implementation of the program me or curricula. Similarly, Areca (2014) has documented that there is considerable evidence that continuous assessment is a powerful instrument for enhancing the attainment of learning outcomes to ensure quality education and academic excellence in the education institutions. In the broadest sense, as learning is the main reason schools exist, every school needs to systematize the way learning is continuously assessed within the school. While discussing about continuous assessment, it is scholarly recommended to view it in light of assessment of learning, assessment as learning and assessment for learning (Walliman, 2011). This entails that student learning should be continuously assessed and timely feedback should be given so that it is possible to capitalize on the outcome of the assessment and take possible action. Thus, does schools management monitor the processes of continuous assessment learning activities in combined science?

Despite acknowledgement of the importance of CALA by abundant educators, its practice is evidenced with tremendous pitfalls. In connection to this, Diamond (1998) described that the fundamental problem in assessment practices to be the mismatch between the learning targets established and the methods and criteria teachers use to assess their students. Moreover, Fisseha (2010) found that the current state of assessment, particularly formative assessment (also named as assessment for learning) is not in line with best practices to enhance student learning and realize curriculum intentions. Some other studies also pinpointed the following findings which is teachers practice continuous assessment as continuous tests (Abiy, 2013), practice of CALA as activities to assess students’ written work is not sufficient enough to improve the learning and teaching of a writing course. Thus brings about finding out what strategies are there to implement CALA in combined science.

The study is explained by transformative point of view that, the reflexive aspect of learning as a process of that simultaneously informs and is informed by the participants. Dewey, Mezirow and Freire sustain the argument that education has the capacity to transform the learner and by extension the society in which the learner lives by noting that ‘transformative learning has both individual and social dimension and implication. It demands that strategies on assessment should be effectively implemented at each level (Aina, 2014).

In addition, constructivism also helps understand present research. Constructivism of 1970s and 1980s brought a rise to the notion that students are not passive consumer of information, but actively constructs it environmental stimuli and the restructuring of their psychological mechanism. Learners are thus considered as sense makers not merely recording but also evaluating information. This perspective on learning resulted in moving from summative to continuous assessment. Thus, the research will look on how do teachers assess students in combined science as per given policy? And what strategies are there to implement CALA.

## 1.3 Statement of the problem

New evaluation technique is designed in such a way that, it systematically covers all of the student’s performance that is: in class tests, home assignments, projects and other school activities, throughout the course (Bolyard 2003). CALA is a new evaluation of assessment which continuously follow up the progress of learners and should be assessed by facilitators using various methods. Thus the main concern of this study is to examine the practice of CALA and to determine how teachers implement it as well as the position of school managers to monitor the effective implementation of CALA in the teaching and learning of combined science at Kajekache secondary Hurungwe district. This new evaluation technique is thus designed to systematically cover all of the student’s performances in class test, home assignment, project, interviews and other school activities, weekly, monthly or periodically throughout their entire duration of the student’s course.

## 1.4 Research Aims

The research aims at assessing the effective implementation of continuous assessment learning activities of form three combined science at Kajekache high school, the researcher expects to assess on how teachers assess learners using the educational policy.

## 1.5 Research Objectives

The study was guided by the following research objectives:

To identify ways teachers assess students continuously in combined science, Kajekache secondary school in Hurungwe

To identify strategies used by teachers in the effective implementation of CALA in combined science

To identify how school managers monitor the effective implementation of continuous assessment learning activities at the school.

## 1.6 Research questions

The study aims to have answers to the following questions:

**1.6.1** How do teachers assess students continuously in combined science at Kajekache secondary school as per given policy?

**1.6.2.** What strategies are there to implement continuous assessment learner activities in combined science at Kajekache secondary school?

**1.6.3** How do school managers monitor the processes of continuous assessment learning activities in combined science?

## 1.7 Research Assumptions

The assumption of this study were:

* CALA is an animal which teachers and learners are doing though it have some drawbacks which include a burden to a teacher as well as to the learner
* Lack of understanding on how to execute CALA by teachers and how to assist learners are the challenges of CALA
* School monitors are doing their best to help teachers on how to do CALA though they lack an understanding at some points

## 1.8 Significance of the study

This new method of assessment in educational system is totally different from traditional system. Hence, the studies are conducted in the field of school. As a result the concern regarding its effective application is in the consultant with the facilitators. To carb for these issues there is a need of conducting more studies on the matter, so as to gain a deeper understanding of the effectiveness of CALA. Thus the research will help teachers even myself to understand if the implementation of CALA is effective as expected. It will further provide significant information to the heads of schools in identifying their lacking areas and design School Based Professional Developed (SBPD) programs accordingly. Moreover the important decision are always made at the policy level. Thus, this research can help stakeholder to take reformative actions and provide new insight for further research in the field. Therefore, the research would examine the effective implementation of CALA in form 3 combined science teachers and learners in Hurungwe district.

## 1.9 Limitations

Due to the small/ unique sample available for the study, the failure of sample respondents to answer with lack of understanding of the importance of research. Results might not accurately reflect the opinions of all members of the induced population and also the financial constraints which the researcher can come across results in the use of one school in the research as she cannot travel to other schools. Due to these limitations the results of this study would not be generalized to other areas.

## 1.10 Delimitations

Due to the number, of potential participants in the study population, population involved in current study focuses only on members located within Kajekache secondary school, such as teachers and students who are doing Form Three Combined Science in Hurungwe District

## 1.11Definition of key terms

The terms are defined as they are used in the research that is going to assist whoever is going to read this thesis as it is going to assist a lot of people. The following are the terms which are commonly used in this research: effective, implementation and CALA

Effective is defined by (Leeman et al. 2017) as to enable an innovation to be planned and delivered over the different stages of implementation. These include assessing the context, engaging with key stakeholders, and monitoring implementation and making improvements. Gamble and Gamble (2010) defines effective as that reflective activity which enables the learner to draw upon previous experience to understand and evaluate the present, so as to shape oneself, future action and formulate new knowledge. Therefore, one can define effective as a way of understanding the new thing in order to achieve or fulfill intended purpose.

According to (Akinpelu, 2005) implementation is the carrying out, execution or practice of a plan and method, or an action that must follow any primary thinking in order for something to actually happen. Hudson (2019), also defines implementation as a way of ensuring that the information system is operational and used in order to meet quality standard. Thus, implementation is defined as all methods used in a system (school) to achieve quality standards.

CALA which stands for continuous assessment learner activities, and is defined as activities that enhance the significance of the feedback procedure to confirm an optimized learning process (Smith 2016). Bennet (2011) also defines CALA as the assessment of pupil’s progress throughout the course of study rather than exclusively, by the examination at the end of it, this can provide knowledge skills, attitude and proficiency. CALA therefore means all the learning activities such as assignments, projects and other educational activities during a given period of term, year and during entire period of educational level.

## 1.12summary

This chapter focuses on the effective implementation of CALA in teaching and learning. The main focus of this research is to assess if teachers have an understanding on how to assess CALA in combined science (one school in Hurungwe)

## 

## **Chapter two**

## Review of related literature

## 2.0 Introduction

There is an increasing international interest in CALA approaches to assess student’s achievement. Specifically the chapter shall focus on two specific aspects which is theoretical framework and empirical evidence. Theoretical framework present theory which have been put forward with regards to continuous assessment. The empirical evidence shows results obtained by different scholars in investigation on effective implementation of CALA of one school in teaching and learning of Combined Science in Hurungwe district.

## 2.1 Theoretical framework

John Dewey as cited in (Akinpelu, 2005) defined education as the continuous reconstruction or reorganization of experience which adds to the meaning of experience and which increases the ability to direct the course of subsequent experience. (Singh, 2007) Since knowledge comes through the processing of experience by intelligence, using the problem solving method, the aim of education is therefore the development of learners’ ability to deal with future problems. Dewey states that “Devoted his life to the project of overcoming the dualism that afflict the field of education…………”the dualism of thought and action, research and practice science and common sense, the academy and everyday life. Dewey criticized traditional modes of education, he mentioned that it was too focused on the issues of the past and lacking in process skills which can help one in life skills. Dewey believed an educational philosophy, or plan was required when deciding content, method of instruction and discipline. Thus the effective implementation of CALA in teaching and learning of combined science can determine the worth of an educational experience is to evaluate its effect on student’s current understanding and reflect on how teacher can influence their future action.

## 2.3 Empirical evidence

## 2.3 .1 what is continuous assessment?

(Onuka, 2006) Defines continuous assessment learning activities are concerned with measuring performance against the set standards or benchmarks as defined by the curriculum (MOPSE2019). Apart from focusing on mastery of content, knowledge and its applications to practice, it recognize the acquisition of skills that will make learners productive, employable and have the capacity to create employment. CALA presents a situation that calls for learners to apply their learning in context. Miller (2005) also indicates that CALA as a general term that includes the full range of procedure used to gain information about students’ learning ( observation, rating of performance, or projects, paper and test as well as experiments) and the information of value of judgement concerning learning progress.

CALA is an ongoing system of monitoring and assessing learners progress with the aim of helping them improve their learning. It is done in the school environment through daily teaching, projects, quizzes, tests, interviews and observations. This is daily monitoring of learners progress and collecting information on learners ability to demonstrate the required competence (Bolyard, 2003). CALA yields a tangible product and/ or performance that serve as evidence of learning. A continuous assessment learning activity presents situation that calls for learners to apply their learning context (Linn & Gronlund, 2001).

Various studies have pointed out that continuous assessment strategies being used by the teacher are likely to contribute to student learning in schools. According to (Onuka, 2006), teachers need to use a variety of instruments to effectively measure their students, traits and that the outcome of the assessment are used to assist the students to improve upon their learning skills. (Deonarian, 2004) Have asserted that that continuous assessment promotes dialogue among teachers and student to generate knowledge in order to improve the teaching and learning process. He asserts that continuous assessment tells teachers if they need to reteach something which students need to be retaught and what the students need in order to improve their learning. Thus the effective implementation of CALA in teaching and learning of combined science whether can bring about evaluation as asserted by researchers can be assessed through this research.

The revisiting the Zimbabwe new curriculum of Chinangure (2017), indicates that the involvement of teachers in the implementation of curriculum can result in positive attitude of them in the effective implementation and therefore yield good results. It is clear that this is the same in the first implementation of CALA as the teachers are the ones who makes the ball roll well. According to his results he recommend teachers are trained, books are available for effective teaching. This therefore is the aim of the study to find out if the required materials for effective implementation of CALA is provided at one school under study.

## 2.3.2 How teachers assess students continuously?

According to Ministry of Basic Education and Culture (1999) of Namibia, continuous assessment consists all the processes and tools teachers use to make decisions about the students’ progress. These include observations of students, seat work, their voluntarily responses and answers to questions as well as a results on teacher made tests. (culture, 1999). (Deonarian, 2004)Indicates that teacher’s assessment involves decisions such as assigning grades, reteaching a topic and provide supplementary instructions. When all these are combined it make up teachers assessment system. Though CALA does not mean testing often to find out whether they are truly learning or not. However, the effective implementation of CALA is affected by teachers having negative attitude towards effective implementation, as CALA overload workload and the lower salaries paid to teachers make them feel demotivated to implement effectively CALA in teaching and learning of combined science.

As cited in USAID (2009)……. “Feedback is information, teachers give to learners to let them know about their performance or achievement”. Feedback is not a simple number or symbol rather good feedback is descriptive of the student’s work, is specific the work and outcomes as well as help for the students on how to improve. It describes the student’s strength, improvements needed and way of improving (Linn, R.L. & Gronlund, N.E., 2001).

## 2..2, 1 Drawbacks of CALA implementation

In Zambia, (Kapambwe, 2010) indicates that, factors challenging the implementation of CALA are : large class sizes, shortage funds to fulfill necessary resources, teachers still felt that the CALA took a lot of time for teachers and lack of adequate training of teachers. As a result teachers did not believe that they would finish the syllabus with CALA, so negative attitude in the effectively in implementation of CALA programed, this is supported by (Vurayai, 2021) who says motivation for all members work hard as they will benefit from shared profits. Lack of motivation for teachers resulted in them developing negative attitude on the effective implementation of CALA in combined science. Thus, teachers assess as per departmental policy and therefore lack of motivation need to be assessed in one school in Hurungwe district.

Continuous assessment learning activities is a strategy evaluation that assess learner’s development or performance during the course. This is done to avoid relying solely on test at the conclusion of academic term (Zimbabwe, 2020). It is a technique for evaluating student’s final grades in cognitive, affective and cognitive areas of performance over a particular time. According to (Marley, 2010), the federal government handbook of continuous assessment proposed CALA as a means of determining what the child received during active learning in terms of understanding, problem solving and reasoning, characterization and industry. However, its effective implementation was echoed by teachers as too much workload on them. Balancing written work as per routine requirement is a real challenge as there is a need to assist each and every learner and some classes are large. Thus the research on the effective implementation of CALA in combined science at one school in Hurungwe is it the same with what other scholars had find out such as large classes and workload.

According to (Alausa, 2004) the essence of CALA is the blending of theory and practical experience. The efficacy of CALA is robust engagement of teachers as the implementers, since time for administering CALA and lack of materials make it difficult for teachers and learners to CALA. As asserted by (Vurayai, 2021) teachers are fully occupied with teaching business so they do not have time for administering CALA, learners are overloaded with school work, lessons and assignments as required by departmental policies for all subjects. CALA as a means of receiving the information from the school authority about any student. It considers students termly, or periodic achievement in assignments, test, projects and other education piece of work completed by the student. This type of assessment as asserted by (Kapambwe, 2010) considers numerous ways of modes of evaluation used, with the goal of guiding and improving students learning capacity as well as their various accomplishments. Therefore, requires motivation of the teacher to effectively implement , thus this research will assess if teachers are motivated to effectively implement CALA in combined science in one of school in Hurungwe district.

## 2.3. 3 strategies to effectively implement CALA

(Kadziya, 2020) indicates that broad engagement of teachers as they are implementers is crucial as they are critical to the development of CALA, assessment of instruments, contextualization of CALA, facilitate learning and CALA execution administer CALA assessment instruments, monitor, supervise and support learners during CALA activities and mark CALA. The teachers provide comprehensive standardized assessment tools to guarantee success of CALA. There was no engagement of teachers before the coming of the programed. The ministry announce through media that with immediate effect CALA would be implemented starting with 2021 candidates. Thus, it comes as a blow to teachers as they lack relevant knowledge for doing CALA coursework activities, the effective implementation of CALA strategies are going to be assessed in combined science on one school in Hurungwe.

The ministry of education also commanded provinces around the country to arrange rushed workshops for all exam class teachers in 2021classes without taking into consideration various factors which affect the implementation of the initiative. There was no budget for such workshops and schools were expected to fund teachers and school heads to attend such workshop (Zimbabwe, 2020). Therefore it is against this background that this study seeks to assess the effective implementation of CALA in combined science, in Hurungwe district of a school.

Teachers use assessment information to evaluate their own teaching, as well as to assess if learners are grasping content (Linn and Gronlund, 2001). The most important ideas about continuous assessment can be organized within a framework that focuses on students learning the important outcomes set down in the curriculum. (Kadziya, 2020)Indicates that the learning targets described in the curriculum become the criterion against which students are assessed. Thus the framework is referred to as curriculum based on the major idea that includes all continuous assessed aligned with and organized around learning targets specified in the official curriculum. Sluter, (2006) indicates that the curriculum increases the accountability of teachers for teaching the curriculum and comparability of continuous assessment results from one teacher to another. For example, if the curriculum target that students must learn how to measure using balance scale or graduated cylinder, the teacher’s methods of assessment must require students to actually measure objects and quantities using these instruments. Thus from this background the research will assess strategies to effectively implement CALA in teaching and learning combined science.

## 2.3.4 School manager in monitoring of CALA at school level

When continuous assessment is used as part of the national certification process, it is essential that complete and accurate curriculum based records be kept and there are some of important people in monitoring the effective implementation these include students, teachers and heads of schools.

## 2.3 4. 1. School management

(Alausa, 2004)States that, despite the generally appreciated advantages of new assessment method, its implementation in schools have challenges which demand education ministry realign and redefine the roles of school manager. He identified challenges associated with teachers lack skills in CALA construction and administration, attitudes towards CALA approach and record keeping for successful implementation of CALA. (Yusuf, 2013) states that school managers are expected to constantly observe teachers to see if they are doing their assessments, this means that heads of departments supervise their subordinates to ensure that effective implementation of CALA is progressive as required by the 5.0 education. Thus the study shall focus if monitoring of CALA is done at departmental level of sciences, if not what are the challenges in not monitoring the implementation of CALA.

Most of school management challenges facing CALA implementation could be addressed from school leadership and management perspective as they require function of quality control, learner management, staffing, parent management, staff motivation and conflict management. The ideal of banking on leadership and management skills of school managers, to address the challenges associated with CALA implementation is supported by (Clarke, 2007) who articulates that “nothing happens without leadership, nothing changes without leadership, nothing develops without leadership, nothing improves without leadership and nothing is corrected without leadership”. This means that manager’s role is to change things, make things happen, correct things and improve things. Cohen (2000), these leaders should not only set goals but should be capable of communicating them effectively to teachers (heads). In the light of the foregoing, the implementation of CALA has become a crucial educational challenge in the 21stcentury that calls for school managers to influence motivations and capacities of teachers, hence transforming school into professional learning communities in which educators freely teach and learners freely learn. An effective school leadership understand how to transform educational practices and work collaboratively with teachers to achieve team goals and objectives (Deonarian, 2004). Thus the aim of the research is to assess if managers are effectively assess and motivates the implementation of continuous assessment learning activities in combined science at one school in Hurungwe district.

In managing instructional programmed, school managers should give guidance to teachers, on aspects such as modes of assessment, validity, reliability and objectivity of examinations, marking of papers and administered of internal and external examinations. Linn and Gronlund, (2001) argues that the implementation of CALA in schools requires a healthy and positive school climate where teachers are free to teach and learners to free learn. This healthy and conducive environment with positive discipline remains the duty and responsibility of the school and it stakeholders. However, over past years school have been bombard with many cases of unacceptable learners behavioral problems such as absenteeism can negatively impact on the smooth of CALA , since there are many tasks and activities to be administered to learners on daily basis (Vurayai, 2021). Therefore, it is the intention of this study to find out if leaders are providing a conducive environment for effective implementation of CALA in combined science.

Furthermore, the school managers must ensure that learner’s behavior and learners issues are discussed regularly during staff meetings and parents meetings, to ensure that the learners know the policy. The effective implementation of CALA requires a healthy and sound environment where the conduct of learners is well regulated through the code of conduct and disciplinary policies (Ayeni, 2003 ). These can maintain learners who miss assessment tasks without genuine reason can be dealt with fairly and consistently by school managers. This can be possible when there is school code of conduct and disciplinary policies which are communicated to the learners through their representative.

## 2.3.5 Monitoring and supporting role of school

(Bolyard, 2003) Indicates that the new assessment policy provides the opportunity for teachers to use different methods and learner centered approach. Teachers who are not familiar with these methods will not function until they are trained and have received follow up support in order to implement these methods successfully. (Ayeni, 2003 ) indicates that school managers should provide in school support team. Monitoring and support remains a critical issue in ensuring that effective implementation of CALA is successful. This is because of two reasons a) there is no adequate training for the wide array of assessment strategies used by teachers which may lead to wrong using of assessment strategies, b) teachers need to be taught how to select, modify and develop assessment tasks (Marley, 2010). School managers constant monitoring and support will ensure that assessment standards are not comprised and an increase in the level of learners achievement is realized (Yusuf, 2013). (Zimbabwe, 2020) the government of education 5.0 suggest that monitoring on the implementation of assessment process should cover the following aspects: ensure compliance with policy, ensure assessment tasks are designed in accordance with the subject guideline, ensure assessment tasks are administered in accordance with the principles of good assessment, ensure assessment evidence is marked according to mark guidelines and marks are totaled and recorded as per policy. Thus the study aims to assess if manager at one school is monitoring CALA and the heads of department if they have a policy which guide teachers on mark allocation as per policy.

## 2.4 summary

Chapter focuses on the theoretical framework as well as empirical evidence on the effective implementation of CALA in combined science. The different perspective and as much as those possible bring about a gap for the study which shall occur in one school in Hurungwe district.

### **Chapter three Research methodology**

## 3.1 Introduction

The research methodology explains the methods that was used to carry out this study on the effective implementation of CALA in teaching and learning combined science, and it explains how to carry out research. Specifically the chapter will focus on the research paradigm, research design, target population, sample, research instruments, data collection procedure and the research concepts of validity and reliability as well as ethical consideration

## 3.2 research paradigm

The post positivism paradigm evolved from the positivism paradigm which is based on reality that can be mathematically interpreted was used. Post positivism is also known as methodological pluralism. According to Cohen et al. (2007) the paradigm is concerned with the subjectivity of reality and moves away from the purely objective stance adopted by the logical positivism, which is a philosophy of knowledge or of how we come to know. One of the most common forms of post- positivism is a philosophy called critical realism. A critical realist believe that there is reality independent of our thinking about it that science can study. Most post- positivism are constructionist who believe that each construct our view of the work based on our perceptions of it. Perception is seen not as a passive receptive process of production, individuals interact with each other in the society. (Ayeni, 2003 ) says with the understanding of post positivism the implementation of CALA is thus to fulfill the gap which is within the society, Therefore the study shall focus on the implementation of CALA in teaching and learning of combined science, does it rely on the problem solving and is it implemented to in such a way that learners gain understanding, or it rely on individuals perceptions that is why post- positivism will be used.

## 3.3 Research approach

Creswell (2012) defines the research approach as the procedure or plan for analysis that will help in the making of decision from elaborated assumptions as well as methods of collecting data and analysis. A research approach expresses the data that is required, the methods which will be used in analyzing and gathering data and the ways in which the findings are going to be established in response to research questions (Creswell 2012). In his findings of research (Creswell 2012) he noted that the approaches which can be made, this can be mixed, qualitative and quantitative approaches. Thus, this research will be based on qualitative approach since the data intended to be gathered will be more of subjective in nature. Effective implementation of CALA in form three combined science is the main theme, so qualitative research will be adopted to gather data.

## 3.4 Research design

According to Buchanan and Bryman (2009), research design is an overall plan which is to be used for conducting a study. Research design can be qualitative or quantitative. This research will use case study design and focus on one secondary school in Hurungwe district, Zimbabwe. A descriptive research design helps in the description of a phenomena, challenges or issues under research. It aims to come up with effort of respondents in line to a certain practice or product.

## 3.5 Population of the study

Population is the entire group that you want to draw conclusion about a research, Parker (2012) defines population as the total number of a targeted group who are subject to the real world of the issue on which the researcher has to convey a message on. Population is defined as numbers of participants that are accessible for a research. In other words it is a certain group of interest to the researcher, which he/she wishes to collect data from in order to make conclusion on area of study (Neuman 2011). The population targeted by this study comprise of four science teachers at the school including science head of department, head of school, and form three students which is 40 in number.

## 3.6 Sample and sampling procedures

Sample is a small group or a subset of a population selected for measurement, observation or questioning, to provide statistical information about the population (Pandey and Pandey, 2015). Saunder et al. (2012) defines sample as a small part of anything designed to show the style, quality and nature of the whole. Therefore, sample can be defined as a small group which represent population in which the researcher wishes to work with. Sampling is done with the aim to obtain reliable and accurate information about the universe with the minimum cost incurred as well as time and money.

## 3.6.1 Sampling of students

Form three combined science students are considered in this study, and purpose sampling is used to select participants from the targeted population. Since the focus of the research appealed to all students doing combined science, therefore purposive sampling is used. The targeted people under the study were known, hence the purposive sampling is ideal. The whole school is large, so due to time limits of the study the researcher choose to focus on form three who are doing combined science

## 3.6.2 Sampling of teachers and parents for interviews

Purposive sampling will be used to select teachers for the study. Purposive sampling provides non probability samples which receives selection based on the characteristics which are present within a specific population group and the overall study. (Bryman and Bell 2007) It is a process that is sometimes to as selective subjective or judge mental sampling but the actual structures involved remain the same. Unlike other sampling techniques that are useful under probability sampling have a goal of work is to intentionally select subject to gather information. Science teachers including science head of department are used in the research to ensure insight of the effective implementation of CALA. Creswell and Creswell (2018), though purposive sampling relies on the presence of relevant individuals in the study group to provide useful data. If the researcher fails to find enough people that meet the demands of research, then the process become waste of time and resources. The advantages and disadvantages of purposive sampling offers significant level of flexibility, but also require high level of evidence based technique to provide, outside observers that there is relevance to the information collected. It is because of its advantages that the researcher choose purposive sampling.

## 3.7 Research design

Research design is an overall plan which is to be used for conducting a study. Research design can be qualitative or quantitative. In this study qualitative research will be employed in form of focus groups and interviews. Focus group is defined by (Bryman and Bell, 2007) are good for providing rich and detailed data. Interviews on the other hand are ideal for giving prompt responses. This research used a case study which is going to be explained below:

## 3.7.1 Case study

Case studies falls into three categories which is explanatory, descriptive and exploratory. In an explanatory case study, the researcher will be seeking answers to questions that need to be explained on presumed casual links in real life interventions that are too complicated for survey strategies (George and Bennet, 2004). In evaluation language, the explanation would link programme implementation with programmed effects.

Descriptive case study is best for describing intervention or phenomena and the real life contexts in which they occurred. Exploratory case study is used when an attempt is made to demystify those situations in which the intervention being evaluated has no clear, single set of outcomes (Godfrey, 2015). This research will take the form of explanatory case study whereby the researcher sought to find links in form three combined science.

The research design adopted for teachers for this study is descriptive survey design. The design is considered appropriate for the study because the researcher does not have any intention to manipulate the study’s variables but to study them as they occur naturally. Interviews will also be used to prompt responses, for detailed data. With small number of teachers and form three combined science the researcher can obtain rich- detailed data from the groups, since the research involved is subjective elements such as feelings, views and emotions.

## 3.7.2 Research instruments

Godfrey (2015) states that strategies used for fact finding are research instruments. These are tools employed in gathering of information of topic under investigation. The researcher will use interviews and focus group as research tools so as to gather data from questions of the research.

## 3.8 focus group

Focus group are the students in form three whom are doing combined science. According to (Singh, 2007), focus group are most ideal for interviewing participants with homogenous characteristics. Thus focus group for this study is combined science students doing form three. The researcher will write notes of the responses of interviews.

## 3.9 interviews

Interviews is an official face to face meeting especially of an official nature or conversation between two people but would have been establish by the interviewer in an effort to obtain certain information of the topic that will be under study and aimed at answering research objective (Lindzey 2014). The researcher used face to face interview with teachers and the head of the school, so that each individual gives their own point of view. The use of interviews and focus group provide creativeness, personal skill as well as allowing inquisition that helps in acquiring information particularly on more difficult questions that maybe ambiguous and need the researcher to explain little bit. The advantage of face to face communication will also be enjoyed through interviews, as one can monitor the respondent’s body language when discussing sensitive topics, more so all questions are likely to be answered in a personal interview. Though it is expensive, since interviewer must be in attention all the time (Silverman, 2000). Respondents might not feel comfortable to open up and say truth, but since the disadvantages has remedies the researcher choose interview since they give enough evidence to render the credibility and trustworthiness of the study.

## 3.10 data analysis procedure

The raw data gathered will be sorted and altered in order to present the findings the researcher will utilize Microsoft word to classify primary data into themes and dissect the data as well as allowing literature review (Munroe, 2008). The way in which questions will be answered by respondents including their homogeneity will be used to group and sort these themes. Questions of the research and narrative description composed the reactions in the surveys and will be used to reflect circumstances as they happen at the school. The methods which will be used could be justified since they provide understandable and clear summary illustration.

## 3.11 ethical consideration

Ethics are among the most important elements of any research, without which any research is doomed to failure as according to Bryman and Bell (2007), the main parts of ethics in research are informed consent, privacy and confidential and voluntary participation.

## 3.11.1 Informed consent

This refers to the right of participants to be given full information concerning what they will be participating in (Cohen et al 2007). To achieve that, the researcher will have prior meeting with each group of participants, informing them not only of the research but also its important.

## 3. 11.2 privacy and confidential

According to Saunders et al, (2012) the protection of the privacy of the participants is important. The researcher will ensure that participants are not going to be mentioned to cover for the participants response for confidentiality, the researcher will assure that the participant’s information would be used confidentially by summarizing and paraphrasing responds.

## 3.11.3 Voluntary participation

The researcher will inform participants how their information will be used. The participants voluntarily response and are free to withdraw at any time, if they are no longer interested.

## 3.12 Summary

This chapter had focused on the methodology that shall be used in a research. This include research paradigm, target population, sample size, research instruments, data collection procedures, data presentation, analysis and ethical consideration.

# CHAPTER FOUR: Data presentation, Interpretation, Analysis and Discussion

## 4.1 Introduction

The present chapter focuses on the data presentation, analysis and discussion. The data was collected through interview guide and focus group on the effective implementation of CALA in teaching and learning combined science. The data collected is presented using tables, themes that emerged from the data which is discussed in line with related literature review. The next section present participants and the biographical data of the participants who took part in research process. The table below presents the participants:

## Table 4.1: research participants

|  |  |  |
| --- | --- | --- |
| **Research**  **participant** | **Real names** | **Pseudo names** |
| **Teachers** | **Teacher 1>3** | **M1, M2,M3 & M4** |
| **Focus group** | **Focus group 1>5** | **Fig 1>5** |

The table above shows the participants and their pseudo names as they are used in the research, in which teachers are represented in form of M1 up to M4 and the focus group which is represented with the Fg1 to Fg5. This is done to represent members who took part in research.

## Table 4.2: biographical data for teachers

|  |  |  |  |
| --- | --- | --- | --- |
| **Gender** | **Age** | **Professional**  **Qualification** | **Teaching**  **Experience** |
| **Male(M1)** | **35 years** | **Diploma in science education (biology)** | **10 years** |
| **Male (M2)** | **30 Years** | **Honors degree in education (geography)** | **11 years** |
| **Female (M3)** | **28 years** | **Diploma in science education (math’s)** | **5 years** |
| **Female (M4)** | **32years** | **Honors degree in education (chemistry)** | **8 years** |

The table above shows biography data of three teachers were interviewed for this research. Participant M1 was 35 years old and 10 years teaching experience, the participant M2 is a male with 30 years of age and has 11 years in the field of teaching and the lastly M3 which is a female who was 28 years and has 5 years working experience in teaching. M4 was a female with 8years working experience as a teacher. The experience was asserted by Murphy (2016) indicating that teaching experience is positively associated with student achievement and gains throughout teacher’s career. As teacher gain experience, their students are more likely to do better on other measures of success beyond the requirement of assessment. The working experience of teachers have an impact on the effective implementation of CALA in combined science.

## 

## Table 4.3 biographical data for focus group

|  |  |  |  |
| --- | --- | --- | --- |
| **Number of Fg** | **Pseudoname** | **Average age** | **Class** |
| **1** | **Fg1** | **14 years** | **3 north** |
| **2** | **Fg2** | **16 years** | **3 north** |
| **3** | **Fg3** | **16 years** | **3 south** |
| **4** | **Fg4** | **17 years** | **3 south** |
| **5** | **Fg 5** | **18 years** | **3 North** |

The above table shows students who took part in the research. Their pseudonames, age, class and subject they are interested in doing CALA. Fg1 who are 14 years old and was in form 3 north interested in doing combined science CALA. Group of students who were interested in doing history and was in form 3 north and was 16 years of age and her name were in FG 2. Fg3 were students whose average age was 16 years old in form 3 south and interested in Shona. Fg 4 were students and their average age was 17 years and were n form 3. The lastly was the Fg5 which comprise of students whose age group was 18 years and were in form 3 North. The table represents some members who participate in the focus group and their subjects they were interested to do at school.

Information from focus group was critical because it assisted me to verify the information that the teachers had provided on the effective implementation of CALA in the teaching and learning of combined science. The main purpose of focus group research is to draw upon respondents’ attitudes, feelings, beliefs, experience and reactions in a way where other methods are not applicable. A focus group is a research that brings together a small group of people to answer questions in a moderated setting and is a type of qualitative research.

Hayward et.al (2004) indicates that focus group discussion is a technique where a researcher assembles a group of individual to discuss a specific topic, aiming to draw from the complex personal experience, beliefs, perceptions and attitude of the participants through a moderated interaction.

The next section focuses on the understanding of CALA by teachers and learners. It was critical for this study to understand how teachers understand the concept of CALA as it shapes the perspectives’ of teachers. The following were responses from participants:

**On understanding of CALA**

M1 and M3 were of the same perspective saying “CALA is the evaluation of students work as they are assessed timely to determine their mastering of content and skills evaluated”, however M2 understand CALA as regular evaluation of students work as they need to be assessed timely. The focus group also indicates that CALA is when teachers assess them regularly, this was indicated by all focus group as they.

In line with the above findings (Aina, 2014) in Namibia indicated that CALA consists of all the processes and tools teachers use to make decision about the students’ progress. These include observation of students, seat works, their voluntary responses and answers to questions as well as results on teacher made tests. It is an on going system of monitoring and assessing learners progress with the aim of helping them improve their learning. Though , some teachers understand the term CALA as the continuous assessment of learners, it have its own drawbacks as indicated by participants through these themes:

## 4.4.1On lack of understanding by teachers and learners

Research shows that many teachers and learners lack relevant knowledge for doing CALA. Participants give these responses:

M2 confirms that training was done as a crashing programme therefore teachers did not have enough know-how on how to effectively implement CALA as facilitators failed to provide enough knowledge on how to assist learners. This was also confirmed by M1 and M3 as they add on saying there is no policy or textbooks to guide on how to do it . Likewise this was also confirmed by focus group as the “teachers sometimes they can delay to assist whenever one asks for assistance on how to do CALA and they cannot help enough for effective doing of CALA, and they are doing it harpharzadly as CALA is not indicated on the timetable

This means that at the school CALA is a thing which some of the teachers understand and some are not sure on how to do it. In line with this, it agrees with Kapambwe (2010) notes saying lack of adequate training for teachers. As a result, they did not believe that they would finish syllabus.

## 4.4.2 on negative attitude by teachers

Participants raised the issue of negative attitude by teachers as the main drawback for effective implementation of CALA in combined science their responses were:

*M2 says that “most of the teachers developed negative attitude since the implementation of CALA needs a lot of time to administer, therefore the teacher need to assist each and every child on the five CALAs that they need to complete within the course and thus need the teacher to assist each and every child to do the best ,so a lot of time is needed and it became a burden to the teacher”*

*M3, M4 and M1 indicates that teachers are demotivated because of low salary they are receiving from the government so they do not want extra load on their shoulders since their hands are already full, so they are failing to effectively implement CALA*

This means that CALA is an assessment procedure which need to be done by teachers in such a way that the objectives of CALA that yields a tangible product and/or performance that serve as evidence of learning. Though, teachers have their grievences of lack of motivation. In line with the responses of teachers in Zambia Kapambwe (2010) indicates that teachers felt that it needs a lot of time to do CALA and also that lack of motivation through income or shared profits can motivate the teacher to work extra hard. Thus lack of motivation for teachers resulted in them developing negative attitude on the effective implementation of CALA in teaching and learning combined science. This was also supported by Gama (2022) who states that lack of motivation for teachers resulted in them developing a negative attitude with the effective implementation of CALA.

As a result of teachers not having knowledge it has become a challenge in the effective implementation of CALA and thus brings about paper work only not the actual thing at the ground. As the researcher observe that teachers are demotivated and they are just doing CALA for the purpose of saving their jobs. The reality is that they are not doing CALAs as they are supposed to be done. The other issued revealed was that, CALAs need a lot of time to prepare and to the students it is now becoming a burden as they need to finish five components to each subject and it also makes learners drop some of the subject such as science as they feel it as a difficult subject.

On strategies used in the effective implementation of CALA by teachers

Participants raised issues on the strategies that are used in the effective implementation as they have a better understanding of what CALA is, teachers use different strategies so as to effectively implement CALA though the resources can be a challenge as asserted by the following responses:

*M1 indicates that the available resources do not provide sufficient instruments as the schools do not have enough laboratories and apparatus to effectively do experiments for every child, there was a need of teacher training, since they are the drivers of the programme. M3 and m2 also indicates that teachers were not fully trained on how they should assist learners, during the process which is triggering some resistance from the teachers. Focus group also indicates that though the CALA are being done, they are not indicated on the time table, thus results in shortage of time for teachers to assess them. This also bring teachers to make money as they can ask learners to pay funds for them to be assisted.*  The human resource is also a challenge at school and it can affect effective implementation of CALA in combined science.

## 4.4.3 on resources as challenge for effective implementation

Shortage of resources results in teachers rising complaints meant that motivation levels for them is low as indicated by M1 as “as a result of economic hardships, teachers are now channeling their efforts towards fund-raising activities at the expense of their main mandate to implement CALA.” Observation made by the researcher is also that teachers are doing CALAs on behalf of the students for a certain fee, which disrupts the whole purpose of initiative, which is targeted at improving the education system and research skills of students in the country so that they can contribute to socio-economic development, even at lower levels.

M2 and M3 indicates that most teachers are using tests, assignments and recap exercises to assess their learners, this is due to lack of resources for effective implementation of experiments for each child to perform. This was also supported by the focus group as they are mainly assessed through assignments, tests and recap exercises

In line with this, Mwebaza (2010) in a study in Namibia indicates that written assignments, tests and recap exercises dominated teachers’ ways of continuous assessment strategies. It was however, found that project work, observation and experiments are not mostly used by science teachers to assess students learning progress, since teachers are glued to the use of particular types of continuous assessment strategies. This means that CALA is not considerd as the only way of aasessing learners which can solve problems in the society as asserted by the main objectives of CALA.

On school managers’ reactions on how to monitor effective implementation of CALA

The findings indicate that the effective implementation of CALA in a school requires a health and positive school climate where teachers are free to teach and learners are free to learn.

*M1 indicates that “healthy and conducive environment with positive discipline remains the duty and responsibility of the school and its stakeholders*.

*M2 and M3 indicates learners’ behavior problem such as absenteeism can negatively impact on the smooth implementation of CALA, since there are many tasks or activities to be administered to learners on daily basis*. “Fg 2and 3 the managers are assisting on the implementation of CALA as sometimes they ask if we hsve been given CALA to certain subjects”.

Thus the school manager’s duties and responsibilities should involve ensuring that all personnel parents and learners are aware of the school policy, regarding positive learner’s behavior and ensuring that policy regarding disciplinary measures is implemented. Masson (2004), states that the school managers must ensure that learners behavior and learner issues are discussed regularly during staff meeting and parents meeting. The school discipline does not happen by chance, it begins with adaption of school’s code of conduct. The aim of school’s code of conduct is to establish a disciplined and purposeful environment in which effective teaching and learning can take place.

**On lack of motivation**

*M3 confirm that lack of motivation results in ignorance of manager to monitor effectively, as motivation provide a derive force* *to work, which was also confirmed by the Fg 1 and Fg2, they indicate that the teachers are lacking to assist on how to do CALA as they may sometimes ask for the payment for them to help on, how to do CALA.* This means that CALA is an assessment procedure which need motivation to the implementers as asserted by Masson (2004) the motivation should be understand as management strategy to persuade people to change, to release teachers, trapped potential and to bring out the best in people

**On resources provision.**

*Resources provisioning as indispensable to the implementation of CALA. The findings in the study explain that the issue of human, financial and teaching resources is indispensable to the implementation of CALA as asserted by M1, M2 and M3*

Another issue that was observed by the researcher with respect to the resources was that head is reluctant to provide facilitators with teaching resources and also M4 said “support is very important because head is not supporting the teachers, as they say to teachers come along with strategies, you see. If an educator may ask for vinegar to perform an experiment at the school, the head will simply say you have vinegar at home and the vinegar is supposed not to be used at the school.”

Lack of human, financial and teaching resources possess a serious problem at school managers and impacts negatively on their roles in the implementation of CALA. Provision of financial and human resources is collective responsibility of the school manager and this role will enable teachers to successfully implement CALA in combined science. In managing instructional programme, school managers should give guidance to teachers on aspects such as modes of assessment (Wolfork, 2007).

The shortage of resources results in the shortage of resources for learners as there are large classes and the resources are very scarce for every child to access them. That is having less apparatus and the teachers can feel that they cannot carry out experiments as asserted by M1 and M2 in response to their understanding of resources.

In line with this Marley (2010) emphasized in Namibia that large classes as a large challenge on the effective implementation of CALA and this is the same in Hurungwe District on one school as indicated by focus group when they said “teachers sometimes they fail to assist all of us in the class, sometimes they deal with the most talented learners”. Thus in conclusion resources have a negative effect on the effective implementation of CALA as they are vital on implementation of teaching and learning of combined science.

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# Chapter 5: Summary, Recommendations and conclusion

## 5.1 Introduction

In this chapter, the researcher would like to state some concluding remarks on the findings and recommendations of the study conducted on the effective implementation of continuous assessment learner activities in the teaching and learning of combined science form 3. The researcher also highlights some limitations and shares some experiences encountered during this study.

## 5.2 Summary of the findings

This study aimed to assess the effective implementation of CALA in combined science. The motives and objectives of the study were on the understanding of CALA, strategies involved by teachers in CALA implementation and the role of managers on the effective implementation of CALA. The motives and objectives behind the implementation of CALA were not even clear to most instructors and a student, due to the constraints CALA were carelessly handled and randomly implemented, lack of motivation to teachers due to low income, resources which are not available and the lack of knowledge on both teachers and the learners on how to do CALA and this can affect the effective implementation of the programme. These include the lack of resources, motivation and being the burden to both teachers and learners. Others were of the view that the CALAs do not have time to be delivered since it is not included on the timetable, thus resulting in the effective implementation very low.

The research also showed that the effective implementation results on not having the policy on how to effectively implement the CALA. The demotivated teachers are just doing it for the purpose of giving marks for learners and sometimes they are paid to do for the learners which result in learners not acquiring the skill and problem solving for their living as they are the society solvers of the problems. Focus group indicates that the CALAs are too many for them at the same time, as they are expected to understand the content of syllabus. This is the same issue with the teachers, as they asserted that the effective implementation of CALA is becoming difficult for the coverage of syllabus.

The findings from the managers of the school, on how they monitor CALAs, is that they are not actual equipped on how to monitor, since there is no extra money for doing the process, as it contributes to learner’s marks of exams there is need of ZIMSEC to pay teachers even managers so as to motivate them. Others also lamented the lack of knowledge and suggested that they need to be educated on how to effectively implement the programme.

## 5.3 Conclusions

The researcher sought to establish the effective implementation of CALAs and it adopted a qualitative design through the use of interviews on teachers and focus group. During the research process, the researcher faced some constraints such as time, since there was need to balance module and the job routines, and research process. To curb the problem, the researcher make use of weekends and sometimes missing lunch time to conduct the research. Some respondents also showed some lack of understanding of the importance of the research and unwillingness to contribute, but the researcher explained the importance of the research as well as to shade light to them with the validity of the research, with the help of encouragement of the supervisor.

## 5.4 Recommendations

The following recommendations are proposed to improve the effective implementation of CALA that is the involvement of teachers before introduction. The ministry of education should take measures on making CALA included in the textbooks so that teachers and learners have a guideline on how to do it (CALA guides or work books).

The school should also include the CALA on the timetable for learners and teachers to know the time to do the CALA. Moreso, ZIMSEC should pay the teachers on effort made to provide course work and more workshops to improve the understanding of teachers and the students population in each class should be optimum to manageable size.

There is need to prioritize of teachers welfare. The welfare of teachers should be improved through coming up with convincing packs which motivate them to work extra hard. Teachers need for an expanded effort to conduct CALA workshop so that teachers as programme implementer became very acquinted with what is expected of them. The CALAs should be reduced or be done to one subject which the learner is interested in, not all subjects. Most of teachers are failing to complete the ZIMSEC syllabus due to the increased pressure of the CALA initiative as well as the pandemic of COVID 19, which affected students in the process as they will be having a lot of ground to cover.

Additionally, teachers should be given additional allowances. The allowances is needed since there is now increased work load. All stakeholders should have been consulted before the introduction of the initiative and all events should have been well planned.

## 5.5 Recommendations for further studies

Further study is recommended on the effective implementation of CALA in other areas to broaden the view nature of the concept or the new animal.

## 5.6 Summary of the chapter

The chapter had focused on summary, conclusion, recommendation of the study and recommendation of further studies

# References

Aina, J. K. (2014). students academic performance and importance of continuous assessment in science. *American Journal*, 1(3): 9-16.

Akinpelu, J. A. (2005). *Essays in philosophy and Education .* Ibadan : Stirling Horden Publishers (Nig).

Alausa, Y. A. (2004). *Continuous assessment in our schools: advantages and problems .* Namibia: Kolin Foundation Arandis.

Arora, P. N. McCabe, G. P and Craig , B. . (2009). *INTRODUCTION TO THE PRACTICE OF STASTICS.* New York: W.H. Freeman and Company.

Ayeni, M. A. (2003 ). *Philosophy of education : an introduction .* Edo Ekiti: Petoa educational publishers.

Bolyard, K. (2003). *Linking continuous assessment and teacher development : Evaluating a model of continuous assessment for secondary school.* Malawi: Mc Graw-Hill Press.

Bryman, A. and Bell, E. (2007). *Business research methods .* London : Oxford University Press.

Buchanan, D. a. (2009). *The sage handbook of organisational research method.* London : Sage Publication Ltd .

Chinangure, F. a. (2018). The intergration of technology in teaching and learning of mathematics : the missing link. *Journal of applied science and technology*, 1-13.

Clarke, A. (2007). *The handbook of school management .* Capetown: Kate Mccallum.

Cohen, L. a. (2000). *Research methods in education (5th ed).* London and New York: Routhledge Falmer.

Creswell, J. a. (2018). *Research design (5th ed).* London : Sage edge publishers.

culture, M. o. (1999). continuous assessment. *European journal of science & mathematics Education vol.4,No4 2016*, 534-544.

Deonarian, S. (2004). *An investigation into teachers views of continuous assessment and its implementaion in sciences .* South A frica: University of KwaZulu Natal.

Epstein, J. L.& Janson, N. R. (2004). School, family and community partnership . *Link the plan education digest*, 69(6) , 19-23.

Gamble, M. &. (2010). *research methods and statistics.* New York: Routledge Press.

Kadziya, L. &. (2020). Towards improving the quality of teaching and learning of STEM subjects in rural post-colonial Zimbabwe. *Journal of African Renaissance* , 17.(4) 141-165.

Kapambwe, M. W. (2010). *The implementation of school based continuous assessment .* Lusaka: Aprentice Hall.

Linn, R.L. & Gronlund, N.E. (2001). *Measurement and assessment in teaching (8th ed).* Merril: Mc Graw-Hill.

Marley, D. (2010). *Teacher perceptions of professional learning communities: communities that practice continuous learning within christian schools.* London : Columbia international University.

Marley, D. W. (2010). *Teacher perceptions of proffessional learning communities .* Capetown: Columbia International University.

Munroe, M. (2008). *In charge : finding the leader within you.* New York: Hachette Book Group.

Onuka, A. (2006). *Continuous assessment as an instrument of achieving learning objectives.* Ibadan : University of Ibadan.

Saunders, M. L. (2007). *Research methods for business students (4th ed).* London : Prentice Hall.

Silverman, D. (2000). *Doing qualitative research: A practical handbook .* London : Sage .

Singh, J. (2007). *Philosophical Foundation of Education.* New Delhi: A.P.H. Publishing Corporation.

Sluter, W. N. (2006). *Introduction to educational research.* California: Sage Publication Inc.

Verial, D. (2013). *relationship betwen parenting style and academic achievement.* Chicago: Adventure works press.

Vurayai, S. (2021). *Challenges faced by female students in combined science education in Zimbabwe.* harare: University of Zimbabwe.

Walliman, N. (2011). *Research methods: the basics.* London: Routledge.

Wolfork, A. (2007). *Educational psychology (10th ed).* Botson: Pearson education.

Yusuf, A. F. (2013). Influence of principals leadership styles on students academic achievement in secondary schools. *Journal of innovative research in management humanities* , 3(1), 113-121.

Zimbabwe, G. o. (2020). Continuous assessment activity guide. *continuous assessment* , 346-350.

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# Appendices 1

**FOCUS GROUP DISCUSSION FOR STUDENTS**

Good afternoon. My name is Makomborero Muzembe and I am from Bindura University of Science Education. As you have learnt from the cover letter, the purpose of this study is to assess on the effective implementation of CALA in combined science

**SECTION A: Biographical data for students**

|  |  |  |  |
| --- | --- | --- | --- |
| No .of students per F.G | pseudo of the students in the group | Age of the student | Specific class attended |
| 1 |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |
| 5 |  |  |  |

**SECTION B: Teachers’ assessment criteria of CALA**

1. Which methods do teachers use to continuously assess form three combined science students?

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1. Which combined science skills do teachers assess when they do CALA?

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1. How does continuous assessment in biology assist learners’ acquisition of the scientific skills/competencies in learning combined science at form three level?

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1. How do you know whether teachers understand what to do during CALA assessment?

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1. Explain your own understanding of CALA processes in combined science.

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**SECTION C: Strategies used by teachers to effectively implement CALA in combined science**

1. What methods do biology teachers use during CALA in combined science?

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1. Which methods of CALA in combined science have you observed as most beneficial to students?

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**SECTION D: role of the manager in the effective implementation of CALA**

1. What role(s) has your school head played to ensure CALA, in combined science is efficiently?

….……………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………..

**Thank you**

# Appendices 2

**INTERVIEW GUIDE FOR TEACHERS**

Good afternoon. My name is Makomborero Muzembe and I am from Bindura University of Science Education. As you have learnt from the cover letter, the purpose of this study is to assess on the effective implementation of CALA in combined science

**SECTION A: Biographical data**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| number of participant | SEX | Age | Professional qualification | Teaching experience in teaching combined science |
| 1 |  |  |  |  |
| 2 |  |  |  |  |
| 3 |  |  |  |  |

**SECTION B: ASSESSMENT of CALA by TEACHERS**

1. What is your understanding of the implementation of CALA in combined science teaching at form three level?

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1. What various methods do you use to assess CALA in combined science?

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1. What challenges do teachers face to effectively implement CALA at form three level?

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1. In your opinion do combined science teachers have adequate knowledge to do CALA a assessment?

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**SECTION C: Strategies teachers employ to effectively implement CALA in combined science**

1. What strategies do teachers use to effectively implement CALA to form three learners?

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1. Which methods of continuous assessment at form three level do teachers see as most effective?

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**SECTION E: Challenges Teachers Face To Effectively Implement Cala**

1. Explain whether teachers have resources available to effectively implement CALA in combined science?

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1. What are the draw backs in the effective implementation of CALA in combined science?

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**SECTION D: Monitoring for effective implementation**

1. Does the school have any policies that guide on the monitoring of CALA in combined science?

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1. How does the school monitor teachers to ensure there is effective implement of CALA?

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1. What challenges do teachers face to effectively implement CALA?

….…………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………………

1. Is lack of teachers incentives contribute to effective implementation of CALA in combined science?

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1. How does the school ensure that teachers are updated on how to effectively implement CALA?

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T**hank you**