ENHANCING AVAILABILITY AND UTILIZATION OF INSTRUCTIONAL MATERIALS IN FOOD PRODUCTION AND SERVICE SKILLS AT MUKONO YMCA COLLEGE

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DECLARATION

I, Kiwala Irene Winnie, hereby declare that this report entitled, "Enhancing Availability and Utilization of Instructional Materials in Food Production Skills at Mukono YMCA College" is my original piece of work and has never been presented or submitted to any university or institution of higher learning for the award of any degree, diploma, or academic qualifications.

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APPROVAL

This is to acknowledge that this research proposal entitled, "Enhancing Availability and Utilization of Instructional Materials in Food Production Skills at Mukono YMCA College,'' is submitted with the approval of the undersigned research supervisors.

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ACRONYMS

BBQ	=	Barbeque
CLFP	=	Cooking Local Food and Pastry
ELT	=	Experiential Learning Theory
FGDs	=	Focus Group Discussion
FW	=	Future Workshop
FPS	=	Food Production and Service
ICT	=	Information Communication Technology
IMs	=	Instructional Materials
MVP	=	Masters in Vocational Pedagogy
NGOs	=	Non-Government Organizations
PAR	=	Participatory Action Research
PLFP	=	Preparation of Local Food and Pastry
RLP	=	Real Life Project
TVET	=	Technical Vocational Education and Training
UGAPRIVI	=	Uganda Association of Private Vocational Institutions
UNESCO	=	United Nations Education Science and Cultural Organization
VE	=	Vocational Education
WWW	=	World Wide Web
YMCA	=	Young Men's Christian Association

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ABSTRACT

Shortage of instructional materials is a critical issue at Mukono YMCA training institution in Uganda. A situation analysis was done to examine the types and the status of instructional materials at Mukono YMCA College in Uganda. The study involved students, teachers, and administrators. The situation analysis showed that instructional materials were inadequate; therefore, a project of cooking local food and pastry products was identified as the approach to improve on the availability and utilization of instructional materials at Mukono YMCA College. The challenges during teaching and learning of food production were recorded. The study implemented, and evaluated the possible strategies to minimize the challenges of availability and utilization of instructional materials. A participatory action research (PAR) approach was used and qualitative data was collected following the experiential learning theory (ELT). Stratified sampling technique was used to select the respondents who included administrators, instructors, and students. Data was collected using interviews, observation and focus group discussion. The study revealed that; the instructional materials available such as cookers for food production course unit at Mukono YMCA College were inadequate. Using the available resources, a real-life project approach to acquire more instructional materials, was designed and implemented where students cooked local food and pastries, for sale to the college community. The initial items used in preparing the food were provided as teaching materials by the college administration. At the end of the study period, a refrigerator, cake tins, and a blender were acquired from the extra money earned from the sale of 'local food' and pastries. The study recommended that cooking local food and pastries can be used by students as a project to get working capital as well as acquiring other missing equipment.

CHAPTER ONE: INTRODUCTION

1.0 Overview

This research project was aimed at enhancing availability and utilization of instructional materials for teaching and learning of food production and service skills at Mukono YMCA College. The study was designed to examine the challenges of teaching and learning of food production and service. Possible strategies were identified to minimize the challenges. Evaluation of the project of cooking local food and pastries as the identified strategy was done to increase availability and utilization of instructional materials and equipment. To achieve this, the participants who were students, teachers, and administrators checked for the materials and equipment available, their conditions, and their effective use. In addition, the study analyzed the extent or regularity of utilization during food production practical lessons, according to the content to be delivered and the teaching methods used.

1.1 The Discipline of Vocational Training and Vocational Pedagogy

Vocational training (VT) is a form and level of educational process which involves preparing for occupational fields and effective participation in the world of work, lifelong learning, and a preparation for responsible citizenship. It can also be used as an instrument for promoting sound environmental and sustainable development. Vocational Training offers general knowledge and academic skills, study of technologies and related sciences, acquisition of practical skills, attitudes, and understanding relating to occupations in the various sectors of economic and social life.

A number of countries have been undergoing rapid transformation in areas of technological innovations and intensified competition in the world of work for the last two decades (Mouzakitis, 2010). These changes have created new demands for more adaptable, multi-skilled, and creative labour. To meet these demands, vocational training becomes

necessary as it is identified as an essential field that attempts to prepare young people for work.

On the other hand, vocational pedagogy requires the vocational teacher to adjust the teaching approaches to meet the needs of learners and to match the situation in which they live. Much of the learning is acquired through interactions with materials and equipment while reflecting on the theoretical knowledge. Vocational pedagogy as a field of knowledge focuses on teaching and learning oriented trades, occupations and professions. It stresses the relationship between teaching, learning or training on one hand, work and the labour market on the other. The dynamic relationship is between the work of hand, the mind and the body that plays host of these activities (Mjelde, 2006). The concept is broad and covers the pedagogical activities of teaching, learning, and developmental work that are directed towards, vocational or professional and technical disciplines. These are conducted in schools or through apprenticeship system in workplaces.

Generally, pedagogy is the study and practice of teaching and learning, which involves a conscious use of particular instructional methods such as experiential learning which focuses on the active role of learners in using new knowledge and understanding based on what they already know and believe (Yates, 2007). Vocational training is a pedagogy based on learning from theory towards practice (workshop learning) and back, reflectively, again to practice (Mjelde, 2002). Teaching and learning of catering asa field in vocational training, requires a specific pedagogical method that emphasizes hands-on experiences. To estimate teaching and learning of catering skills or services in relation to working life, there is a need to obtain enough instructional materials. However, a better understanding comes from the required action and personal experience that the relevant theory learnt is in close relationship with the practice. Vocational pedagogy is the relationship between workshop

learning, learning from the classroom on one hand and learning in practical situations in working life on the other hand (Mjelde, 2006).

1.2 Background to the Study

Instructional materials (IM) give the teacher opportunity to prepare good content, set appropriate tools, plan appropriately for lesson delivery and improve teaching and learning processes (Joke, 2000). Teaching and learning require use of the most appropriate instructional materials especially those that actively involve learners in the teaching and learning process. Food production (FP) in this study is a course unit in hotel and institutional catering which aims at improving individual's ability and turn knowledge into practice. Availability of IM can change a student's attitude towards learning, encourages creativity, self-reliance, and active participation in day-to-day lessons, within and outside the classroom.

Instructional material (IM) pulls the attention of learners, simplifies the teachers' work, and brings life to learning by stimulating students to learn. The use of IM in the classroom has the potential to help the teacher to explain new concepts clearly, resulting in better understanding of the concepts being taught (Enem, 2001). Thus, IM is a means of helping learners to cultivate their potentiality so as to explore and control changes. Further, the search for knowledge provides experiences of learning meaningful for groups or individual student (Miami-Dade County Bylaws& Policies, 2011). This informs that for a given instructional procedure to achieve desired objectives, it must be properly harnessed through adequate and proper use of IM. For lessons to be effective, we need equipment and materials for students to understand food production unit (Kadzera, 2006).Through proper planning, IM attracts and sustains the attention of the learners faster and serve as a channel between the teacher and the student in delivering the content and bringing out the real answer to the challenge (Jubay, 2014). The materials make lessons interesting hence motivating students to learn. Utilization of instructional materials such as tools and equipment brings

students to realize their abilities and potential. Instructional materials should be specifically prepared for teaching and learning of specific content such as food production to achieve the goals defined in the syllabuses (Garba, 2016).

To improve learning outcomes in the classroom it is better to understand the decisions teachers take and how they interact with students (Lucas, 2012). Teachers therefore need to use the right instructional materials and equipment that enable students plan, actively learn and evaluate their own learning process. All forms and levels of teaching and learning processes involve preparing the learner for effective participation in the daily activities and to be a responsible student. Materials and equipment help to bridge the gap between theory and practice. For effective teaching and learning to take place, the teacher is encouraged and expected to fully utilize relevant instructional materials. Such materials make the teaching and learning process interesting, more effective, lively, and more appealing to the learner and easily (Ema, 2014).

As economic, social, and technological change mature faster, students need to develop their knowledge and skills on a continuous basis so that they can live and work meaningfully to transform the society. Instructional materials and equipment contribute to individual's development, increased productivity, and facilitated participation in economic and social life. It follows that if students learn how to operate ovens, blender, and cookers in food production and service (FPS) practical, it helps them to make products like cookies, queen cakes, daddies, crisps, and to prepare local food such as banana, rice, beef, and vegetables hence earn more income to escape from poverty.

Mukono YMCA College is a vocational institute in Uganda offering a number of courses including food production and service as course unit in hotel and institutional catering course. The college has inadequate IM and even the ones available are not in good condition to support teaching and learning effectively. Students' learning depends on a

number of material and equipment that can be categorized as measuring tools, mixers, cutlery, cooking gargets, crockery, perishables, and dry ingredients. In today's era of economic constraints and low funding in most institutions by government and other bodies, students' performance and future career may be at stake if the challenges are not addressed. My teaching experiences of four years motivated me to find out more about the challenges during teaching and learning of food production and service at Mukono YMCA College. Therefore, this drove me to carry out a situation analysis and the area of concern was later subjected to a future workshop to identify the root cause and plan for intervention measures.

1.3 Personal and Professional Background

I am a graduate teacher who trained for three years at Kyambogo University in vocational education of home economics with education. Currently, I am teaching foods and nutrition unit and also handling real life projects at Mukono YMCA College in the catering department. I learnt numerous methods of teaching including those where the teacher had all the authority in decision making concerning what to teach, objectives of the lessons taught, and other teaching approaches where learners would be involved in the preparation of the lessons, decision making as well as ensuring social equality in the classrooms.

I joined Kyambogo University with the previous knowledge in hotel and institutional catering that I had studied as part of my course. This further took me a step ahead and gave me more experiences in the hotel industry. At Kyambogo University, I met with other students from the hotel industry whose experience in their field of work further encouraged my curiosity and desire to pursue my professional career as a vocational teacher.

Before I joined Mukono YMCA College, I first worked as a caterer at COWA VTC (companion of works association vocational training center) where I was motivated to take up a course in hotel and institutional catering so that I can improve on my competences. However, at Mukono YMCA College students' performance was not good, this was partially

because the college top management was more concerned about the money for tuition and grades that the students got at the end of every term than the skills they obtained. After realizing that students were not concentrating during teaching and learning, my effort to improve on the modes of teaching and students' competences, skills and knowledge was to engage them in a practical (real life project). These students could not set/lay tables or prepare the local dishes which were cheaper to make a source of income. Experiential education provides the pedagogy for the type of education often called "project-based" or "experience-based"

While at Mukono YMCA College, I got an opportunity to come and further my skills and knowledge in vocational pedagogy at Kyambogo University. As part of my learning experiences, I got more information about student –centered approaches of teaching and learning. With this approach, I noted with keen interest the importance of involving my learners to actively participate in the teaching and learning process. I also learnt that it is necessary to help my students to learn from their colleagues because peer learning is a collaborative process (Grabinger& Dunlap, 1995). Students do not completely learn everything from teachers, but also from each other. They test new ideas with each other and help others construct, elaborate, and filter knowledge structures. They take an active role in forming new understanding and not just inert receptors of facts from teachers. As a reflection from the above experience, I developed an aspiration to alter my practical skills steadily from the traditional lecturer methods to more learner centered teaching and learning approaches.

1.4 Situation Analysis at Mukono YMCA College

The situation analysis was carried out to discover the challenges of teaching and learning in order to get solutions for the identified challenges particularly in the teaching of food production. If these challenges were not addressed, they would affect and reduce

students' interest to learn. This became an important aspect for teachers to link pedagogy to practice as it is the case with the masters' programme in vocational pedagogy (Mjelde, 2008).

The researcher together with the stakeholders used SWOT analysis (strength, weaknesses, opportunities, and threats) to categorize the key areas of concern during teaching-learning process to have a deeper understanding of the condition at the college. Table 1show the strength, weaknesses, opportunities, and threats that were identified by students, instructors, and administrators during situation analysis.

Table 1: Results of SWOT Analysis (Strength, Weaknesses, Opportunities, Threats)

Strength	**Weaknesses**
• Lecturers give time to students during lecturers. • Counseling and guidance by lecturers.	• Practical money is released late especially on weekends. • Combining of all levels during teaching and learning(elementary, certificate and diploma) • Inadequate teaching staff • Teaching practical subjects theoretically. • Inadequate practical lessons. • Limited lecture rooms. • Congestion of the exam timetable. • Collision of the class timetable.
Opportunities	**Threats**
• Popularity in the community. • Have a UBTEB center. • Qualified lecturers.	• Poor supervision of students on industrial training. • Delayed salary payments for teachers. • High dropout rate of students

The weaknesses were heavier than the strength and this is a threat to the department and the college at large. Formal conversation using interviews to discover the challenges students and teachers face during teaching and learning of food production and service unit were employed. Stake holders gave a narrative of the challenges raised which they said inhibited their competences.

Late payment of tuition and bringing requirements late; One of the instructors shared the following comments; "*Students wait until the last minute when the term is ending that is when they bring the school requirements and these requirements end up not used making these ingredients to expire*".

Late release of materials from the store; instructors during interviews said that late release of materials from the store and money from the account's office can contribute to the loss of valuable knowledge and skills in class which may lead to the outcome of half-baked students. This takes place when materials such as flour, cooking oil, sugar and blue band from the store are not distributed as well as the money to buy fresh ingredients not being released from the account's office on time. This results in prolonged hours of the lessons and interfering with other lessons.

One of the administrators advised that teachers should learn to improvise. They should as well submit their requisition two days before the practical lesson and the accounts office should have petty cash kept with the cashier/accountant. Another solution to solve this problem teachers and the accountant were advised to work together so that students don't suffer because of their weaknesses.

Equipment to Student Ratio; one Instructor' said that; "*we have a big numbers of students compared to the instructional materials and equipment available*". Another instructor said that;

> "it is difficult for a big class to use the few material and equipment effectively if you have two classes in one yet time for practical's is limited. In this sense students become redundant and not easy to control because some of them instead of concentrating they turn to their phones and start charting on face book and WhatsApp because they are doing nothing".

Large classes and inadequate instructional materials have a negative impact on teachers' methods of teaching (Otaala, Maani, and Bakaira, 2013). Therefore, when the number of students is big the teachers need to develop appropriate strategies during planning to take care of the number of students they have in their classes or workshops depending on the lesson. Another way to manage the big numbers is by using different methods of teaching and learning so that the teacher has the ability to engage the learners through active teaching and learning techniques like learning stations, group learning and peer learning.

Inadequate practical lessons; in explaining the issue of inadequate practical lessons, a student noted that there was an increment on our tuition this quarter (term) June-August 2018 of 50,000/- each student. Administration releases 50,000/- each day of the practical for two classes of about 30 students each class which is not enough. This was supported by the teacher who said it is not easy to use 50,000/- for two classes because of fluctuation in market prices. On the other hand, there is cost sharing where students are required to bring some materials such as 1 packet of flour, I kg of sugar, 1 kg of blue band and 1 liter of cooking oil. Stakeholders, during individual interviews and focus group discussions indicated that inadequate practical resulted in poor performance of students. In explaining this, one instructor noted that: "*at the end of the term or near examination time, most students bring the materials and teachers rush, to attempt to complete schemes of work or the syllabus in order to compensate for practical lessons lost*". This resulted in inadequate skills and poor performance of students.

Teaching of food production and service as a subject in hotel and institutional catering programme has been mainly done as a theoretical process rather than practical engagement. This raised my concern as a vocational pedagogy student to find the best way to improve the situation. Information was gathered through SWOT analysis as a tool of data collection and observation as a method of data collection. This was subjected to a future workshop which

aimed at critically analyzing why food production as a subject was mostly teacher centered rather than learner centered practice.

1.5 Future Workshop Process

Future workshop comprises five phases; preparation, critique, fantasy (utopia), reality/implementation, and follow up. During the preparation phase, materials tools, preparation of venue, rules of the workshop among others, are specified for at this point. For example, critique phase, participants critically give their thoughts on the issue under study. During fantasy phase, participants would express their ideal situation regardless of time, resources, and constraints. In reality phase, participants critically reflect on what can be achieved given the available time and resources, to develop a work plan and implement developed strategies. On the other hand, follow up phase; participants also discuss the feedback on what had been done. Once an action is taken, it is essential to check and appraise the implementation process (Heino, 2004).

In the context of this study, the Future Workshop (FW) was planned and scheduled for 2nd February, 2018 at 10:00am, in the catering class. FW was used as a research tool at this point to identify gaps and to lay possible strategies for improving the situation at Mukono YMCA College.

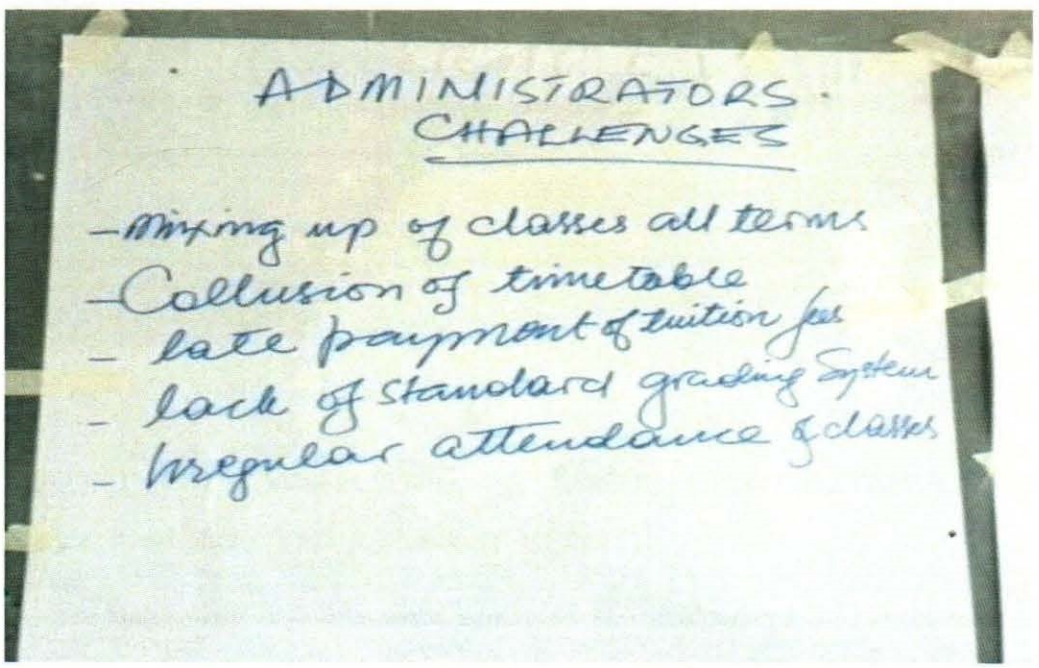
1.5.1 Preparation phase

During the preparation phase, the researcher came up with a programme guide (agenda) that was followed during the future workshop. The identified facilitators (mentors) and participants (students, instructors and administrators) were invited for the workshop as planned the invitation letter is reflected in (Appendix 6). The room and local facilities for the workshop were settled by the organizers and writing materials (pens, papers, markers, and manila papers) food and refreshments were purchased. The researcher, emphasized the following rules that govern the future workshop process: no criticism, respect for everyone's

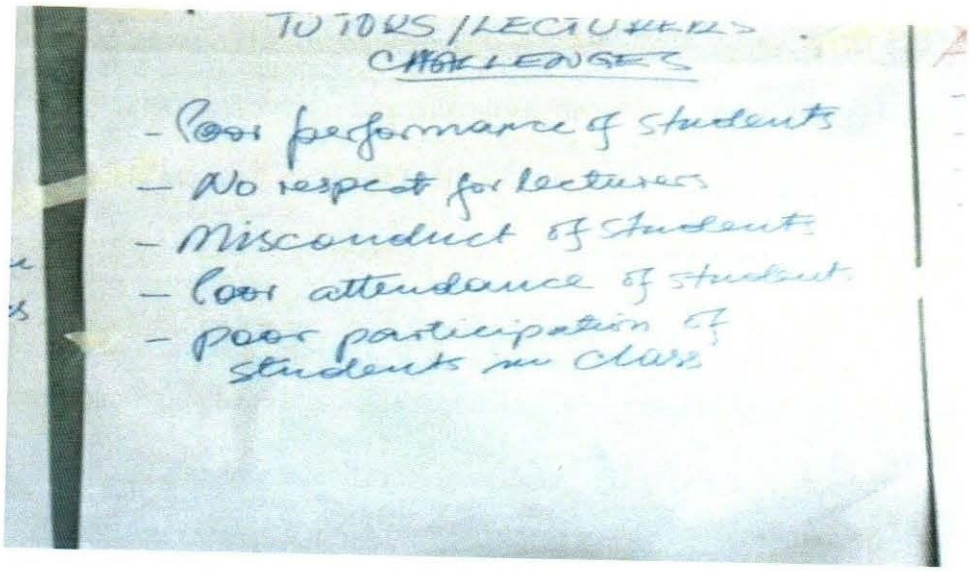
idea, short responses referring to personal experience whenever you are giving an answer, Inform but do not be missionary for example do not teach as the one who has all the truth, listen to others, do not judge too early, do not use long detailed stories, do not give advice make proposals and do not generalize but be specific. In observing the rules as the guiding principles, combination of ideas was permitted.

1.5.2 Critique phase

The critique phase started with continuation from the situation analysis, through SWOT and observation as conducted by the researcher. Basing on my interest in improving the teaching and learning of food production and service, together with key stake holders discussed critical challenges faced in the teaching and learning process of food production in the catering department at Mukono YMCA College. Brainstorming was used as a tool for idea generation in the critical phase of the future workshop. We identified gaps together with the stakeholders, which were visualized as shown in (Figure 1).



(a)



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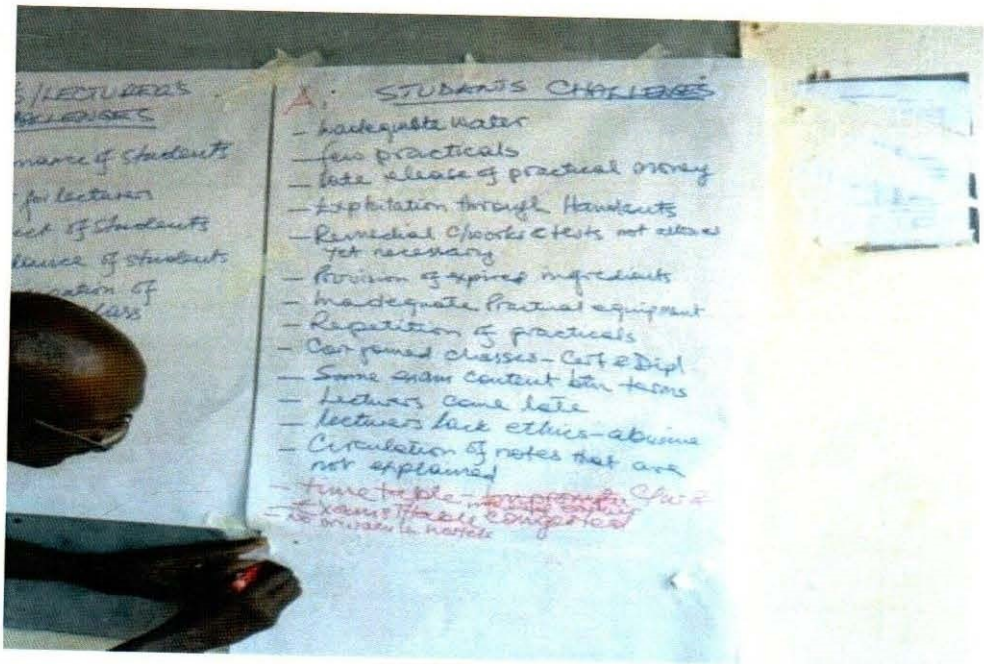


(c)

Figure 1 (a, b & c): Visualized challenges Teaching and Learning Process of FPS.

Source: Field photo, YMCA Mukono (Feb, 2018)

Many critical points were generated and categorized into short term, medium term and long-term challenges as follows:

Long term: Teaching same units together since there is inadequate teaching staff, inadequate teaching and learning space.

Medium term: inadequate practical and more theory, large equipment acquisition for example baking ovens, administrative issues e.g. funds, teaching same units together, inadequate teaching staff, late bringing of requirement and delayed tuition payment.

Short term: Inadequate water supply, poor sanitation, Equipment to Student Ratio, feedback on products, inadequate materials and equipment, unreliable power supply, inadequate practical lessons, late release of materials from the store, lack of guidance and counseling, irregular attendance of students, absenteeism of students, late payment of tuition and bringing requirements late.

The short-term challenges were clustered to get four statements; inadequate water supply and poor sanitation, absenteeism irregular attendance, counseling and guidance, inadequate materials and equipment so that we can get the most pressing issue. We labeled them using numbers 1 to 4 as seen in (Table 2).

Table 2: Identification of the Most Pressing Challenge Using Pair Wise Matrix Ranking

		1	2	3	4	TALLY	RANKING
		Inadequate water supply and poor sanitation	Lack of counseling and guidance of students	Absenteeism, irregular attendance and late coming	Inadequate materials and equipment		
1	Inadequate water supply and poor sanitation		1	1	4	04	2nd
2	Lack of counseling and guidance of students	1		2	4	01	4th
3	Absenteeism, irregular attendance and late coming	1	3		4	02	3rd
4	Inadequate materials and equipment	4	4	3		05	1st

On the priority list, inadequate materials and equipment ranked as the most pressing challenge that needed to be addressed at Mukono YMCA College. This was done through voting by show of hands as shown in the (Figure 2).

(a) (b)

Figure 2 (a & b): Stake Holders Vote for the most pressing challenge

Source: Field photo, YMCA Mukono (February, 2018)

1.5.3 Fantasy Phase

In the fantasy phase also known as utopia, the stakeholders mentioned what they would desire to see put in place to solve the challenge of inadequate materials and equipment. These included; using of ICT, studying in shifts, establishing a real-life project, cost sharing, improvisation by teachers and students, talk to some NGOs for help and getting contributions from the college. All the ideas were collected and put together in a store, regardless of their practicability. The problems were fantasized to be fixable and we turned all the negative ideas to be positive. Stakeholders imagined that every situation was possible and resources were available to address the gaps in this Utopia phase of the FW. However, it was not considered to be an ideal situation and we were obliged to move to the reality phase of the future workshop. Out of the many fantasized strategies, the following were generated as the possible strategies in relation to available resources and the time frame for this study and they were further discussed in the reality phase.

1.5.4 Reality Phase

Establish real life project; stakeholders (administration, teachers and students) in the Futures Workshop we came up with another idea to start a real life project of preparing local food and pastries so that the money collected can be used for acquiring the missing instructional materials and equipment in food production at Mukono YMCA College for both students and teachers.

Contribution from the college management; one student noted that;

"The tuition we pay, some percentage can be used to acquire materials and equipment". He further elaborated that as much as we want to start a real life project, the money collected may not be enough to give us what we want to achieve. Another participant said that "administrative issues are not easy we can't programme on that money if so it will take us a year to achieve our goals, but even if it is so, this cannot stop us from talking to the principal about our challenges".

Cost sharing, top management with the students; one of the stake holders brought in the idea of cost sharing that is students should bring some of the materials and the College also should contribute and the teacher to improvise were possible. This can also increase the availability and utilization of the IM hence reducing the challenges of inadequate instructional material.

Studying in shifts/sessions; one of the participants suggested that equipment to student ratio with such large numbers in class is to use shift system, where one group of students studying in the morning, another group in the afternoon and another group comes in the evening. This method will help students to have access to the few equipment and materials available. All these were wonderful ideas but we agreed on the real-life project (of cooking local food and pastries- CLFP) which was to act as a source of income to increase availability and utilization of instructional materials in food production and service skills at Mukono

YMCA College. The suggested products to be produced in pastry were queen cakes, half cakes, daddies, cookies, crisps as well as preparing local food such as banana, rice, beef, salads, breakfast porridge, and other food as requested by the guests. The preparation of local food and pastries project were going to be a good experience for them because they had never worked on such a project before. In experiential learning this is instigated by posing a problem or uncertainty that the learner wants to solve (Boud & Feletti, 1991) and (Duch, Groh, & Allen, 2001).

1.5.5 Implementation phase

In the Implementation phase, together with the stakeholders we drew an action work plan. This was done so that participants become part of the team, decision makers and encouraged to take on tasks. In the study, the roles of students, instructors/lectures, and administrators were clearly discussed and agreed upon and the role of the researcher was to make a follow, to monitor what was being implemented, what was working, and what was not working well, and why it is so. From 20th February to 20th April was implementation period and from 20th April to 20th May, the feedback was to be known from all groups given responsibilities.

Table 3: Action Implementation Work Plan

Activity	Process	Responsible person	Time frame	Indicators
Contribution from students	Circulars Follow up by recoding .	Students Administration Researcher	February to May 2018	Circulars Material Letters
Preparation of local food as a real-life project	Space, Menu, Guiding principles, Marking guide	Students Administration Researcher	February to May 2018	Note book Furniture Linen
Pastry project	Guiding principles, Grouping students, Follow up	Students Administration Researcher	February to May 2018	Equipment Ingredients
Contribution from the principal	Circulars, Guiding principles	Instructors, Administration, researcher	February to May 2018	Cookers, ovens,

1.6 Statement of Motivation

The four years of my teaching experience in foods and nutrition, hygiene and food production in particular at Mukono YMCA Uganda coupled with observations emerging from the situation analysis. The biggest motivation to this study was academic performance which has persistently been poor. In light of this, the researcher was motivated to find out as to why the performance of students in food production continues to deteriorate amidst the existence of qualified professional teachers at Mukono YMCA College

1.7 Problem Statement

Teaching and learning of food production and service at Mukono YMCA College required adequate instructional materials and equipment for learners to obtain the right skills and knowledge. Instructional materials and equipment are essential for the teaching and learning of food production and service (Jubay, 2001).However, at Mukono YMCA, there was evidence of inadequacy of instructional materials and equipment which negatively affected students' learning of food production and service skills. Teaching and learning were

more teacher centered than learner centered where students are not directly involved in learning but the teacher is the only knowledgeable person and learners are passive learners which resulted into graduates with lack of competences. Learners were less involved in practical lessons due to inadequate equipment and materials and some of them didn't have access to use them. The influence of instructional materials and equipment in the teaching and learning of food production and service was observed. This stirred me to research on the challenges of instructional materials and equipment during teaching and learning of food production and service.

1.8 Purpose of the Study

The purpose of this study was to improve teaching and learning of food production through developing strategies to increase the instructional materials and equipment at Mukono YMCA College.

1.9 Objectives of the Study

i. To examine the challenges of teaching and learning of food production unit at Mukono YMCA College.

ii. To identify possible strategies that can be used to minimize the challenges of teaching and learning of food production unit at Mukono YMCA College.

iii. To design a project of preparing local food and pastries as a strategy to increase availability and use of instructional materials at Mukono YMCA College.

iv. To evaluate the designed project of preparing local food and pastries as the identified strategy to be used to increase availability and use of instructional materials at Mukono YMCA College.

1.10 Research Questions

The research study was directed by the following research questions, which gave the basis for understanding my topic of study.

i. What challenges do the instructors and students in Mukono YMCA College face during teaching and learning food production?

ii. What are the possible strategies to be used to minimize the challenges that the instructors and students' face during teaching and learning food production at Mukono YMCA College?

iii. How can the designed project of preparing local food and pastries be used to increase availability and use of instructional materials at Mukono YMCA College?

iv. How can the project of preparing local food and pastries to increase availability and utilization of instructional materials at Mukono YMCA College be evaluated?

1.11 Justification of the study

The current work places expect institutions to have trained and produced proficient food production and service providers with adequate hands-on skills and competences. It was on this that the society expects food production and service graduands were trained using the relevant curriculum that met the 21st century needs of work places and being taught by highly skilled qualified instructors. Abban and Quarshie (1996) pointed out that the paradigm shift towards practical skills training with TVET in Africa is increasingly being reshaped to make it more attractive, efficient and effective. One of the most important features of TVET, as recognized by African governments, is its orientation towards the world of work with the curriculum emphasizing the acquisition of employable skills and occupational competencies. This therefore calls for training institutions like YMCA Mukono Campus to adopt a skill-based training, hence this study to examine the challenges and look for solutions in teaching and learning of food production and service.

1.12 The scope of the study

The scope of this study was presented under geographical scope, content scope, and timeframe.

1.11.1 Geographical Scope.

Geographically, the project from its inception to the end was carried out at Mukono YMCA College Uganda. The College is located at Mukono 1 km from the city center off Kayunga road on Mulyanti road, behind Colline Hotel. The researcher chose Mukono YMCA College Uganda, because it is her workplace and one of the objectives of this course was to improve the workplaces through participatory research models.

1.11.2 Content Scope.

The content scope of this research was to establish the aspects and challenges of supplying enough materials for teaching and learning. The study mainly examined the challenges during teaching and learning of food production at Mukono YMCA. The study identified the instructional materials needed for effective learning and teaching of food production. The study as well established the status of available instructional materials and equipment, developed possible strategies for the challenges, implemented, and evaluated the strategies identified. Hence, adequate supply of materials was encouraged in the catering department Mukono YMCA College for effective teaching and learning processes of food production to take place.

1.11.3 Time Frame.

The project was carried out for a period of ten months from January – October 2018. This time was enough to investigate the required and available materials and equipment at YMCA Mukono College in line with the study objectives and the research questions.

1.12 Significance of the Study

This study was focused on the issues of inadequate materials and equipment for teaching and learning of food production had much impact on the management of the College. It was intended to make them understand the need for effective supply of the catering laboratory for effective teaching and learning to take place. Below are some of the significances of this study to the researcher, learner, and employer:

The study enabled the students, Instructors and administration to improve or even change the way they think about facilitating teaching and learning processes at the College. They as well thought about integrating theory into practice using the pedagogical approaches to improve the mode of delivering the content. This was possible after identifying the challenges of teaching and learning of food production as a unit at College.

1.13 Definition of Key Terms

Instruction materials; these are facilities given to students, so that they can use every opportunity to develop full potential. Instructional materials in food production include cookers, cutlery, crockery, baking tins, ovens, perishables, and dry ingredients necessary for effective learning (Uslegal.com, 2015).

Academic performance; refers to the level at which a student, teacher or institution has managed to reach their educational goals this can also be measured by the examination results because this is one of the major goals of a school (Cambridge University, 2003).

Availability; refers to something that can be bought, got, found, or something accessible.

Utilization; is to use something especially for practical purpose

Teaching and learning; refers to giving the student a lesson in the school, college, university to gain knowledge or skill by studying through experience being taught.

Real life project; this is a project that aims at giving students the chance to talk together about how to connect all parts of our lives in a meaningful way.

Mis-en-place; means preparation before service

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

This chapter reviews the work of other researchers and scholars on availability and utilization of instructional materials during teaching and learning. The chapter mainly looked at the theory that was followed in conducting the study. The first part presents theoretical literature, the second part presents empirical literature that rotates around the objectives developed in chapter one. The last part presents theoretical framework which was developed by David Kolb comprising of experience, reflection, thinking, and testing new situation (Kolb, 2014).

2.1 Theoretical Framework

The study was guided by Experiential Learning Theory (ELT) Kolb (1984) which provides a holistic model of the learning process and a multi-linear model of adult development. The ETL emphasizes the central role that experience plays in the learning process and it differentiates cognitive learning theory, which tend to emphasize cognition over affective and behavioral learning theories which deny any role for subjective experience in the learning process (Beat, 2009).Also the ETL derives its intellectual origins in the experiential works of Dewey philosophical pragmatism (Dewey, 2001). Lewin's social psychology (Lewin,1951) and Piaget cognitive development(Piaget, 2011).ETL can also be defined as hands on activities due to the qualities it imparts on its learners. These qualities include team work, creativity, responsibility, honest, empathy, punctuality, which help the students manage their own learning, rather than being told what to do and when to do it.

The relationship between student and instructor is different with the instructor passing much of the responsibility on to the student. Learners can reason for themselves and are able to successfully explain their position. They have clarity of purpose with tasks they undertake and self-management skills necessary to work successfully both alone and in a group. Experiential

learners are aware of the "rules" governing their discipline or mode of operation. They are open-minded and able to work with people with different views. Students can identify what to learn, as well as reflecting on how they have come to their new knowledge (Moon, 2004).Learners play a critical role in assessing their own learning (Wurdinger, 2005).How one student chooses to solve a problem will be different from another student, what another student takes away from inexperience will be different from the others. Therefore, experiential learning means learning from experience or learning by doing.

2.2.1 Visualisation of theoretical framework

A framework employs the use of drawings/diagrams to explain the interrelationships between variables. These variables and other related factors are put in boxes with arrows indicating the Interconnections between them (Orodho, 2008).The theoretical framework for this study was developed from the theory and the related literature already discussed. It is evident that if instructional materials are available and are utilized effectively during teaching and learning can greatly improve students' knowledge and skills in food production and service. The instructional materials include: dry ingredient, cooking gargets, crockery, cutlery, and fresh ingredients.

This means that instructional materials should be available, adequate in supply, of good ratio to the pupils and used frequently. Efficiency in the use of these materials will then transform and improve on learners' knowledge and skills during teaching and learning hence higher academic performance. However, there may be other factors which influence performance. They could be the teacher's commitment, attitude, qualifications, sex or age, experience or level of education. Others could include pupils' home environment and parental involvement or adequate supervision. The variables are illustrated in the Figure below.

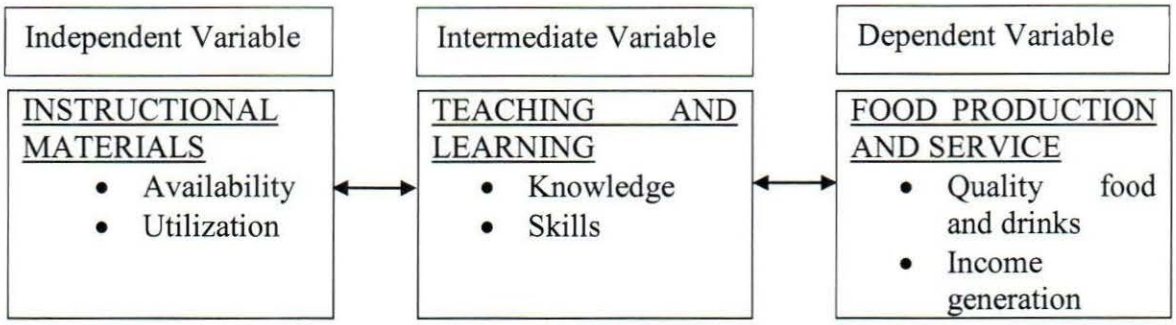


Figure 3: Relationship between Independent, Dependent and Intermediate valuables

Source: Primary data (2018)

Note: Figure 3 shows the relationship between Independent Variable (Instructional Materials), Intermediate Variable (Teaching and Learning) and Dependent Variable (Food Production and Service). The variables are based on experiential learning theory that informs this study, this is so where by the research holds a belief that when instructional materials are adequately availed to students in the learning process, the learning becomes meaningful. This is through the vivid experiences' learners go through while interacting with the instructional materials.

Utilization of instructional materials in experiential learning theory, teaching-learning and knowledge is through transformation of experience. The theoretical framework in this study is based on Experiential Learning Theory (ELT) attributed to the works of David Kolb in 1984, because of its suitability in hands on learning. Experiential Learning Theory (ELT) contains two different methods of gaining experience which are related to each other which is physical experience and theoretical understanding. There are also two distinct approach of transforming the experience so that learning is achieved: reflective observation and active experimentation (Baker, 2002).

In addition, when these four modes are analyzed together, they constitute a four -stage learning cycle that learners go through during the experiential learning process. The first stage is where the learner actively experiences an activity such as a practical lesson or project work that

is actual doing. In the second stage reflective observation this is where the learner consciously reflects back on that experience. The third stage is abstract conceptualization were the learner attempts to think of what was observed. The fourth stage which is active experimentation or planning is a situation where the learner tries to plan how to test an experiment.

Furthermore, this particular model was selected because it had some connection in the practicability with food production, hands on which enables to solve the problem at hand holistically as well as improving teachers' professional knowledge. Using this model as illustrated below, we considered instructional materials as students learning resource designed to help a teacher achieve the set goals and objective during the teaching and learning process. The study considered the participants as learners and instructors, given learning resources to undertake different activities through experiential learning. We expected students to account for their learning process during a practical lesson, make products that go well with their standard for evaluation. The design to improve on the original material depends on the type of learning, the availability of existing materials and utilization of resources available (Dick, 2001).

At the same time, experiential learning is rooted in hands-on practical exercises and experiences, which makes it similar to the kind of learning that goes on in institutions. Experiential learning is a very useful tool of teaching how various fields such as food production operates (Batalden, & Davidoff, 2007). It has been shown particularly effective in teaching skills needed by students (Hoover, Giambatista, Sorenson, & Bommer, 2010) and (Whetten, 2007). Since food production is a field that is skill-based, experiential learning is the key to student success (Corbett, Kezim, & Stewart, 2010).

2.2.2 Concept of Instructional Materials in Food Production Unit

Most educators define instructional materials as resources that are systematically organized to support teaching and learning (Remillard & Heck, 2014). The materials required for practical lessons in food production include; fresh and dry ingredients, cooking garget,

utensils, ovens, linen, and crockery. These should be provided to facilitate the teaching and learning process so that the teacher prepares and enrich training. This would make learners get involved actively in the lesson in order to get a deeper understanding and better use of knowledge (Dolmans, De Grave, Wolfhagen, & Van Der Vleuten, 2005). Every teacher needs IMs in order to have a successful classroom. The learner can continually choose which set of learning abilities he or she can use in a specific learning situation. In this sense, learners need materials and equipment to foster their learning. This means that in scenarios where by learners do not have the required quality or quantity of instructional materials and equipment like saucepans, baking ingredients, cookers, coolers, warmers, ovens and refrigerators' their learning is crippled.

Instructional materials are central in the teaching and learning of food production because they are used to compliment efficiency of a teacher and effectiveness in lesson delivery. The uses of instructional materials make teaching effective as it enables learners to participate actively in classroom instruction (Mathew, 2012). All these views suggest that the use of instructional materials can improve students' performance

2.2.3 Importance of Pedagogical Skills in Teaching and Learning

To begin with, pedagogical skills are very important for the teachers to undergo proper professional training so that they understand why certain things happen in teaching and learning and how they can deal with them. BTVET sector also suffers from qualification issues among its teaching staff (TISSA, 2013). A massive 30 percent of the estimated 5,000 instructors have minimum requirements to teach (40 per cent in public and 21 percent in private institutions); this translated into 3,500 instructors in need of upgrading training especially incompetence related to occupational skills, industrial experience and instructional skills. Much as one may be skilled to be in position to teach, you need a pedagogical orientation to teach well. Therefore, regardless of any situation, it is the role of the instructor/ teacher to ensure that quality IM is not

compromised and the learners are provided with the knowledge and skills they require. In this case, the contemporary technical and vocational teacher should select and develop appropriate IM.

In this regard, they should as well match them with the learner's developmental abilities, characteristics, skills and knowledge with the aim to develop vocational and technical capacities. The teachers are the key element in the curriculum reforms process (Mkpa, 1988). In order to produce teachers with good knowledge of the content and method of using available instructional materials, teachers must be exposed through in-service training programme. It should be clear that if the training is given to these teachers, it eventually enabled them to acquire the new skills and knowledge needed to teach vocational and technical subjects effectively. For this reason, the learning process to be effective, both knowledge of subject matter and teaching skills, are essential (Olaitan, 1983). There is a need, therefore, for a programme to be designed to train would-be teachers for effective transmission of knowledge. Teacher training programme should be designed so that teachers are taught the methodology behind the uses of the materials and equipment in a way that in turn allows them to best equip students with the skills and knowledge demanded by the job market.

I wish to clarify the idea that utilization of instructional materials does not require pedagogical skills only but also technical skills are required. This may require operation of some machines, performance of some tasks to come up with appropriate and deserving IM. This challenge therefore, results into a teacher being less creative and innovative and this affects the quality of teaching. The demand for learning most especially in vocational education has changed. TVET is referred to as a range of experiences that are relevant for employability, portability of competences and qualification and acquisition of skills, decent work opportunities and lifelong learning in the related world of work (UNESCO-UNEVOC, 2006). This concept embraces the importance of innovation, competitiveness, productivity and growth of the

economy. Considering that, innovation creates a new approach to education and training to meet the demand of new skills. Therefore, a teacher with less vocational skills will definitely not be creative, innovative and productive as well.

At the same time, material resources help to bridge the gaps between reality and the abstract (Garba, 2004). For effective instructional delivery, the teacher is encouraged and expected to effectively utilize relevant instructional materials. Such materials make the teaching and learning process more interesting, easier, effective, livelier, and appealing to the learner. These studies indicate that there is a problem in VE institutions, directly linked to inadequate instructional materials. Food production and service (FPS) is one of the vocational education course units in hotel and institutional catering under the department of catering. Vocational education is a tertiary education offered in the universities, polytechnics, schools and colleges of education. Food Production and its related operations are integral elements of hospitality, hotel and restaurant management (FPT, 2014), which requires a skilled staff who can produce a variety of quality foods. FPS curriculum focuses on skills and knowledge in preparing and presenting quality food and other kitchen operations.

In addition, learners of food production and service perform better during demonstrations, preparations and presentations when their teacher is around to guide them at every step when cooking and providing feedbacks on items prepared. This is why in this age where quality service is required, it is necessary to harmonize what we teach in food production and service with what the industry expects from students (Okeiyi et al., 1994). This creates the need to integrate workplace-based learning involving hotel personnel in teaching and allowing more time for learners to practice in the hotel and hospitality organizations. Learning exhibitions could be a better way of doing this through real life projects (RLP).

Furthermore, before selecting or developing any IM, consideration should be given on the number of teaching/learning situations to which the IM can be applied. This is because it is

more economical to buy or develop an instructional material which has dual usage than one that can be applied in a single learning situation. Therefore, acquisition of instructional materials having a wide range of practicability is essential. The teachers should realize the need for improvisation if the cost of purchasing is high. Such improvisation is a way of increasing inquiry, curiosity, creativity and productive application of intellect. Development or improvisation of instructional materials could also be done concurrently with the students such as projects or group assignments in designing and purchasing some gadgets of learning.

2.2.4 Importance of Instructional Materials to Students during teaching and learning

The teaching and learning of food production as a specialized field is vital in improving skills of workforce with potent understanding and diverse skills in the development, production, management and utilization of materials and equipment. For effective teaching and learning of food production to take place, instructional materials and equipment are necessary because they help to facilitate teaching-learning processes and are used to influence concrete and permanent change in food production technology and other disciplines. They also carry adequate information which can be used to record, store, preserve, transmit, concretize or retrieve information for the purpose of teaching and learning. Their use will allow discovered facts to be glued firmly to the memory of students (Ogwa, 2002); (Wale, 2006) and (Eya, 2006). Therefore, all materials or teaching aids or material resources are used for purposes of making teaching and learning more effective and meaningful to the learner.

This means that technology and vocational education programmers' require instructional materials and equipment which help in the facilitation and the acquisition of occupational skills in the diverse areas of food production and service. Useful skills can be developed and reinforced by the appropriate selection and use of instructional materials and tools. Furthermore instructional materials aid explanations make the subject matter understandable and the learning

concrete and real. They allow students to participate in the lesson, enable students to retain knowledge and acquire better skills thus learn meaningfully (Ololobou, 2008). Instructional materials provide learners the chance to become actively involved intellectually, perceptually and physically in the learning process (Jekainfa, 2005). Therefore, IMs aid in the transformation of learners and all people involved in the instruction. In scenarios where the equipment is limited, students will perform poorly, won't be able to acquire the necessary skills. This requires that institution offering courses such as food production unit should provide the required instructional materials.

2.2.5 Challenge of Instructional Materials during teaching and learning food production.

Many training institution do not have enough instructional materials and equipment to cater for students learning and in the right amount and quality to ensure effective utilization (Owoh, 2009).Inadequacy causes ineffectiveness school system and poor performance of students. Most vocational teachers do not locally improvise local teaching aids because of lack of teacher qualification and professional development, lack of creativity and experience. Inadequacy of funding in vocational teaching is acute in Africa, more so at this time that many countries are struggling to get out of the trouble of economic recession. Therefore, training institution should equip the training laboratories well for effective teaching and learning to take place (Lukeman, 2009).

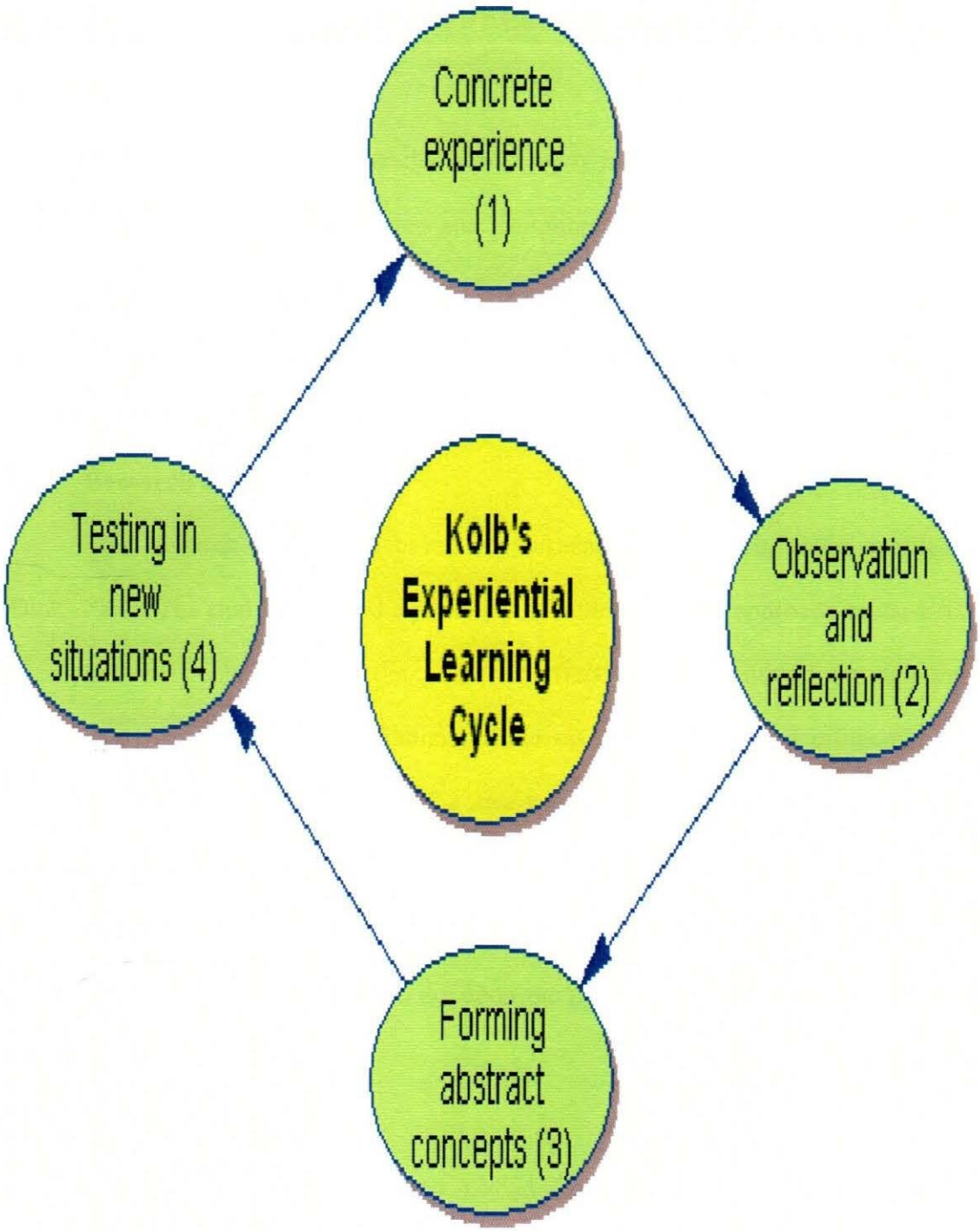


Figure 4: Enhancing experiential learning in higher education

Source: Secondary data (Kolb, 1984)

CHAPTER THREE: METHODOLOGY

3.0 Introduction

This chapter presents a detailed plan, clearly indicating the research design, area of the study, study population, sample size and sampling techniques, data collection methods and tools. It also looked at quality control methods, data analysis techniques, ethical considerations and limitations. The description of methodology as procedures used to obtain and analyze data is in line with (Todd, 2012).

3.1 Research Design

This research design was based on participatory approach, using qualitative method (Dick, 2001). The study employed a participatory action research approach because it allows the participants to freely diagnose the problems affecting the institution through the situation analysis and develop practical solutions to address them quickly and efficiently. It offered a complete description and analysis of a research subject without limiting the scope of the research and nature of participants' responses (Collins & Hussey, 2003). It described participatory research as a process through which members or community identify a problem, collect and analyze information, and act upon the problem in order to find solution (Selener & Bradbury, 2001).

3.2 Area of study

The study area was at Mukono YMCA College because access was possible and the appropriate people (target population) were available. Therefore, a high probability that the study's focuses, processes, people, programs, interactions was available to the researcher, and the research can be conducted effectively by individuals during the data collection phase of the study (Berg, 2001). I sought to undertake the study at Mukono YMCA College because as a teacher at the institution being allowed would not be difficult and communication to the participants would be easy. The institution also had the appropriate population that I needed for

the study and these included the students, teachers and administrators at the college. For this reason, all the processes seemed to favor the problem statement at every stage of the research. To gain access to the study area, I had to seek official permission from the principal and this is shown in appendix 2 and explained under the section for ethical issues of this chapter.

3.2.1 Study Population.

Mukono YMCA College had the following number of students and staff connected to the study. They included 15 administrators, 5 instructors under catering, 54 certificate students, and 16 diploma students totalling to 90 respondents. I had to ensure that the population at Mukono YMCA College was appropriate by virtue of their proximity to the research, be able to provide the richest and most relevant information (Ritchie, Lewis & Elam, 2003). The appropriate population may be obvious, but often it was necessary to think through the roles, knowledge or behavior of different groups and their ability to shed light on different aspects of the research (Ritchie et al. 2003). The students were included because they are affected by my practices and they would benefit from any improvement made. The teachers had to share professionalism with me and some of them showed interest to also improve their practice. The administrators determine which resources are allocated to what project. The overall population comprised everyone who works at Mukono YMCA College especially in the catering department. However, the selection was purposive from this population that the sample was picked.

3.2.2 Sample size and selection of participants

A sample is a segment of the population with the same characteristics or the population on whom the study is conducted (Burns & Grove, 2003).The sample size depends on what the research intend to know, the objectives of inquiry, what's at risk, what will be useful, what will have credibility, and what can be done in consideration to the available time and resources(Marshal, 2013).The sample size of this study comprised of 40 participants who were

selected for data collection with both sexes male and female regardless of age. This included 34catering students' diploma and certificate, four instructors, a principal and the examination coordinator. It was important to have instructors in the sample because not only the research aimed at improving their methods of teaching practical lessons but also their contribution was vital, because it revealed critical information which contributed to the study. This is illustrated in (Table 4).

Table 4: Selection of Participants

Category of participants	**Study population**	**Sample size selected**	**Percentage sample %**
Diploma students	16	8	50
Certificate students	54	26	48
Teachers	05	04	80
Administrators	15	02	13
Total	**90**	**40**	**44**

Note: Table 4 highlights the sample size and the selection of participates. A total of 9 participants were considered and out of those, 40 of them were selected. As highlighted in (Table 4) this consisted of a 44 percent of the total sample size.

3.2.3 Sampling techniques

The researcher used stratified sampling because different groups were selected using strata in which the researcher divided the entire population into different subgroups, and then randomly selected the final subjects proportionally from different strata. This type of sampling was used when the researcher wanted to highlight specific subgroups within the population. For example the researcher organized the population into different groups and then selected appropriate numbers of student, instructors and administrators. This ensured that the researcher

had adequate amounts of subjects from each group in the final sample as shown above. This helped to reduce bias and also saved time.

3.3 Procedure of Data Collection

Data were collected using the Futures Workshop model which involved four phases: preparation, critique, fantasy and reality phase. In the preparation phase, the researcher presented an introduction letter from Kyambogo University which is reflected in (Appendix 1). The letter sought permission to carry out action research. After getting the letter of acceptance from the College which is reflected in (Appendix 3), the researcher organized meetings to draw the work plan for all the activities that were done during the action research process. The participants included learners, instructors and administrators. The researcher together with the participants carried out a situation analysis on the challenge's students and instructors face during teaching and learning of food production at the institute mainly in matters regarding the instructional materials and equipment. The data collected from the field was cross-examined and triangulated through various processes. This was also cross-examined with data already published through various books, journal articles and other sources of secondary data related to the subject under study.

3.4 Methods of Data Collection

The researcher triangulated interview guide, focus group discussion (FGD), and future workshop methods when collecting data for the study. This was done in order to ascertain that the methods used for data collection were appropriate to ease the work of the researcher and to explore the current situation at Mukono YMCA College regarding the availability and utilization of instructional materials and equipment to cater for the teaching and learning of food production and service course unit curriculum.

3.4.1 Interview

Interviews are regarded as an interchange of views between two or more people on a topic of mutual interest (Steinar Kvale, 2009). In depth, interviews were conducted to enable the participants to describe the situation hence offering the researcher access to ideas, feelings, and recollections in their own words, rather than the words of the researcher (Key, 1997). The structured interviews were used to collect data from the students, teachers and administrators on the availability and utilization of instructional materials and equipment to cater for the teaching and learning of food production course unit.

The researcher formulated an interview guide that is presented in appendix 4 and 5 based on the study objectives to gather information from the respondents. This approach was opted because it permitted the establishment of confidence and co-operation between the researcher and respondents, which made it easier for the interviewer to get vital information. Interviews were used because of their nature of flexibility that allows the questions to emerge from the immediate context of presentation. This enabled the researcher and the participants to share and learn from each other throughout the interviewing process in a collaborative manner.

3.4.2 Focus Group Discussion (FGD)

Focus Group Discussion (FGD) was chosen because it uses limited resources in terms of time, man power and finance. The phenomenon that was researched requires collective discussion in order to understand the availability and utilization of IM and equipment at Mukono YMCA College to cater for the teaching and learning of food production. In this study forty respondents were engaged in focus group discussions. A total of four sessions were conducted according to the materials available for the study. The FGDs were used during situational analysis process and during data collection, validation and report writing. This is in line with participatory action research approach which upholds that the problems within an institution should be based on group discussions (Mikkelsen, 2005). This method helped the

researcher in getting participatory decision on the variables in the study to get first-hand information.

3.4.3 Futures Workshop

Futures Workshop was used as an investigative way to highlight problems and look for suggestions to solve them (Jungk & Müller, 1970). Future workshop is a good tool for tackling complex problems where many seem to have contradicting views (Lauttamäki, 2014). This is a future technique developed because it enables a group of people to develop new ideas and solutions in a collaborative effort towards existing problems. A future workshop emphasises critique learning, team work, democracy, and empowerment (Lauttamaki, 2014).

In addition, the FW was used as a tool in this study because it aims at supporting participants in identifying common problems, developing visions and ideas in order to improve on the situation at hand. The FW was developed for groups with limited resources to have a voice in a collective decision-making process. This was meant to shed light on common challenging situations, to generate visions about the future and to discuss how these visions could be realized.

Key participants who were students, teachers and administrators came up with strategies through voluntary and active participation in the study as emphasized in community of practice. The future workshop started with self-introduction of the researcher followed by a brief introduction of the purpose of the gathering. Participants were encouraged to brainstorm on their personal expectations and fears about the critical stage of the workshop as they gave their individual views

Following the above, the researcher presented and explained to the stakeholders the guiding principles of the action research as being collaborative, democratic, equity and transparency. By being collaborative and democratic, any action research agenda was tobe

inseparable linked with dialogue and freedom necessary in the empowerment of all stakeholders that are affected by the issues at hand.

3.4.4 Participant observation

This method involved recording all those phenomena which were visible to the human eye. It entailed making critical analysis of events, seeing and hearing. The researcher as a participant in this collaborative research associated with the key participants as in a community of practice. The participants listened and took notes of the events that took place at the institution during the study. In this way the researcher observed the respondents' instructional materials and equipment available at Mukono YMCA College. To conduct an effective participant observation, the researcher should live and work within the group, become part of it, and live as a group member for an extended period of time (Crossman, 2017). This gave the researcher and the participants' access to get closer to the details and on goings of the group and their community.

3.5 Data collection tools

3.5.1 Log book

The researcher recorded her observations and important conversations shared between the researcher and participants. This kind of data if not recorded could have otherwise been lost (Maykut & Morehouse, 1994). The researcher recorded the views of each discussion held by the participants within the Focus Group discussion in the logbook. This contained all activities, indicating experiences including dates, the resolutions made by the participants and work plans. The researcher kept the log book as an observation field of notes and discussions.

3.5.2 Camera

The camera was used to collect the evidence of the research through taking photographs and videos. It was vital during all focus group discussions especially when participants were

stressing their views. For academic purposes, smart phone camera was used to gather and document information during field research activities (Pelckmans, 2009).

3.6 Data analysis

Data from the interviewees and focus group discussions for this study was coded, edited, arranged and analyzed by first identifying major themes and sub-themes based on the study objectives and questions (Creswell, 2003). The data obtained was used in the decision making, comprehensive interpretations and other related inferences. From the qualitative data obtained, the emerging ideas, opinions and beliefs were critically analyzed and synthesized with what other writers have said in the literature review in order to make them more comprehensive. This was done in order to fill the literature gaps (Lipton, 2014). Some of the photos that were captured during the focus group discussions were used as strong evidence to support the study findings.

3.7 Ethical considerations

The researcher presented an introductory letter from the faculty of vocational studies, department of Art and Industrial Design of Kyambogo University to the respondents so as to avoid bias and give focus of the study. Some of the principles of ethics were taken into consideration in the course of the research. The study respondents were left to retain the independence of their minds and free decision-making process. The researcher also ensured that the information got from participants was kept very confidential to avoid the stakeholders being in danger of being victimized of any ideas contributed during the study. Free discussion and every one's idea were considered to encourage maximum participation by the stakeholders without any form of distress. Secrecy was maintained through the use of stakeholders or respondents to conceal the identity of participants. This is because the information provided by respondents was in no way revealing their identity. Recording responses and photography

during the interviews and focus group discussions was done under the permission of the participants to avoid fear and suspicions.

3.8 Validity and reliability of instruments

Validity refers to the quality that a procedure or an instrument used in a research collects right and meaningful data (Kimberlin, 2008). Reliability on the other hand refers to the consistency of a research procedure or instrument to get vital information. In other words, it is the degree of constancy demonstrated in the study. Since the validity and reliability of data are critical, the tools used in the study were instrumental in gathering detailed and accurate first-hand data and above all, it was helpful in triangulating the information acquired from the interviews with the information got from FGDs. In this study the researcher carried out focus group discussion and interview methods with different individuals to see whether the key questions could easily be understood and see whether they could bring useful answers. This was done to test the stability or dependability of an instrument or procedure in order to obtain the same information (Kahn, 1986).

In this study, the researcher designed several sets of data collection tools and distributed them among administrators, instructors and students at YMCA Mukono College. After collecting the data, opinion from the students, instructors and administrators were sought to ensure accuracy and consistency of the data collected. Following the interviews and FGDs from the situational analysis, the researcher analyzed the data collected and comments were generated during the future work shop on aspects that seemed unclear to the key respondents. Adjustments were made in line with what was relevant to the situation analysis. Similarly, reliability was guaranteed by triangulating the methods of data collection namely; interview guide, FGDs, and direct or personal observations from the future workshop.

The instruments used in this study enabled us to get what we wanted to get using cameras and observation check list as the figures show in the text. This means that the

instruments were accurate, correct and true with what they were supposed to measure. So, if whatever data collection instrument that we used gave us what we wanted in our objectives, then there was validity (Anastasia, 1982). In light of this, the accuracy and quality of the instrument used by the researcher ensured that for purposes of developing items, valid and reliable instruments were used to collect accurate and desired data that achieved the study objective.

3.9 Limitations of the Study

i. The researcher faced limitation of financial constraint when conducting the research as she incurred high costs in the local transport, accessing, downloading articles and printing which were beyond the planned budget. This problem was over come when the researcher decided to involve the stakeholders such as using the photo copier from the college and to accept a part time job to cater for my transport.

ii. Time by constraint, Time allocation between the study and various activities which occupies human life in the study was experienced. This was overcome by foregoing some of these activities such as visiting friends, going for different functions, and got a private place so that I can concentrate.

iii. Some respondents didn't want to provide the necessary information, due to the technicality of the subject under study and the confidential nature of other data. This was dealt with by simplifying the interviews and discussions with them. Confidentiality of the information that was provided was handled by promising and assuring the respondents that the study is just for academic purpose.

iv. Towards the end of term one, there was a strike which halted most of the activities at the College which led to the closure of the college for one month. This as well affected the time which was stipulated for the research and it was extended.

v. The institute has both resident and none resident students, sometimes it was hard to get all the students at once because day scholars tend to delay at home or even do not attend

classes completely. This was handled by involving mainly residents who were easy to get any time.

CHAPTER FOUR: ANALYSIS, PRESENTATION AND INTERPRETATION OF FINDINGS

4.0 Introduction

This chapter describes data that were pertinent to increasing availability and utilization of instructional materials in food production and service at Mukono YMCA College. Findings from the analysis, presentation and interpretation of this research successively, followed by the objectives of the study were to be discussed in this very chapter. The findings were presented in themes which were directly generated from the objectives. These included; preparation of local food, making short paste bakery products such as daddies, cookies, cakes, and students learning outcome. Each theme had sub-themes as shall be revealed in the text.

Implementation was conducted with the help of interview guide and a focus group discussion guide, compiled and presented accordingly. Being qualitative in nature, this research allowed data descriptions and interpretations to be based on the researcher's reflection, students', teachers' and administrators' responses, observations and perception of what happened during implementation. The key participants during the course of data collection were assigned responsibilities and dates of completion as reflected in chapter one. Since the research was about increasing the availability and utilization of instructional materials in food production and service, we had to implement some lessons through preparation of local food and pastries as a real-life project that data generated based on the project. The project was based on David Kolb's Experiential Learning Model (ELM) 1984 which has already been explained in chapter two.

4.1 Perception of the real-life project

The real-life project (RLP)is a module which introduces learners to real life activities that spark them off to look out for business opportunities and develop their skills to plan and work in a real-life context. The real-life project in the syllabus for technical and vocational

institutes was developed bearing in mind the current labour market demands. It is learner centered, competence based, and emphasizes on hands on training. The module enables a learner improve customer care to expand on their project by application of social skills for customer retention. The RLP is done every term for learners to perfect their skills as they continue with their project created in term one. The participants were expected to select the right materials for the identified project and produce the selected project items.

My exposure to experiential learning as a master's student of vocational pedagogy at Kyambogo University compelled me to extend a similar learning process to Mukono YMCA College. The project was done through performing tasks and learning experiences derived from the tasks as well as reflecting upon the experiences related to the previously acquired experiences. Learning from experience is to make a backward and forward connection between the things we do and what we enjoy or suffer from (Dewey, 1997). In such conditions, doing becomes trying an experiment with the world to find out what it is like which becomes instruction-discovery of the connection of things.

Furthermore, my understanding of experiential learning was strengthened when I was an undergraduate at Kyambogo University conducting a restaurant project during my end of third year. During that project, I observed how students were involved in the planning and execution of their learning tasks in groups after which they would write what is to be done regarding the task. I felt it vital to carry on similar experiences to the real teaching and learning situation at Mukono YMCA College. In doing so, I got more acquainted with the applicability as well as to expose my knowledge to participants which they can later adopt and employ in their learning as well as the world of work. Learning through the project was intended to empower the students to learn by getting involved in different activities such as sharing experiences, personal reflections and ideas generation about their tasks and I would make a follow up on their progress.

In addition, the process was to enable students to develop confidence, self-impression, knowledge and cooking skills. As a teacher, I considered the individual involvement in executing of tasks as paramount to developing self-confidence, a sense of responsibility in managing tasks as well as promoting curiosity and self-discovery which are fundamental in learning (Dewey, 1997). In order for them to learn these skills, it was necessary for each person to get involved practically and individually. The purpose of individual involvement was for students to attend to a specific task and master it on their own, because establishing an individualistic structure would help them to learn specific skills to be subsequently used in cooperative learning situation (Johnson & Johnson, 1999). It is my belief that the knowledge and skills acquired during the practice by the students would be used in their respective fields of specialization in preparing quality food and pastries during the teaching and learning process

However, like any other learning process, participants need encouragement and empowerment from one another to get started and to keep focused. Learners to strengthen their cooking skills, they needed practice through trying and failing, learning from their mistakes until mastery of the skills. This is also shared by constructivist theorists who recognize that there is no such a thing as knowledge out there independent of the knower, but also, we can construct knowledge for ourselves as we learn. As teachers, we should help the learner understand the world, but we don't ask him/her to construct his or her own world.

Besides, I observed and experienced that most learning requires a great deal of motivation and encouragement from the experienced person facilitating it. Therefore, as a teacher, I had to keep encouraging the students through sharing personal experiences and made sure I was available whenever they needed guidance. Gradually as the project progressed, I begun to realize improvements in the products through comments from our customers, which was an achievement in our project, participants were encouraged to be more keen and attentive. This enabled them to note any related details which they felt important for their individual

development and learning. Even if learning needs the application of the mind, some bodily activities have to be used. The senses especially the eye and ear, have to be employed to take in what the teacher say. We also set goals and objective of the project which included to;

i. Acquire the necessary skills for job creation rather than job seeking.
ii. Initiate and manage small business enterprises.
iii. Make good quality products.
iv. Equipping the catering lab with the necessary instructional materials and equipment relevant for teaching and learning.
v. Utilize the acquired instructional materials effectively to improve teaching and learning environment.

4.2 Key components of the real-life project (RLP) of the research

The key components of the RLP chosen by stakeholders include "cooking local food, baking cakes, and short pastry products" which were to enable a learner to; prepare good quality food, serve guests proficiently, pack and brand their products, design menus, writing a budget, and market their products, which would improve on their knowledge and skills acquisition for better performance. The chosen projects are part of the real-life project and were designed so that it could connect to various subjects among these are; Food production and service, Food costing, Personal, Book keeping, food, and kitchen hygiene.

Food production and service involves preparing quality food and serving it to customers. Food costing entails preparing the costing sheet and portioning food to ensure that no losses are incurred. Personal, food, and kitchen hygiene prevents food poisoning, cross contamination, food spoilage, and keeps the working area and the service area attractive. Marketing and sales was done to help students to improve the quality of their products and selling abilities. Book keeping helped students to balance their books of accounts in order to check their progress. Shopping, preparing, portioning their products was done to help learners balance their books of

accounts. Finally, in store keeping students made sure that what was bought is stored in the right place and monitored. All the information about the project was to be recorded by jotting notes somewhere on what was done which was to be taken later as important. Among the required information was taking photos to be attached to their report as evidence about the activities done during implementation of the project.

4.3 Verifying the available instructional materials at Mukono YMCA College

Stake holders expressed that before doing anything, we have to verify the materials available and the quality, the ones to buy, and the ones we can obtain from the population and the surrounding. Below the table show the available instructional materials and equipment.

Table 5: Available instructional materials at Mukono YMCA College before the study

S/N	INSTRUCTIONAL MATERIAL	CONDITION	COMMENT
1	Cookers	Fair	Not enough
2	Refrigerators	-	Not available
3	Blender	-	Not available
4	Weighing scale	-	Not available
5	Utensils	Fair	Not enough
6	Cutlery	Fair	Not enough
7	Linen	Fair	Not enough
8	Cake tins	-	Not available
9	Cookie cutters	-	Not available
10	Nasals'	-	Not available
11	Dinner plates	Fair	Not enough
12	Mixers	-	Not available
13	Mincers	-	Not available
14	Service Area	-	Not available
15	Whiskers	-	Not available
16	Mixing bowels	-	Not available
17	Gas cookers	Good	They are adequate
18	Palette knives	-	Not available
19	Source pans	Fair	Not enough

According to Table 6, we realized that most of the IMs needed for teaching and learning to take place were missing. Instructional materials (IM) require financial and technical support

with a certain amount of budget allocation from the college to be secured. The community and stake holders should work together to increase the availability and utilization of instructional materials and equipment. The department should as well prepare a purchasing plan; submit it to the principal, for acquiring IM to assist the teacher in disseminating knowledge and information. Some materials should be got from other sources, including collection of items from the students and improvised materials by teachers and students. Any effective utilization of instructional materials requires an instructional process to be organized, have people, facilities and equipment so that the stated objectives are realized.

4.4 Theme 1: Preparation of local food procedure

The project of cooking local food was used to increase instructional materials at Mukono YMCA College. It involved different steps which included; selection of group members, writing budgets, shopping, cooking and serving food, clearing, and washing up. The learner may choose and run any of the projects such as designing a la carte menu cards, operating a canteen, making short paste bakery products such as cookies, doughnuts, daddies, pizzas, and filos, bake cakes, cook local foods, run a grocery, deep fry fish, and meat, chicken roasting, and prepare cocktails. The detail of course units covered per term is reflected in (Appendix 11).

Students had to write and submit their budgets indicating how much money was required as working capital on a daily basis. After printing the budgets, I met the group members, read through the budget (shopping list), to determine the selling price, portion control and advice was given to them accordingly. The money used as the opening capital for the project was given to us by the principal and some of the utensils to be used were also provided.

Continuous assessment was done during implementation of the project and marks awarded were added to end of term results. The administration was aware of our project and they approved it. The project was carried out from the catering class because we had to use the available equipment and materials. The project took place as scheduled on the time table and

learners selected items to be worked upon in the subsequent terms. Some of these items were; queen cakes, daddies, cookies, crisps and preparing food such as banana, rice, potatoes, beef, vegetables, and salads. These were selected basing on the preferences of our target customers. The project was operated in groups of five members and each group wrote a report on what has transpired indicating their tasks, schedules, challenges and benefits.

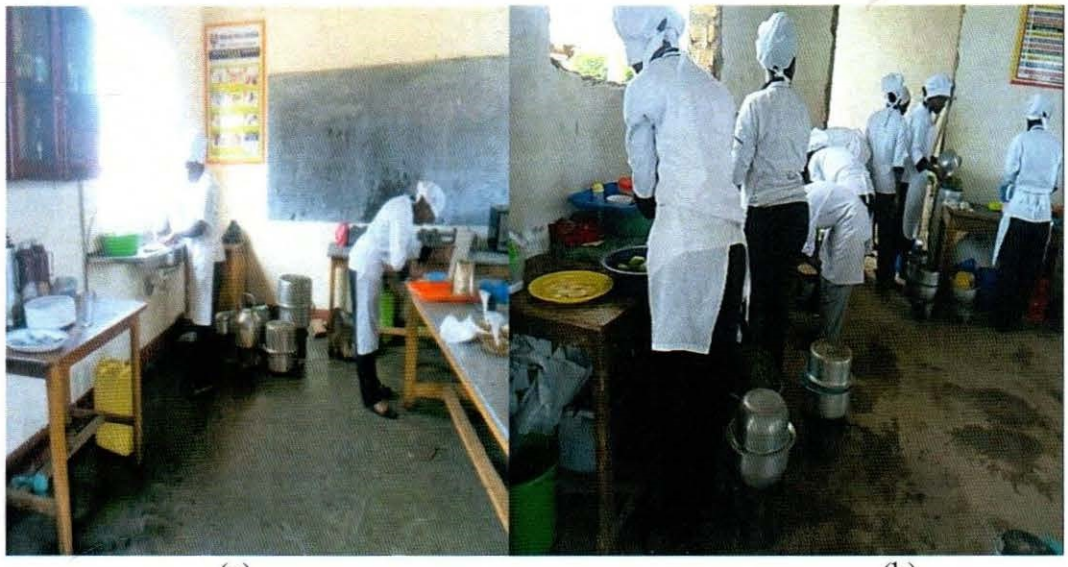
4.4.1 Formation of groups and their duties

Formation of groups was done bearing in mind gender balance. Students were selected from different terms i.e from term one to term six, from different levels that is diploma and certificate who had to work together. This was done so that students are more creative, complete the project on time and engage in critical thinking and discussions. They also chose group leaders especially the manager and the assistant manager, after they took on tasks such as a cashier, a chef who was responsible for cooking and portioning the food. The service staffs were responsible for serving and billing the guests, this helped them to participate equally and actively, to be responsible when working, cooperate with each other and share knowledge. Team work was experienced as they worked cooperatively with each other. Students also had to write reports on the daily work done as a team from the beginning of the project up to the end. During that time, students acquired knowledge and skills from the activities they underwent and kitchen cleaning after work was done together as a group.

4.4.2 Cooking, portioning, and selling food

Group members had considered to prepare dishes such as chicken, fish, liver but the selling price would be high for our customers since a plate of beef was sold at 2,000/- but they kept on complaining that it is too high. If we had sold some chicken, it would cost 8,000/- per plate, liver at 10,000/- per plate, and fish at 6,000/- per plate, it would not have worked for us. We have been selling a minimum of 13-15 plates at 2000/- per plate, 24 glasses of juice at 500/- per glass,24 cups of millet porridge at 500/- per cup, and 20 packets of water

at100/- each per day. We used the new place for the project in the catering lab which helped us to increase the number of customers. Portion control equipment and costing sheet also helped us to secure more money so that we can buy the missing materials and equipment. Students used different portion control equipment such as ladles, table spoons, small cups for scooping rice, glasses and cups so that our customers are not cheated or served more than required. Coupons were used to help us ascertain the number of plates sold so that we establish the number of customers served. The figures 6 illustrate how students are demonstrating their skills in different groups by cooking local food.



(a) (b)

Figure 5: Group members cook food for customers

Source: Field data, photo by researcher, YMCA Mukono Campus (2018)

Figure 6, shows some of the members of the group cooking food such as banana, rice, potatoes, beef, g/nuts, cabbage, and porridge for breakfast. Group members decided to prepare local food as a real life project performing different tasks for three days such as cooking food, portioning, and cleaning, washing plates.

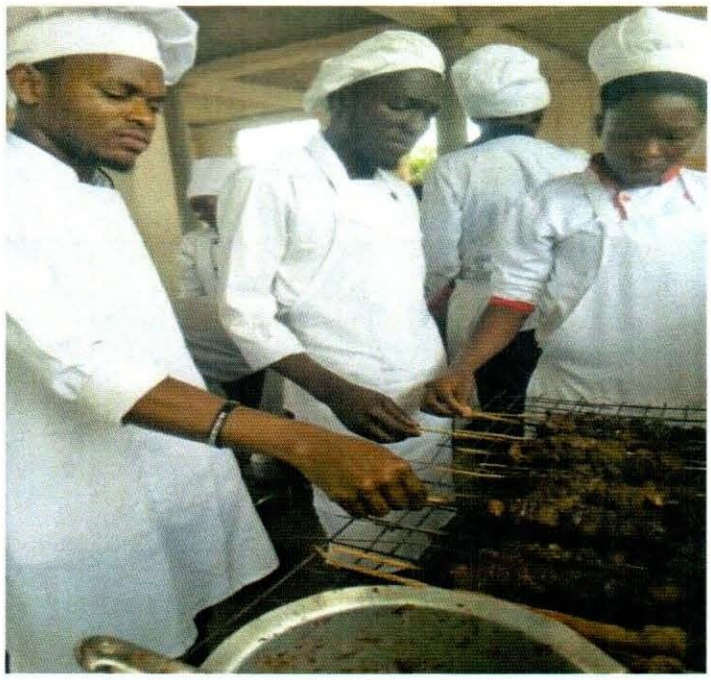


Figure 6: Group members roasting beef and other types of meat.

Source. Field data, photo by researcher, YMCA Mukono Campus (2018).

This stage also involved beef and banana roasting using barbeque method to be served to customers. This charcoal stove is one of the achievements got from the savings of the project of preparing local food and pastries. The participants were practically trying to transfer the theory learnt from classes into practice hands on learning which is in line with experiential learning theory. Different groups used different working capital leading sales and profits to change. I practically got involved by guiding and supervising the project as well as advising students in different areas. Assessment and evaluation were done daily, Sales and savings were calculated at the end of each day to check the progress of the project.

4.4.3 Food service, clearing, and billing

Food and beverage service were designed as a delivery processes with the customer being the center of the process and critical to the business success. This was followed by the food and beverage service sequence which was essentially the bridge between the production system, beverage provision and customer process or customer experience. The group members used the service sequence which had stages these included; preparation for service (mis- en

place), welcoming the guest, greeting and seating the guest, taking orders, serving food and beverage to the guest, clearing during service, billing and dealing with payments. Customer processes was concerned with the experience our customers undertake to be able to order, be served, consume, and have the area cleaned. Some of the customer processes methods used by students included; table service, were the customer was served at a laid table. Another method used was specialized service (or service in situ) this involved food and drink to be taken to where the customer is i.e to offices and classes. Figure 8 show group members serving food and beverage to customers seated in the service area.

(a) (b)

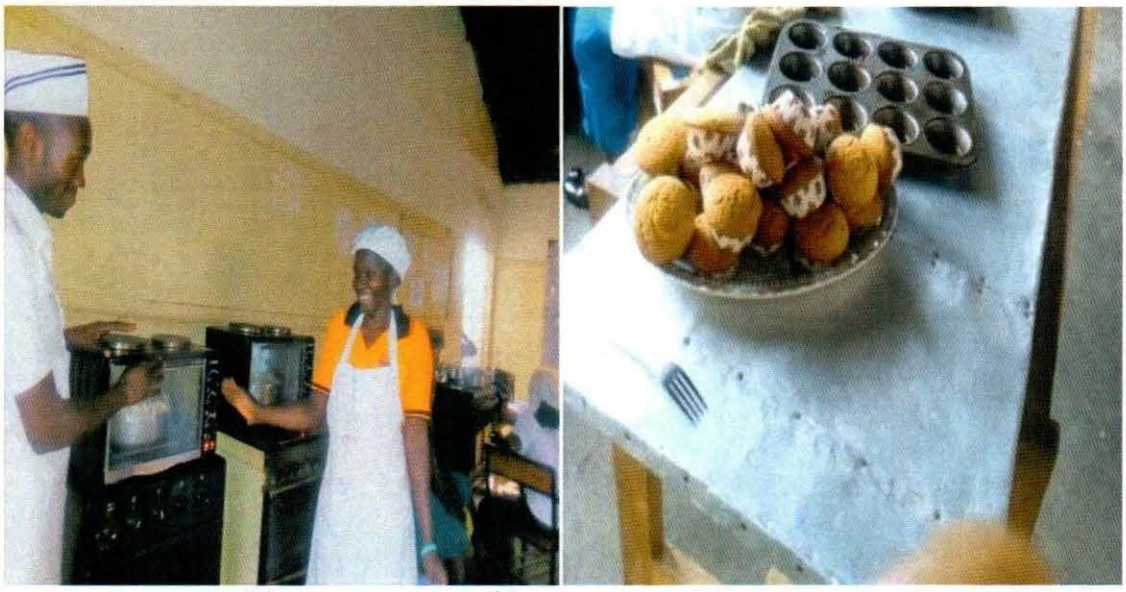
Figure 7 (a & b): The service Area

Source. Field data, photo by researcher, YMCA Mukono Campus (2018)

Figure 7 (a & b) shows group members serving guests in a new place for the restaurant. Food service is part of the real-life project where students demonstrate service skills such as setting table du hotel and a la carte table setting. This was a good experience for them because they gained confidence, learnt how to well come the guest; seat the guests and how to take orders using captain order books.

4.5 Theme 2:Making Short Pastry Products

We started making pastries to be served for breakfast, after realizing that the saving collected from food production was not appeasing. Budgets were writen, presented and the money was given to the group member for purchasing the ingredients. Some of the products to be made were; daddies, cookies, and queen cakes.Group members had to choose and make products as agreed. Muffin tins and cookie cutters were used as portion cotrol equipment. We also used small cups for packing our dadies into polythen bags.



(a) (b)

Figure 8 (a & b): Baking Cakes as end Products

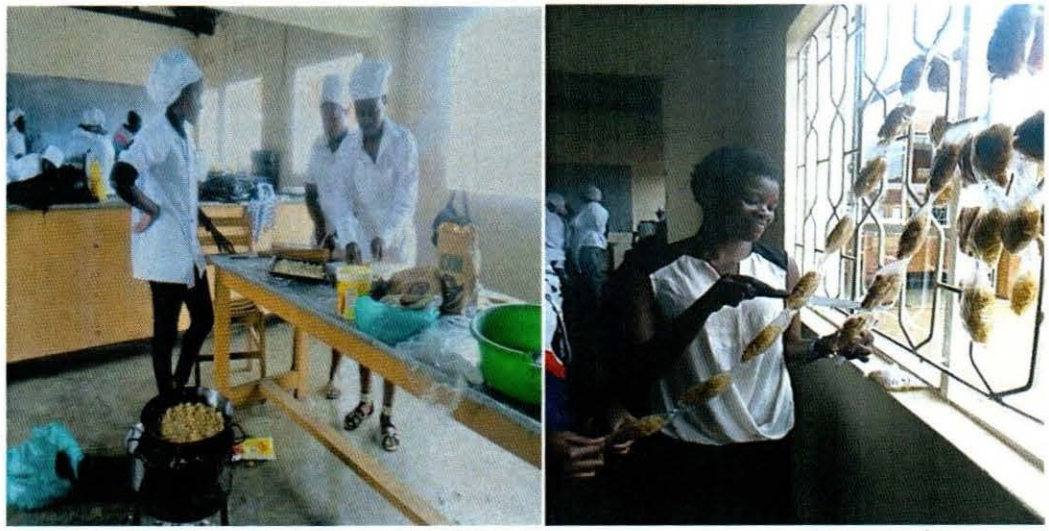
Source. Field data, photo by researcher, YMCA Mukono Campus (2018)

Group members decided to bake cakes as a real life project. These products were sold to customers as snacks to be taken with tea and juicefor breakfast or lunch this was a good experience for thembecause they shared knowledge and ideas.

4.5.1 Packaging short pastry products.

After preparing the pastries, group members had to cool them before packing. The packing bags were bought according to the size fit for five hundred Uganda shillings and depending on the working capital used. At the end of the day we sat together and went through

the cost of sales, labour cost, overheads, gross profits, and net profits to summarise the relationship between revenue, costs, and profits. Figure 10 show group members frying and the packed products ready for sale.



(a) (b)

Figure 9 (a & b): Group members prepare snacks

Source. Field data, photo by researcher, YMCA Mukono Campus (2018)

Group members in Figure 9 (a & b) decided to make snacks such as daddies, cookies, and crisps as a real-life project. Our products were packed well and sold to students and teachers as our target customers. This was done to initiate students so that they can manage small business enterprises and small-scale businesses.

4.6 Theme 3: Achievements and students' learning outcome

Some participants exhibited high advanced skills in preparing local food and others in snacks during the process to ensure that they accomplished the tasks before them. In my observations, I saw some of the participant exchanged ideas, actively and owning the project. During the interviews with the participants about what they learned from the project, the students indicated that they learned how to share ideas with their colleagues such as managerial skills, communication skills, and how to handle guests [welcoming, seating and serving guests].

Some of the participants were able to operate the project independently without being forced or driven though it was their first time.

During the implementation exercise, one of the participants said;

"This was a great exercise because you need to be self-driven. This has taught me how to peel Matoke, cook local food, be confident and work without fear".

Accordingly, many students fear serving customers in different location. They held that their fellow students tease them by calling them different names such as food driver, food doctor this made some students fill shy to carry trays to different location. Students said that they learnt how to be confident, carry trays professionally, presenting themselves before the guests, welcoming, seating and serving them.

4.6.1 Communication skills

Students learned to communicate with their colleagues and with guests who were rude to them. This helped them to increase on their savings because of the good language they were using and being calm. They used different methods of communication especially oral and body language that is politeness, welcoming guests with a smile, sitting guests, and directing guests using gestures.

4.6.2 Customer care

Students learned how to handle different customers in a business environment, to create value, satisfy and retain customers in the organization. They also learned to ask for pardon were communication is not clear while observing respect, listening and setting measures for effective handling of difficult customers without hurting them. They provided quality services to satisfy their customers and to create a positive attitude towards the course. They learnt to respect their customers when using none verbal communication cues in their conversation.

4.6.3 Teachers' input during implementation of the project

The quality of training is highly affected by the skills and ability of the teacher. This is why teachers practically should participate in the skills demonstration, to improve their abilities to teach as well as the skills of learners. The teachers together with the researcher supervised the project, guiding and advising students were necessary. One of the ways teachers assessed students was basing on the feedback from the customers which led to improvement of our end products. Our major target in doing all this was to improve teaching and learning of food production at Mukono YMCA College.

4.7 Evaluation of local food and pastry project

At the beginning of the project, we set objectives comprising of equipping the catering laboratory with the necessary instructional materials and equipment relevant for teaching and learning. We had to utilize the acquired instructional materials such as a blender to make juice, a weighing scale, the cake tins, the cookie cutters, and the refrigerator, effectively, improve teaching and learning in order to achieve knowledge and skills required in the world of work. Students' also had to Initiate and manage small business enterprises by making quality products during their free time.

Most of the students' perceptions towards the project changed. One of the participants said that in their group, they shared tasks and he was given a task, he said that I fast refused but later I decided to do it because as we did the project, I thought of doing the same when I finish my course. This enabled the group to systematically acquire skills to improve their competences so that they can compete with others in the world of work confidently.

The project was carried out throughout the term, at the end all savings were added to find out how much was collected. Following the topic at hand improving the availability and utilization of instructional materials in food production and service skills at Mukono YMCA College and the objectives of the study reflected in chapter one, we managed to purchase a

refrigerator, baking tins, a weighing scale, a platter, charcoal stove, a blender using our savings and the gas cookers were contribution from the principal receipts are reflected in (Appendix 12). Participant didn't expect this because the future workshop was a joke to them, as one student said *"even if we say or do what, nothing will change at Mukono YMCA"* they couldn't believe it would happen; surprisingly they were amazed to see things work out. The refrigerator helped us to generate more money through selling juice for 500/- and water for 100/-. The figures below show some of the equipment acquired.

(a) (b)

Figure 10 (a & b): Equipment purchased using savings from the real life project
Source: Field data, YMCA Mukono Campus (2018).

Preparation of local food and pastry project was evaluated by all the participants against the set objectives. The project was fruitful and stakeholders said it was an achievement. They were hopeful that we must continue with the project because it was the only hope for a change in the catering department at Mukono YMCA College.

During the interviews with the participants about the attainment of the objectives, 80% said they fill the set objectives were achieved, 10% were not sure, 5% said we still need more effort to adequately achieve more equipment and 5% were not present. Participants said that

their involvement in the project led to acquisition of some of the equipment such as a fridge, blender, cake tins, four gas cookers, whiskers, a platter and a weighing scale the receipts are on appendix 12. What they saw was beyond their expectation because during the future workshop some participants were still hesitant saying at Mukono YMCA things never come to reality.

Concerning the space for our project, we got a place to serve our customers from in the catering laboratory. After discussing with the college principal, we were given a big classroom which could accommodate practical lessons for food production and service and the project in the catering laboratory (Table 7) shows the acquired IMs.

Table 6: Status of instructional materials at Mukono YMCA College after the study

S/N	INSTRUCTIONAL MATERIAL AND EQUIPMENTS	BEFORE THE STUDY			AFTER THE STUDY		
		A	NA	COMMENT	A	NA	COMENTS
1	Baking flour	Yes	-	Fair	Yes	-	Done
2	Sugar	Yes	-	Fair	Yes	-	Done
3	Cooking oil	Yes	-	Fair	Yes	-	Done
4	Margarine	Yes	-	Fair	Yes	-	Done
5	Cookers	Yes	-	Poor condition	Yes	-	Fair
6	Refrigerators	-	No	Not available	Yes	-	Done
7	Blender	-	No	Not available	Yes	-	Done
8	Weighing scale	-	No	Not available	Yes	-	Done
9	Utensils	Yes	-	Inadequate	Yes	-	Done
10	Cutlery	Yes	-	Inadequate	Yes	-	Done
11	Linen	Yes	-	Inadequate	Yes	-	Done
12	Cake tins		-	Still lacking	Yes	-	Done
13	Cookie cutters	-	No	Still lacking	yes	-	Done
14	Nasals'	-	No	Still lacking		No	Still lacking
15	Dinner plates	Yes	-	-	Yes	-	Done
16	Mixers		No	Still lacking	-	No	Still lacking
17	Mincers	-	No	Still lacking	-	No	Still lacking
18	Service Area	-	No	Not available	Yes	-	Done
19	Whiskers	-	No	Not available	Yes	-	Done
20	Mixing bowels	-	No	Missing	No	-	Still lacking
21	Gas cookers	Yes	-	Still lacking	Yes	-	Done
22	Palette knives	-	No	Not available	-	No	Still lacking
23	Source pans	Yes	-	Still lacking	Yes	-	Fair

*A = Available, NA= Not Available.

4.7.1 Challenges during implementation of the project "Preparing local food and pastry"

During the course of implementation, participants faced some challenges these included; laziness of some group members which led to frequent supervision and monitoring. Some groups failed to balance their books which led to losses. Other groups lost forks, plates; cups

because of being irresponsible but one of the rules of the project was whoever loses something should pay. Such groups were not creative, had a negative attitude towards the project and were not cooperative because they were avoiding to do some work. Some of the participants did not have the knowledge to think of other alternatives if what they wanted to use was not available such as a blender for juice but in another group they improvised. Another group would complain all the time about market prices for ingredient and food being high and some ingredients were not available. Students complained about some customers who didn't want to pay after eating the food which had an effect on our sales as well as the savings. Guests complained about the little food served to them saying your competitors serve a lot of food at a cheaper price why don't you also do the same? We explained to them that it was fluctuation of market price. On the other side our competitors were buying poor quality beef which we couldn't buy this is why their food is cheap. Guests also said that students delay to clear their cups and plate after serving we have to remind them to clear. They continued saying that some students don't use the social skills such as customer care in the way they talk to them is not professional; they said that this should be improved upon. Another challenge was that students delayed to take customers' orders; but this was not on all groups but, on some groups.

In summary, gathering from the evaluation from all the respondents (student, teachers, and administrators) on the strategy used to enhance availability and utilization of instructional materials at Mukono YMCA College had an impact. Our guests appreciated our services and compared our food with the competitor saying it was good in terms of taste, flavor and portioning. They said that some groups performed well by preparing high-quality food and others were fair but all the products at least scored excellent. The above strategy was implemented and some instructional materials were acquired, hence improved teaching- learning as well as performance.

CHAPTER FIVE: DISCUSSION, CONCLUSIONS, RECOMMENDATIONS

5.0 Introduction

In this chapter, discussion of the findings obtained from the study aimed at enhancing availability and utilization of instructional materials in food production and service skills at Mukono YMCA College were presented. The problem was; inadequate instructional materials during teaching and learning food production and service. Discussions were guided by four objectives each handled independently in the ascending order. Data were collected from three categories of respondents namely; students, teachers, and administrators.

The findings under discussion were obtained through focus group discussions, interviews, and observations. I basically bring to you my perceptions, reflections, and views of other scholars in respect to the problem under discussion. The discussion has been based on some theory, already given in chapter two. Similar findings got from different sources have been already presented in chapter four. The chapter starts with the utilization of the available instructional materials (IMs) when implementing the project of preparing local food and pastries, evaluate what was implemented after conducting the project. It also includes the students' learning outcomes from the project, the challenges, and way forward of project at Mukono YMCA College.

5.1 Implementation of local food and pastries project processes

During the implementation of the work plan for availability and utilization of instructional materials, the study revealed that cooking local food and pastries (CLFP) as a key component of the real-life project was used as a means to reduce the challenges of inadequate instructional materials. This helped to solve the most pressing issue which was identified during the future work shop with the stakeholders. Participants expressed that before increasing on the instructional materials (IMs) we must validate the available IMs and the condition they are in, what to buy and those that could be locally obtained from the surroundings. The real-life project

as a technique increased participation in class, knowledge, reduced absenteeism, and skills gap. Further, the project was done in groups of five members in each group, students managed to prepare different dishes such as banana, rice, beef, snacks which were sold to guests and we secured some funds which we used to acquire the refrigerator, barbeque stove, a blender, cake tins, cookie cutters, whiskers, and cocktail glasses.

Much as it is the teacher to improvise, the study sought to involve other stakeholders like the students, administrators and parents in the collection of instructional materials to be used during teaching and learning of food production and service skills. Therefore, in considering instructional materials as a major factor, there was need to consider other alternatives in case someone cannot find the one that you planned to use. One can choose to use a charcoal oven, a gas cooker or a charcoal stove

5.1.1 Learning outcome

During the discussion, participants revealed that engagement of students in the project in various groups helped them to solve the problem at hand and to increased their morale and ownership of the project (Dahlgren, 1998). Food production and service is one of the core course units in hotel and institutional catering, we found it fitting for us to consider improvement in this area. Therefore, developing instructional material depends on the type of learning, the availability of the existing materials and utilization of the ones that are available (Dick, 2001).

During the interviews, participants revealed what they learned from the project; they pointed out that they learned how to share ideas with their colleagues such as managerial skills, communication skills, and how to handle guests (welcoming, seating and serving guests). Some of the participants were able to operate the project independently without being forced or driven though it was their first time. Some of them said that they learnt how to peel and cook local food, to be confident that is working without fear which involves serving customers to different

location, carry trays professionally, self-presentation before the guest, welcoming, seating and serving the guest".

5.1.2 Challenges during Implementation of Local Food and Pastry Project

First and foremost, the quality of education hinges on instructional materials (IMs) these are the ultimate predictors of students' academic achievements (Yara & Otieno, 2010; Moochi, 2012). It was found that lack of instructional materials and equipment that are vital for effective teaching and learning; link the inadequacy of these IM to inadequate finances in the institution (Ayuba & Gatabazi, 2010). Inadequate finances, in turn, shrink the budgets for procuring up-to-date materials and equipment, repairing old equipment and improvisation (Sharma, 2008). The study also pointed out that inadequate IMs ultimately provided fewer opportunities for students to practice with tools and machines, hence negatively impacting student outcomes.

One of the pillars of a successful and effective teaching-learning of food production and service is the availability and adequacy of instructional materials (Bongotons, 2010).These materials are in form of dry ingredients, fresh ingredients and apparatus needed to foster skill development and produce standard quality products. In my view, availability or adequacy of teaching and learning materials implies that they are easily, readily, publicly, and generally got and enough in quantity and quality for use but at Mukono YMCA College it was the contrary.

Secondly, inadequacy of teaching and learning instructional materials was a constraint to implementation of the curriculum at Mukono YMCA College (Hailu, 2011). Lack of a standard laboratory and modern instructional materials affected the teaching learning of FPS (Bandele & Faremi, 2012). This may result in low acquisition of practical skills among students due to ineffective instructional delivery (Dasman, 2011). In many developing nations, inadequate IMs and outdated equipment hinder effective implementation of teaching and learning programs (Maino, 2013: Ezike, 2006). Such institutions may have insufficient equipment and lack rooms for practical teaching (Tshabalala, 2014). In actual fact, teachers' utilization of relevant

equipment, materials and tools facilitates teaching-learning and enhances students' achievements (Umunadi, 2012).

Similarly, in Kenya, inadequacy of teaching and learning resources hinders TVET implementation (Indoshi, et al., 2010). This inadequacy is expressed in terms of obsolete equipment (Hooker et. al, 2011), shortage of material resources (Mupinga, et al., 2006) and insufficient time allocation (Indoshi, et al., 2010).

At Mukono YMCA College the analyzed data showed that the available instructional materials for food production and service such as cookers, ovens, blender, source pans, cutlery, crockery, and cutlery were inadequate. Therefore, this may result in incomplete understanding of a topic, incomplete work, and poor participation in class work and hence poor performance. When a student is irregular in class, it has an adverse effect on his/her academic performance (Nakpodia, 2007). Food production and service is one of the core course units in hotel and institutional catering that can be well facilitated when suitable and relevant instructional materials are prepared and utilized during teaching and learning (Dhakal, 2014).In this study, availability means the condition with which teachers have access and make use of instructional materials for effective teaching and learning to take place

The study further revealed that the available instructional materials are not utilized because they are not in good condition thus used at a low extent. This was one of the indications that if efforts are made to provide more instructional materials, the teachers might not use them fully. Ineffective utilization of the available instructional materials is a major concern to the students. To achieve desired objectives, teaching and learning process must be properly harnessed through adequate and proper use of instructional materials (Gistarea, 2013). This is true because the use of instructional materials gives the students the opportunity to see, feel and touch the materials which in turn makes the lesson to be real.

The challenges that instructors and students faced during teaching and learning process of food production and service indicated that students could not get the necessary skills and knowledge due to inadequate instructional materials and equipment. It was also revealed that if laboratories are not well equipped, learners could lose interest in learning which leads to loss of relevant knowledge and students' abilities are crippled. Unfortunately, one of the major challenges at Mukono YMCA College is inadequate instructional materials which are not enough in laboratory. It is only when this needed equipment is provided and adequately maintained, that students will become proficient in the world of work.

5.2 Evaluation of local food and pastry project

Respondents on intervention measures, show that instructional materials used in the catering department such a weighing scale, a blender, a fridge, cake tins, a platter, barbeque (BBQ) charcoal stove, cookie cutters, and whiskers were purchased using joint effort through implementing the project. Some of the equipment bought by the principal includes; four gas cookers and some materials were brought by students which include sugar, cooking oil, baking flour, and blue band.

Improvisation was also used, in which teachers developed and used instructional materials such as text books and models. Facilities required for teaching food production and services were grossly inadequate, instructors adopt lecture method which was found inappropriate and ineffective in teaching skill-based courses (Zakka & Priscilla, 2009). The study also showed that there was a considerable improvement of students' performance in food production and service skills. This gave an impression that students needed adequate instructional materials before they can perform well bridging the gap between reality and the abstract. Therefore, teachers were encouraged to utilize relevant instructional materials in order to ensure effective instructional delivery (Garba, 2004).

The study also revealed that an Instructional material in the school curriculum was crucial in the teaching of any skill-based subject such as food production and service which aims at sharing skills and knowledge through hands on. The use of instructional materials made students discover information which got stack firmly to their memory and drove out lack of interest by giving them something realistic to see and do (Okobia, 2011).

Instructional materials served as a channel of communication between the teacher and the students in delivering the content, motivated teaching learning process, stimulated and restored learners. (Esu, Enukoha & Umeron, 2004). It was further revealed that when instructional materials were applied in teaching of food production and service, students were more attentive because the use of instructional materials stimulated their interest and enhanced their level of learning (Gillani, 2005). It has given the impression that students needed adequate instructional materials to utilize them properly before they can perform well in food production and other subjects as well. Other subjects performed by students were done through the project which could not be separated from student performance. Hence, this study established that students would participate effectively and utilize the acquired instructional materials wisely to improve performance.

In summary, the intervention measures which were adopted to enhance the availability and utilization of instructional materials by students, teachers and administrators are reflected in (Table 4) before implementation and (Table 5) after implementation of the interventions. The implementation of the interventions improved the average performance of students in food production from 45% before implementation to 75% after implementation.

5.3 Conclusion

Increasing availability and utilization of instructional materials improved students learning abilities and created a friendly interpersonal relationship between the teachers and students. This provided room for discussion, opened up on the challenges of each student to

improve on the areas of weaknesses, creating a strong supervisory and monitoring system that puts checks on the school staff and entire administration. Preparation of local food and pastries (PLFP) project used for enhancing availability and utilization of IM was realized as a measure that can be used to improve the levels of inadequate IMs, created suitable actions, follow ups that can be used by the teachers and administrators to tell that improvement is recognized.

Preparation of local food and pastries as a real-life project made all stake holders to participate vigorously, acquire skills and knowledge as well as acquiring the missing instructional material (IM) self-motivation of teachers and students, proper utilization of instructional materials, compensation of lessons missed by teachers and reduced absenteeism. The underlying discussion on implementation of the identified strategy were concluded that knowledge and skills through adequate equipping of the catering laboratory, students, teachers and administrators appreciated and prioritized it in their daily practice. This therefore implies that the knowledge and skills are valued on IMs.

5.4 Recommendations

The following were recommended that is materials to student ratio can be improved by studying in shifts. This would help to improve availability and utilization of IM hence reduce interruption of teaching and learning process to increase academic out come

The institute should have a budget for instructional materials for practical subjects such as food production. This can be used to facilitate the teachers during supervision of students' projects, to buy extra food production materials and equipment so that students may reduce on the improvisation and produce more products, do more practical's and manage projects which should occur without any interference.

Teachers and students in the catering department should consider utilizing the available IMs during practical lessons. Teachers should also be resourceful and encouraged to search for necessary IMs through local means to supplement the ones available. They should as well look

for IMs that appeal the senses of learners, arouse their interest encourage their participation make learning more meaningful and promote academic standards. This will improve on their, attendance, participation, performance and they can contribute effectively in class.

Student should be encouraged to participate in preparing local food and pastry project as a real-life project to help the department acquire the missing IMs hence improving their skills and knowledge relevant in the world of work.

5.4.1 Recommendations for further studies

The study examined improving availability and utilization of instructional materials in the teaching and learning process of food production and service skills. For the instructional materials to be effective depends on the availability and how the materials are used. This study did not cover the aspect of how teachers and students will improve performance during teaching and learning process.

REFERENCES

Adeogun, A. A. (1999). Resource provision and utilization. *Education Management.*

Anyakoha. (1994). Beyond listening: Childrens perspective on early childhood services.

Baker, A. P. (2002). Conversational learnin: an approach to knowdge creation. *Conversational learnin: An approach to knowdge creation.*

Batalden, P., & Davidoff, F. (2007). Teaching quality improvements: The devil is in the details. *Journal of the American Medical Association* , 298(9), 1059-1061.

Beat. (2009). *What theory of motivation say about why learners learn.*

Bongotons, O. Y. (2010). Availability and adequacyof resources in business education.

Boud, D. and Feletti, G. I (1991). *The challenges of problem based learning.* London: Routledge.

Cambridge University (2003). *Indicators of academic performance.* Cambridge : Cambridge University.

Cambridge University (2003). *Indicators of academic performance.* Cambridge : Cambridge University.

Chikuvu, L. C. (2016). Availability of instructional materials at the basic educational level in Enugu Educational zone of Enugu state Nigeria.

Corbett, J. J. (2010). Student perceptions of value added in an active learning experience: Producing, reviewing and evaluating a sales team video presentation. *American Journal of Business Education (AJBE)*, 3(6) 11-18.

Dewey, J. (2001). *Experience and Education* . New york.

Dewey, J. (1997). *How we think.* Dover Publications Inc. Mineola, NYC

Dhakal, K. (2014). *high school students and teachers attitude geography education.*

Dick, W. C. (2001). *The systematic design of instruction.* Newyork: Longman.

Dolmans, D. D. (2005). *Problem based learning: Future challenges for education practice and research.*

Duch Duch, B. J., Groh, S. E., & Allen, D. E. (Eds) (2001). *The power of problem based learning: A practical "how to" for reaching undergraduate courses in any discipline. .* Sterling, VA: Stylus.

Ema, E. D. (2014). *Educational technology concept and practice.*

Enem, F. (2001). Teachers profession of competencies required for effective teaching. *Teachers profession of competencies required for effective teaching.*

Eriayewu, J. (2005). Effective of instructional materials on teachingand learning. *School education.*

Eya, I. (2006). Extending the construct of active learning.

Garba, M. (2016). *The critical role of educational resource on curriculum implementation.*

Grabinger, R. S. & Dunlap, J. C. (1998). Rich environments for active learning: A definition. ALT-J Association for Learning Technology Journal 3(2): 1-24: DOI: 10.1080/0968776950030202.

Heino, A. (2004). *The future work shop retrieved the international expertmeeting on theory and practice of peace education.*

Hoover, J. D., Giambatista, R. C., Sorenson, R. L., & Bommer, W. H. (2010). Assessing the effectiveness of whole person learning pedagogy in skill acquisition. *Academy of management learning & Education* , 9(2), 192-203.

Jekainfa, A. A. (2005). Fundamentals of instructional methods.

Johnson, D. W., & Johnson, R. T. (1999). *Learning together and alone.* UC Sante Cruz University Library.

Jubay. (2001). What are the importance of instructional materials.

Jubay, A. (2014). What are the importance of instructional materials. *What are the importance of instructional materials.*

Jungk, R. (1987). *Futures Workshop. How to create desirable features*. London, England: Institute for Social Inventions.

Jungk, R. (1987). *How to create desirable futures*. Institute for Social Inventions.

Kadzera, A. (2006). use of instructional tecnologiesin teacher training colleges.

Kadzera, C. (2006). Use of instructional technologies in teacher training colleges. *international journal of eduction and practice*. 3(4) 1-10.

Kolb, D. (2014). *Experience is the source of knowledge and development.* FT Press.

Likoko, S. M. (2013). *The adequacy of instructional materials*. 2(10) 1-15.

Lucas, B. C. (2012). *How to teach vocational education*. 6 (1) 1-2.

Lukeman, T. (2009). *Understanding participatory research and development*.

Marshal, B. C. (2013). Does sample size matter in qualitative research?: A review of qualitative interviews in IS research. *Journal of Computer Information Systems.* 1-12.

Marshall, C. (2006). *Designing qualitative research, (4th Ed.).* Thousand Oaks: Sage.

Mcniff.J. & Whitehead, J. (2006). *All you need to know about action research.* Thousand Oaks: Sage.

Miami-Dade County Bylaws and Policies (2011). http://www.neola.com/miamidade-fl/

Mjelde, L. (2002). Aspects of vocational pedagogy a practice: Decolonizing minds and negotiating local knowledge. *International journal of training research*.

Mjelde, L. (2006). *The magical properties of workshop learning. Studies in vocational and continuing education.* Bern: Peter Long.

Mjelde, L. (2008). Magical properties of workshop learning. British Journal of Educational Technology 39(3): doi.org/10.1111/j.1467-8535.2008.00855_19.x

Mouzakitis, G. S. (2010).The role of vocational education and training curricula in economic development. *Social and Behavioral Sciences*: 2(2): 3914-3920 ResearchGate: DOI: 10.1016/j.sbspro.2010.03.616,

Moon, J. (2004). *A handbook on reflective and experience learning theory and practice.* London.

Narayanasamy, N. (2009). *Participatory rural appraisal principles,methods and applications.* India: SAGE.

Ogwa, K. (2002). The role of teacher in the assessment of learning.

Ololobou, C. (2008). *Quality assurance in primary basic education through adequate provision, distribution and utilisation of instructional materials*.

Ololobou, Y. A. (2005). *Classroom assessment techniques*.

Orodho, J. A. (2008). *Techniques of writing research proposals and reports in education and social sciences.* Kanzja Enterprizes.

Otaala, J. M. (2013). Effectiveness of University teacher education curriculum on the secondary school teacher performance in Uganda: The case of Kyambogo University. *Journal of International Cooperation in Education*, 15(3) 95-112.

Owoh, J. (2009). *Schools and skills indeveloping countries.*

Piaget. (2011). *Explainig students cognition during class lesson.*

Steinar, K. S. B. (2009). *Learning the craft of qualitative research interviewing.* SAGE .

Wale, J. (2006). *Changing pedagogic didactics approaches*.

Whetten, D. A. (2007). Principles of effective course design: What I wish I had known about learning-centered teaching 30 years ago. *Journal of Management Education*, Doi.org/10.1177/1052562906298445.

Yates, L. (2007). Embodying education: *Educational Philosophy and Theory 39(7) 772-777.* doi.org/10.1111/j.1469-5812.2007.374_3.x

APPENDICES

Appendix 1: Introductory letter

KYAMBOGO UNIVERSITY
P. O. Box 1 Kyambogo, Phone: 041-285001/2 Fax: 041-220464
www.kyambogo.ac.ug
FACULTY OF VOCATIONAL STUDIES
DEPARTMENT OF ART & INDUSTRIAL DESIGN
MASTERS IN VOCATIONAL PEDAGOGY PROGRAMME

8th January, 2018

.....

.....

RE: INTRODUCTION OF KIWALA IRENE WINNIE

This comes to introduce to you KIWALA IRENE Winnie a student of Masters in Vocational Pedagogy (MVP) Programme at Kyambogo University. This student bears registration no. 16/U/14015/GMVP/PE and in her final year. As a requirement for graduation, this student is expected to carry out Action Research through a collaborative process with World of Work.

Any support rendered to her is highly appreciated.

Looking forward to your usual support.

Yours Sincerely,

Chris Serwaniko
Coordinator, Masters in Vocational Pedagogy Program

NORHED MVP Project

Appendix 2. LETTER OF CONSENT.

To .....

.....

...../01/2018

Dear sir/madam

RE: LETTER OF CONSENT FOR A RESEARCH STUDY

I am seeking permission from your office to allow me carry out a research study on the effects of students' involvement in the teaching and learning process in catering department at Mukono YMCA College. This research will take a maximum period of 6 months from January to June 2018. I the researcher will have to meet with the students, lecturers (catering department), administrators, mentors and the supervisors. I will engage a conversation with the stakeholders; we identify the gap together and agree on an achievable research topic within the stipulated time which we have to work upon together with the participants. This conversation will take 2-3 hours sessions and at each session, the participants will be videotaped while working.

Participation in this research study is beneficial, as it is chances to have you interact with different people, find new ideas and videotaped throughout the research and you may also benefit others by helping them to change since it is action research hands on and problem based learning to better understanding. This information can be useful in identifying more gaps hence solutions for effective change.

There are no anticipated risks or discomforts related to this research. However, if any one of the stake holders feels uncomfortable with any part of this study at any time, you have the right to terminate participation without consequence

*Appendix 3.*LETTER OF ACCEPTANCE

MUKONO YMCA COLLEGE

Knowledge is Treasure

Our Ref: MY/ED/05

Date: 30th January 2018

Dear Sir/Madam,

RE: ACCEPTANCE OF KIWALA IRENE WINNIE TO CARRY OUT HER RESEARCH FROM OUR INSTITUTION.

We received a request from your student in the names of Kiwala Irene Winnie of Kyambogo University. I therefore inform you that she was granted the opportunity to carry out her research having known that she will be recruiting thirty (30) members within the students and staff of which she will have an interview with them and after a workshop.

We warmly welcome her in the institution and wish her the best in her academic endeavors.

We pledge full cooperation towards her noble duty.

Yours in service,

.....

Principal

30 JAN 2018

Mulyanti Road, Behind Colline Hotel, P.O. Box 170, Mukono.
Tel: 256-772-577033, Website: www.mukonoymcacollege.com, E-mail: info@mukonoymcacollege.com

Appendix 4. INTERVIEW GUIDE FOR STUDENTS

1. a) How do your instructors teach?

   b) What are the challenges you face during teaching and learning process?

   c) What could be the possible solutions to the challenges?

2. a) What are the tools and equipment used in the session?

   b) How are the tools and equipment provided?

   c) Are the tools and equipment efficient?

   d) How are the tools and equipment stored and maintained?

   e) Is there any safety precaution put in place while using these tools?

3. a) Does the institution embrace modern technology?

   b) What are the challenges faced in the use of technology in your institution?

   c) What measures are put in place to minimize the challenges mentioned?

Interview Guide for Instructors and Principals

1. a) How do you supervise teaching and learning process?

   b) Which teaching –learning techniques are employed in your institutions?

   c) What are the challenges associated with the teaching-learning method and techniques in your institution?

2. a) what kind of tools and equipment are used in your institution?

   b) How are the tools and equipment stored and maintained?

   c) Is there any safety precaution put in place while using these tools?

3. a) Does the institution embrace modern technology?

   b) What are the challenges faced in the use of technology in your institution?

   c) What measures are put in place to minimize the challenges mentioned?

Appendix 5.OBSERVATION CHECK LIST

OBSERVATION CHECK LIST

Item	Availability	Condition
Training resources Human resource(teachers)	05	Still lacking
Tools and equipment • Cookers • Gas cookers • refrigerator • Cutlery	 03 01 01 2 dozen	 Fair Fair fair Enough
Technology Computers	03	fair
Environment, health and safety • fire extinguishers • fire exit points • safety sign	 None 02 None	 Lacking Fair None

Appendix 6. INVITATION LETTER

Dear Participants,

I invite you to participate in a research study on the effects of poor participation of students during teaching and learning process in the classroom in catering department at Mukono YMCA College. I am currently enrolled for masters in vocational pedagogy of Kyambogo University and I am in the process of writing my Master's Thesis.

Your participation in this study is voluntary and it is up to you to decide whether or not to take part in this study. If you decide to take part in this study, you will be asked to sign a consent form. Even after signing the consent form, you are still free to withdraw at any time and without giving a reason. Withdrawing from this study will not affect the relationship you have, if any, with the researcher. There are no known risks to participation beyond those encountered in everyday life. Your responses will remain confidential and anonymous. Data from this research will be kept under lock and key and reported only as a collective combined total. If you have questions at any time about this study, or you experience adverse effects as the result of participating in this study, you may contact the researcher whose contact information is provided on the first page. If you agree to participate in this project, you will be involved in a group discussion and answer some questions as well. In case you have any questions about this project, feel free to contact the researcher.

Thank you for your assistance in this important endeavor.

Sincerely yours,

.....

Kiwala Irene Winnie

I have read and understood the information provided that my participation is voluntary and I am free to withdraw any time. I voluntarily agree to take part in this study.

Participant's signature _____ Date _____

Appendix 7. FUTURE WORKSHOP GUIDE

FUTURE WORKSHOP

BY KIWALA IRENE WINNIE

REG NO: 16/U/14015/GMVP/PE

VENUE: MUKONO YMCA COLLEGE

08:00am-10:00am

Preparation phase 1 (20 mins)

Organization and preparation of the room, equipment to be used were markers, flip charts, pens, and pencils.

10:00am

Agenda

Opening Prayer

Introduction of members 5. Min

Critical phase 1hr

Fantasy phase:30 min

Realization phase:30 min

Introduction of members

Explanation of future workshop concepts

Critique phase

Fantasy Phase

Reality or implementation phase:

Rules to follow

Refer to your own experience whenever you are giving an answer.

Inform but do not be missionary for example do not teach as the one who has all the truth.

Listen to others.

Do not judge to early.

Do not use long detailed stories.

Do not give advice make proposals.

Do not generalize be concrete.

Critical phase 2

Rules for phase 2

Brainstorming; no discussions

Only short questions of comprehension are allowed e.g. why is practical rarely done?

Criticism should only be in key words.

Fantasy (utopian) phase 3

Some rules for phase 3

Avoid obvious and generally known solutions.

Include intuitive knowledge.

Try to solve the problem without restrictions and barriers in mind.

Pick up other people's thought modify develop them further.

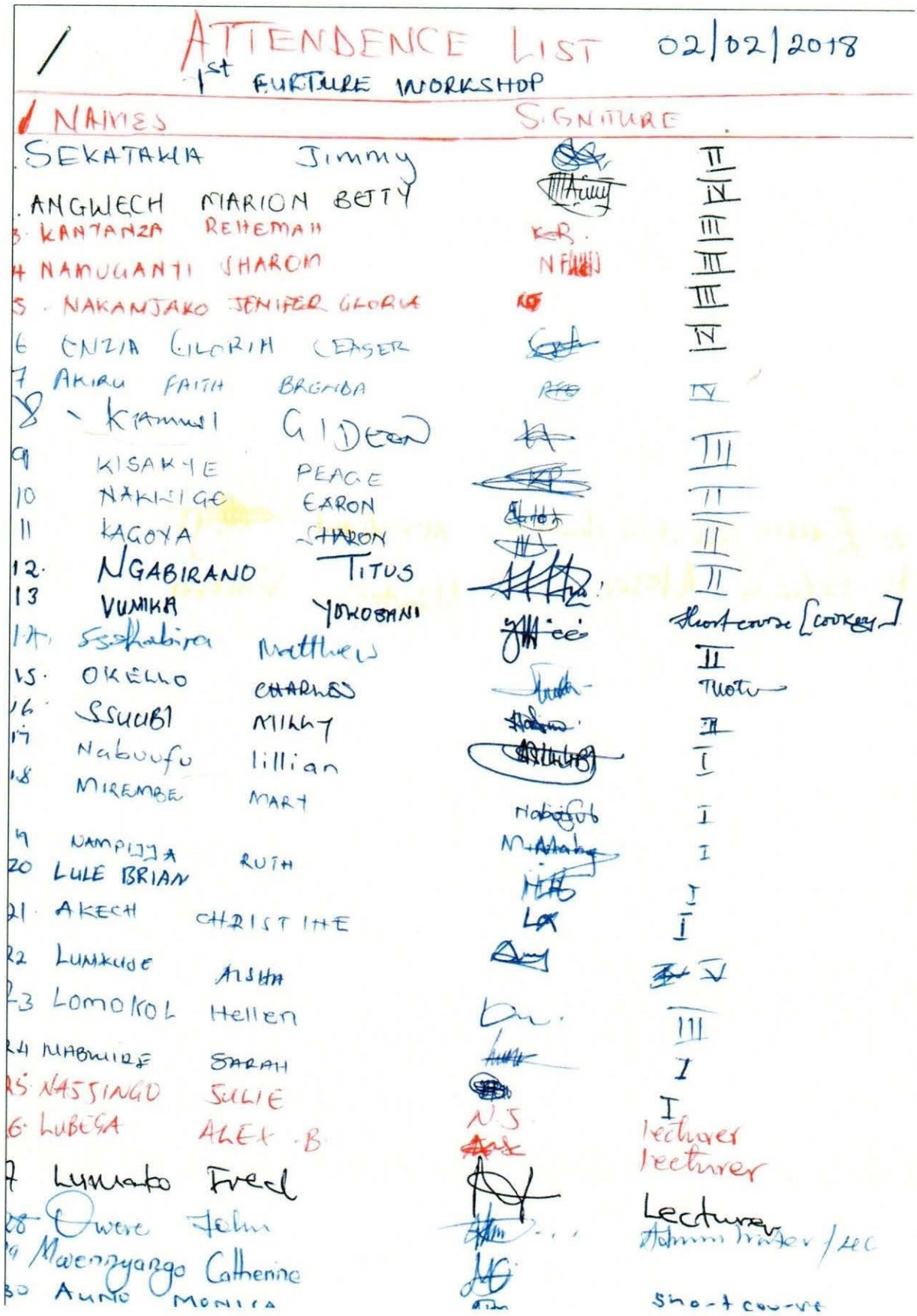
Do not discuss and do not criticize ideas.

Open minded free thought and presentation.

Produce many ideas to find good ones, which constitute the "idea store".

The reality or implementation phase (4)

Appendix 8. ATTENDANCE LIST



ATTENDENCE LIST 02/02/2018
1st FURTHURE WORKSHOP

	NAMES		SIGNITURE	
1	SEKATAKHA	Jimmy		II
2	ANGWECH	MARION BETTY		IV
3	KANYANZA	REHEMAH		III
4	NAMUGANYI	SHARON		III
5	NAKANJAKO	JENIFER GLORIA		III
6	ENZIA	GLORIA CEASER		IV
7	AKIRU	FAITH BRENDA		IV
8	KAMUSI	GIDEON		III
9	KISAKYE	PEACE		II
10	NAKISIGE	EARON		II
11	KAGOYA	SHARON		II
12	NGABIRANO	TITUS		II
13	VUMIKA	YOKOBANI		short course [cookery]
14	Ssekabira	Matthew		II
15	OKELLO	CHARLES		Tuotu
16	SSUUBI	MILLY		II
17	Nabuufu	lillian		I
18	MIREMBE	MARY		I
19	NAMPIJJA	RUTH		I
20	LULE BRIAN			I
21	AKECH	CHRISTINE		V
22	LUMKUDE	AISHA		III
23	LOMOKOL	Hellen		I
24	NABWIRE	SARAH		I
25	NASSINGO	SULIE		lecturer
26	LUBEGA	ALEX B		lecturer
27	Lumato	Fred		Lecturer
28	Owere	John		Admin Director / LEC
29	Mwenyango	Catherine		
30	AUNO	MONICA		Sho-t cou-se

31	NABIKIIRE	SHARON		I
32	NADUNGA	JACKS		I
33	NAYIGA	FLORENCE		III
34	NANTALE	MAUREEN		III
35	Nalumansi	Justine		III
36	NAKALEMBE	EDRINE.S.		IV
37	BAZIRA	HASSAN		IV
38	NAKASI	DOREEN		I
39	Nakayiwa	Mercy	MVP student	
40	Eddy	Berline Audace	MVP Student	
41.	Edidy	Moses	Mentor	
42.	KIWALA	IRENE WINNIE	FACILITATOR/RESEARCHER	

DATE: 20th/02/2018. 2nd FUTURE WORK SHOP

	NAME.	REGISTRATION NO	SIGNITURE
1.	NAKAWESI MARTHA	068/CAT/2017	
2.	2. APELU LUCY	070/CAT/2017.	
3.	3. Wasagali Peace	065/DCAT/2017	
4.	4. NAKIMERA EVA	058/DCAT/17	
5.	5. NANSAMBA LYDIA	067/DCAT/17	
6	6 NANOZI AGNES	078/DCAT/17	
7.	7. Aurelia Akukwasa	Mentor-MVP	
8.	8. LUBEGA ALEX B.	Tutor	
9.	9. PEDUN DIANA ELIZABETH	056/CAT/17	
10	10 ARYONG GWOYETA MARTHA	063/CAT/17	
11	11 KYAMULABI JOAN	060/CAT/17	
12	12 SEKATAWA	077/CAT/17	
13	13 VUNIKA YUSO SANI	054/CAT/17	
14	14 NABIJIRI MERCY	053/CAT/17	
15.	15. Sekabira Matthew	0703072700	
16	16 AKECH CHRISTINE	066/DCAT/16	
17	17 OKELLO CHARLES		
18	18 Nalumansi Justine	061/DCAT/17	
19	19 Owor John	csi/Dcat/17	
20.	20. Edelu Berlin A	D.principal	
21	21. KIWALA IRENE WINNIE	MVP KYU FACILITATOR/RESEARCHER	
22			
23			
24			
25			
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30			

Appendix 10. DETERMINEDOF THE STUDY POPULATION AND SAMPLE SIZE

The sample size was determined by using Krejcie and Morgan (1970) formula given as:

$$s = \frac{x\,NP^2(1-P)}{d\,N(-+1)\,x\,P(1-P)}$$

Where s = required sample size x^2 = the table value of chi-square for degrees of freedom at the desired confidence level is equal to 3.841

N = the population size

P = the population proportion (assumed to be 0.50 since this would provide the maximum sample size)

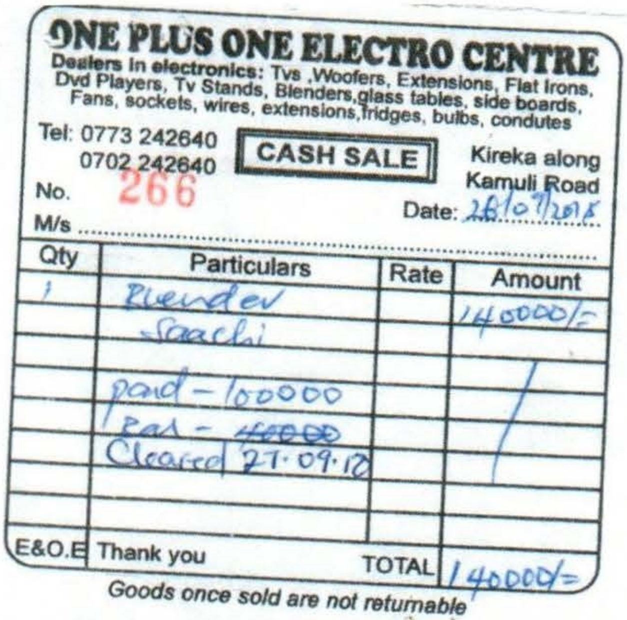
d = the degree of accuracy expressed as a proportion and is equal to 0.05

Category of participants	**Study population**	**Sample size selected**
Number of students	200	100
Instructors	20	10
Administrators	15	08
Principals	05	02
Total	**240**	**120**

Appendix 11. CATERING COURSE STRUCTURE FOR YEAR ONE

Catering course structure for year two

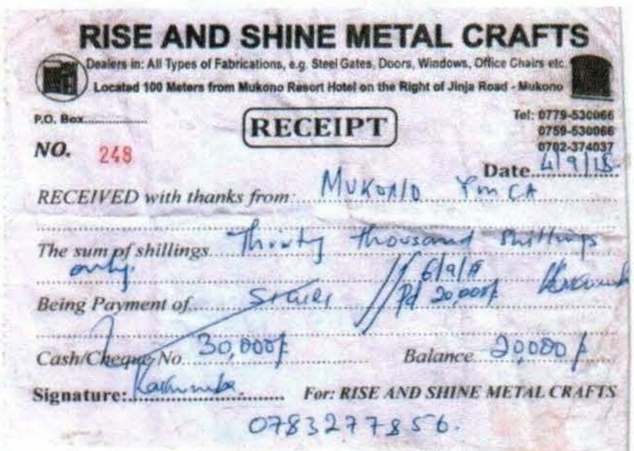
Appendix12. RECEIPTS OF THE EQUIPMENT PURCHASED



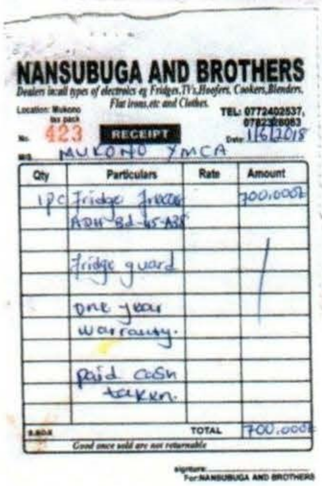
ONE PLUS ONE ELECTRO CENTRE
Dealers in electronics: Tvs ,Woofers, Extensions, Flat Irons, Dvd Players, Tv Stands, Blenders,glass tables, side boards, Fans, sockets, wires, extensions,fridges, bulbs, condutes
Tel: 0773 242640 0702 242640
CASH SALE
Kireka along Kamuli Road
No. 266
Date: 26/09/2018
M/s

Qty	Particulars	Rate	Amount
1	Blender		140000/=
	Saachi		
	paid - 100000		
	Bal - 40000		
	Cleared 27.09.18		
E&O.E	Thank you	TOTAL	140000/=

Goods once sold are not returnable



RISE AND SHINE METAL CRAFTS
Dealers in: All Types of Fabrications, e.g. Steel Gates, Doors, Windows, Office Chairs etc.
Located 100 Meters from Mukono Resort Hotel on the Right of Jinja Road - Mukono
P.O. Box..........
RECEIPT
Tel: 0779-530066 0759-530066 0702-374037
NO. 248
Date 4/9/18
RECEIVED with thanks from: Mukono YMCA
The sum of shillings: Thirty thousand shillings only
Being Payment of: Stove // 6/9/18 Pd 20,000/ [illegible]
Cash/Cheque No. 30,000/
Balance 20000/
Signature: Kathumba
For: RISE AND SHINE METAL CRAFTS
0783277856.



NANSUBUGA AND BROTHERS
Dealers in all types of electrics eg Fridges, TV's, Woofers, Cookers, Blenders, Flat irons, etc and Clothes.
Location: Mukono taxi park
TEL: 0772402537, 0782[illegible]
No. 423 RECEIPT
Date 11/6/2018
M/s MUKONO YMCA

Qty	Particulars	Rate	Amount
1pc	Fridge freezer ADH-BD-45-ASS		700,000/
	fridge guard		
	one year warranty.		
	paid cash taken.		
E&O.E		TOTAL	700,000

Good once sold are not returnable
Signature:
For NANSUBUGA AND BROTHERS

ONE PLUS ONE ELECTRO CENTRE
Dealers in electronics: Tvs ,Woofers, Extensions, Flat Irons, Dvd Players, Tv Stands, Blenders,glass tables, side boards, Fans, sockets, wires, extensions,fridges, bulbs, condutes
Tel: 0773 242640 0702 242640
CASH SALE
Kireka along Kamuli Road
No. 285
Date: 07/06/018
M/s. MUKONO YMCA COLLEGE

Qty	Particulars	Rate	Amount
3	pad rec 700	4,000	12000
E&O.E	Thank you	TOTAL	12000

Goods once sold are not returnable

Appendix13. BUDGET

	A	B
1	**BUDGET FOR RESEARCH ACTIVITY**	
2	**ITEM**	**COST**
3	Breakfast	200,000
4	Lunch	400,000
5	Refreshments	200,000
6	Transport	300,000
7	Stationary	150,000
8	Printinig	200,000
9	**TOTAL**	**1,450,000**