ENHANCING LEARNERS' HANDS-ON EXPERIENCES IN THE ACQUISITION OF INTEGRATED PRODUCTION SKILLS AT SHIMONI CORE PRIMARY TEACHERS' COLLEGE, WAKISO DISTRICT IN UGANDA

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A MASTERS DEGREE IN VOCATIONAL PEDAGOGY

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DECLARATION

This Thesis is my original work and has never been presented for a degree in any other university.

Signature…….. Date _____

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APPROVAL

We as University supervisors confirm the work done by the candidate under our own supervision.

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Date _____

DEDICATION

I dedicate this research work to my family especially, my husband Simon Peter Tukei for the tremendous support that he gave me in my endeavours. I also want to thank my children; Okiria Daniel, Gwari Jesse, Tino Tracy and Ogala Jerry for tolerating with me when I could not give attention and care you deserve.

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LIST OF ACRONYMS / ABBREVIATIONS

AP:	Apprenticeship Training
AR	Action Research
BTVET:	Business Technical Vocational Education and Training
CTE:	Career and Technical Education
HE	Home Economics
IPS:	Integrated Production Skills
MoES:	Ministry of Education and Sports
MVP:	Masters in Vocational Pedagogy
OE:	Occupational Education
PAR:	Participatory Action Research
PTC:	Primary Teachers College
PTE:	Primary Teachers Education
PVE:	Professional and Vocational Education
CPTC:	Core Primary Teachers' college
TE:	Technical Education
TVE:	Technical and Vocational Education
TVET:	Technical Vocational Education and Training
VE:	Vocational Education
VET:	Vocational Education and Training

ABSTRACT

This study was carried out at Shimoni Core Primary Teachers College (CPTC) located in Wakiso District in Uganda; and sought to enhance learners' vocational experiences in the acquisition of Integrated Production Skills (IPS) at the college, particularly Home Economics (HE) component within the IPS discipline. Three objectives guided the study: identify intervention strategies for increasing students' hands-on experiences in the teaching and learning of Home Economics component of IPS; implement the intervention strategies for increasing students' hands-on experiences in Home Economics component of IPS; and evaluate the effects of the implemented strategies on increasing students' hands-on experiences learning the Home Economics component of IPS. Participants comprised of 12 IPS students, 1 IPS tutor, 4 college administrators. This study was based on the learning to learn theory and grounded on the idea that effective learning is based on collective effort of learners as groups and individuals, aiming at accomplishing tasks that translate into various competences. A participatory action research design, which employed a qualitative research methodology as an approach for collecting and analysing data, was used.

Data was collected using; interviews, observation, document analysis and the future workshop. The strategies were identified and implemented by the participants in this study as measures for enhancing practical learning in IPS by student teachers in Shimoni CPTC were: Practical learning within the classroom, creation of extra-time for hands-on experiences, Tutors giving adequate attention and time to students during the extra time hands-on learning activities, forming an IPS club at the college and selling of IPS products made by learners during the HE lessons. It is evident therefore that a combined intervention of theoretical teaching, practical learning and allowing learners to experience revenue from sale of their output has a formidable effect in enhancing learning of practical skills among students.

CHAPTER ONE: INTRODUCTION

1.0 Introduction

This research study focuses on the Home Economics component in the subject of Integrated Production Skills (IPS); a vocational discipline in the Primary Teacher Education (PTE) curriculum in Uganda. IPS has other components such as Technical Education, Art and Technology and Entrepreneurship in addition to Home Economics. In 2012, the Ugandan Government introduced IPS in the PTE curriculum in order to offer vocational training to the Primary Teachers College (PTC) students. The knowledge, skills and values acquired from the IPS subject enabled the student teachers and the learners, to appreciate, preserve, and exploit the environment in order to enhance individual income levels, improve wealth creation, improve nutrition and increase the tax base for national development. The vocational nature of the IPS discipline requires that, the subject should be taught using a vocational pedagogy for a learner to acquire competences needed in the world of work.

This study sought to interrogate ways of enhancing the teaching and learning processes of the IPS discipline at Shimoni CPTC, the researcher's work place. Chapter one presents information on the concepts of Vocational Training, Vocational Pedagogy, and Integrated Production Skills as a vocational discipline. It also presents the background to the study, statement of motivation, situation analysis, statement of the problem, purpose and objectives of the study, research questions, scope of the study, significance and justification of the study. The background to the study is organised in three sub-sections; personal background and experience, background of Home-economics in IPS and statement of motivation.

1.1 Vocational Training

UNESCO-UNEVOC (2014), notes that throughout the course of history, various terms have been used by different scholars to describe Vocational Training. These terms include: Apprenticeship Training [AP] (Molz, 2015), Vocational Education [VE] (Fuller, 2015), Technical-Vocational Education [TVE] (Bhurtel, 2015), Occupational Education [OE] (Pannell, 1981), Vocational Education and Training [VET] (Cedefop,2015), Career and Technical Education [CTE] (Lewis, 2008).

Accordingly, Vocational training prepares students for careers that are based on manual and practical activities which are related to a specific trade, occupation and vocation (Mathews et. al, 1998). In other words, Vocational Training is an education designed to develop occupational skills for survival and work so as to be productive in the society (Maduka, 2015). Other scholars argue that vocational training focuses on the practical applications of skills learned, rather than the theoretical skills of academic skills (Maduka, 2015; Brunello, 2017; Eichhorst, 2014; Comyn, 2015). It should be noted that vocational training too offers knowledge about the theory of the practical concepts under study. Nevertheless, a large part of education in vocational schools is hands-on training, with more emphasis on practical experiences (Wrenn, 2009).

In order for VET to become more meaningful to students, emphasis must be put on the availability of instructional materials in the teaching and learning process. Instructional materials (tools, equipment, among other materials), aid teaching and learning and provide a basis for learners to have a practical experience (UNESCO-UNEVOC, 2014), which is the gist of vocational training. According to (Doak, 2004) vocational training provides a link between education and the world of work, whereby learners are exposed to real world challenges through the training.

Vocational training therefore, is concerned with how skills are passed on to the trainees for their competence development and relevance of the trainees in the world of work. According to UNESCO, 2014, quality of VET has a significant impact on improving learning outcomes which in turn raises the status and the quality of Vocational Pedagogy as a requisite for quality Vocational Training.

1.2 Vocational Pedagogy

Vocational pedagogy is the science, art and craft of teaching and learning vocational trades (Lucas, 2016). Vocational pedagogy emphasizes the methods of delivering subject content, when training people for careers known as occupations, trades, and professions. Therefore, to meet students' learning needs in vocational training, it is necessary to use a Vocational Pedagogy that enables them to acquire competences of the different vocational trades required in the world of work.

As a teaching approach, Vocational Pedagogy is designed to support vocational training and prepare students as competent and skilled professionals who can compete in the job market. Tran (2013) points out that Vocational Pedagogy is grounded in theories of teaching and learning. These theories are highly effective and pedagogical within the context of competence-based training (Makulova, 2015). Here, the focus is on developing the students' ability to consider broader issues in an intercultural context, to capitalize on prior experiences and adapt vocational skills to the workplace setting. Similarly, Lucas, Spencer, and Claxton (2012) hold that vocational pedagogy encourages teaching in the context of problem-solving using hands-on and real-world experiences. They further state that Vocational pedagogy involves; feedback, questioning, application, reflection and when required, theoretical models and explanations are also used.

Furthermore, teaching becomes more interesting when both teachers and students are involved Lucas (2002). This requires vocational teachers to emphasize the use of materials, tools, equipment and the right vocational pedagogical processes used in skills acquisition.

The aforementioned discussion reveals that there is an interdependent relationship between vocational training and vocational pedagogy. A trainer in vocational education uses vocational pedagogy for training students. Therefore, vocational pedagogy cannot exist without vocational training and vice versa. In addition, the type of vocational pedagogy used by the instructors in vocational training determines the quality and relevance of vocational graduates that Vocational Education and Training (VET) institutions send into the world of work.

1.3 Personal Background

The researcher is tutor at Shimoni Core PTC teaching Home Economics as a subject in Integrated Production Skills (IPS) from 2013 to date. She holds a Bachelor of Education with Home Economics and a Diploma in Teacher Education (DTE) with Home Economics from Kyambogo University. She has taught Science, Social Studies, Mathematics and English subjects in three primary schools as a grade three Primary teacher for nine (9) years. The experience the researcher gained over the last thirteen (13) years has exposed her to skills and knowledge in garment construction, textile science, food and nutrition through practicing with tools, materials, and equipment in production processes in relation to the methods of teaching in Home Economics.

Besides teaching IPS at Shimoni Core PTC, the researcher also prepares students for school practice by guiding them in preparing schemes of work and lesson plans and giving

support supervision. Through the process of guiding and supporting the students, they are expected to practice Home Economics using knowledge and skills gained in relation to the IPS syllabus and the PTE curriculum. Home Economics was theoretically taught because of the availability of textbooks in the library, internet facility in the computer lab and lecture notes used in teaching at Shimoni Core PTC. Much as the theories are taught, on the contrary, practical skills are not given adequate time and attention for learners to practice due to lack of materials, tools and equipment for production. It is because of this prevailing situation that the researcher found it imperative to carry out a study of how to improve the teaching and learning processes of the IPS subject to enhance competence development. When the researcher was offered the privilege to study a Masters in Vocational Pedagogy, attention was focused on carrying out a study linked to the state of IPS at Shimoni Primary Teachers College.

1.3.1 History of IPS subject in Shimoni Core Primary Teachers College

Shimoni PTC is one of the 46 government aided PTCs and of the 23 which are core PTCs. It is Core educational and located in Kitikifumba village, Mulawa parish, Kira Municipality, Wakiso District. It is approximately 4km from Kira town, branching off after 2km on Bulindo road. Shimoni CPTC training college trains Grade III Primary Teachers in academics and professionalism.

Shimoni CPTC is funded and supervised by the Ministry of Education and Sports (MoES) while its curriculum was designed, developed and evaluated by Kyambogo University. The College admits both gentlemen and ladies with an Ordinary Level Certificate as the minimum requirement. In 2012, the government revised the PTE Curriculum which was included

in the curriculum. IPS is an integration of different vocational subjects such as; Home Economics, Art and Technology, Entrepreneurship and Technical Education. The subject first appeared in the PTE curriculum in 1997 as an integration of Agriculture and Home Economics, by then, it was called Production Skills (PS).

The objective of PS subject was for production of PTC and Primary School graduates with vocational skills that makes them job creators rather than seekers. The subject later was phased out of the PTE curriculum in 2000 because the government could not fund its implementation and also, Home Economics tutors who could teach it were hardly found [MOES], (Ministry of Education and Sports, 2012) According to Ministry of Education and Sports (2012), the current version of IPS syllabus used in PTC's is of 2008. This version is an integration of all vocational skills subjects carefully and specially designed to achieve broader skills. IPS also involves the use of materials, tools, processes, and conditions in the environment to produce items and services that improve the welfare of the community. In this context, the knowledge, skills and values acquisition to improve wealth, nutrition and increase the tax base for national development.

IPS has both practical and theoretical components that help to build various competences among the learners. IPS subject requires that theory and practice are well integrated for better skills acquisition which requires at least extra time on top of the allocated time on the curriculum for practice. Given the work as a tutor of the subject at the college, the researcher realized that most students do not opt for the subject in their second year of study. This occurrence prompted an inquiry into the reasons as to why students choose to drop the skills subject.

1.3.2 Integrated Production Skills as a Vocational discipline

A vocational discipline is a field of study through which one gains skills and experience directly linked to a future career (Raina, 2012). It is a field of study that is made up of several vocational subjects sometimes referred to as families of occupational profiles (Cedefop, 2015). Fields of professional work show great diversity associated with them. The existence of such occupational domains suggests that teachers who teach them should equally be trained in all the professional profiles / vocational subjects of such domains. It is on this basis that student teachers in Uganda's PTCs are taught multiple vocational subjects in an integrated arrangement called Integrated Production Skills (IPS).

Integrated Production Skills (IPS) refers to a combination of competences an individual acquires from studying several vocational subjects so as to be able to produce items and services for his/her community (Kurnia, 2004). This definition implies that for one to benefit from integrated production skills, he/she needs to undertake a multidisciplinary training in vocational subjects. This is the basis upon which the discipline of IPS in the Ugandan PTE curriculum is made up of four vocational subjects namely; Home Economics, Technical Education, Art and Technology and Entrepreneurship. The apprentice who undertakes training in the IPS discipline is expected to acquire multiple skills that enable him/her to produce and market his/her products in a self-reliant manner as illustrated using the example of baking in Figure1.

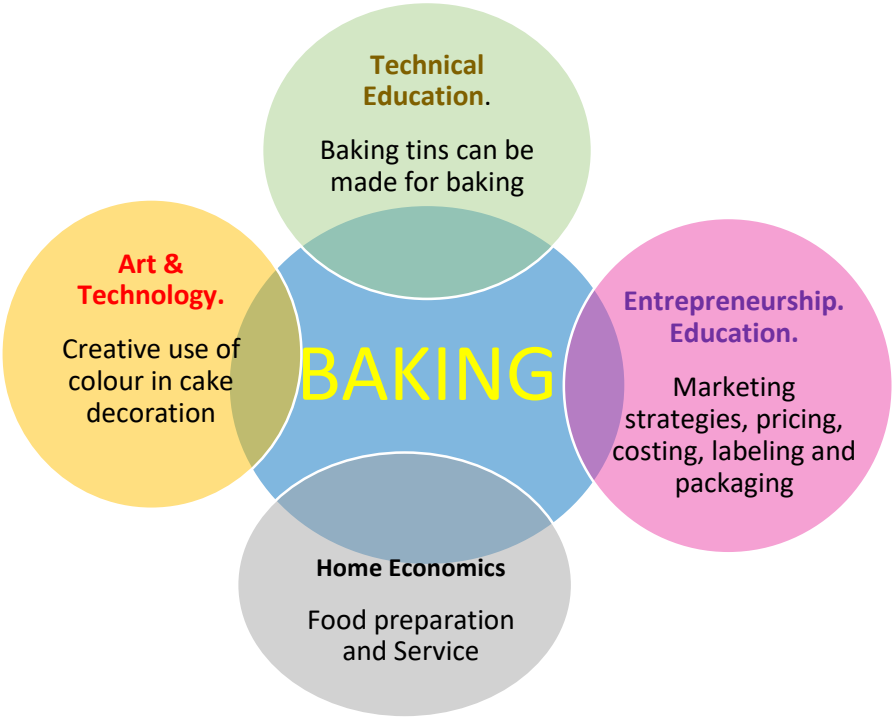


Figure 1: The multidisciplinary nature of the IPS subject in the PTE Curriculum

Source: Primary data, researcher

The illustration in Figure1 reveals how the four vocational subjects in Integrated Production Skills are meant to equip an apprentice with a combination of competences that enable him /her to become a self- reliant entrepreneur in baking. Figure 1 also reveals that the Technical Education subject a student learns in IPS is applied in the construction of baking equipment such as the underground oven and baking tins. The vocational subject of Art and Technology in the IPS discipline imparts competences required for creativity and colouring in cake decoration. The vocational subject of Home Economics equips a student with Baking skills. The students are also equipped with entrepreneurship such as costing, pricing, packaging, marketing and selling.

1.4 Justification for inclusion of IPS in the PTE Curriculum

Integrated Production Skills (IPS) enables students to acquire skills to improve their own welfare and that of the community through sustainable use of low cost resources in the environment for producing different articles (Ministry of education and Sports, 2012). Among the vocational subjects is Entrepreneurship, which equips students with business skills such as budgeting, packaging, marketing, labelling, costing and selling products, that enable them to start up their own enterprises for self-reliance as income generating activities. In this context, the IPS subject should enable student teachers and their pupils, respectively, to creatively explore the environment for self-improvement and community development. Hence, the introduction of the IPS subject in PTCs by the Uganda government (MoES, 2012).

The aforementioned discussion in all the sections of 1.2 indicates that adherence to the prescribed work processes in the teaching and learning of IPS is a requisite for learners' successful acquisition of competences necessary for one to be a self-reliant graduate in the world of work. This is the basis upon which the researcher sought to investigate, using work process analysis, the extent to which the ongoing teaching-learning processes in the Integrated Production Skills discipline at Shimoni Primary Teachers College, conformed to the recommended mode of delivery of school based training while embedding in work based learning, blended learning and student-led learning approaches (Lauglo, 1993).

1.5 Integration of theory and practice modes of delivery in the teaching of IPS

The vocational subjects in IPS are taught through the Competence Based Education and Training (CBET) approach (Bautista, 2015). In this context IPS instructors are expected to use a

Vocational Pedagogical approach that consistently integrates theory and practice. This means that if the process of teaching the IPS subject does not consistently integrate theory and practice, it undermines acquisition of skills in the four vocational subjects or 'family' professional profiles (Bautista, 2012). This is the basis upon which Cedefop (2012) observed that the teaching of IPS in the PTCs in Uganda should emphasize hands-on skills acquisition.

In his development of pragmatic constructivism, Gordon (2009) links Cedefop's observation to Dewey's (1988) notion of integrating thinking and doing in the teaching learning process; by getting the mind to reflect on the act (in this case production of items in HE). Additionally, he asserts that mental development and knowledge are embedded in the social and cultural contexts when students work with their peers under the supervision of their teacher. In this way, the act of sharing insights and reflections becomes part of the pragmatic constructivism discourse when students are learning from each other during practical HE sessions. Furthermore, is the reciprocal approach where the teacher learns from students and vice versa, according to Freire's (1970/1994) model. In other words, knowledge is a shared process of inquiry and creation (Wren and Wren, 2009)

1.6 Statement of Motivation

The experience of the researcher in the field of study spans several years, starting from exposure to crocheting, sewing clothes, knitting, cookery and weaving baskets from home as a young girl, generated the interest to specialize in the subject at the Grade Three Teacher Training course. During teaching the subject in the primary schools, there was inadequate resource for effective teaching and learning of the subject; limited time allocated to art and craft lessons, raw materials for the teacher and learners among others. These challenges remained as a dilemma for

a young professional. In pursuit of lifelong learning, the researcher enrolled for a degree program leading to appointment as a Graduate Tutor of Home Economics Trainee teachers and the researcher continued to experience constraints alluded to with limited solutions. When the opportunity to study Masters in Vocational Pedagogy availed itself, it was a great motivation to explore the possibility of generating new knowledge to solve the challenges experienced in teaching the subject. The researcher's teaching experience has always been to expose students with hands- on skills in HE. Shimoni Core PTC hardly offered students practical sessions in Home Economics, a component of IPS subject. Since the single one-hour lessons allocated to the IPS subject on the College's Time Table is rigid and pre-determined to cater for other equally needed subjects, the researcher had for a long time wondered what could be done to enhance the practical teaching and learning of IPS subject at Shimoni CPTC.

The researcher's desire had always been to establish a way of exposing students to more hands-on experiences in the teaching and learning processes of Home Economics component with the aim of producing competently trained graduates. Under the Kyambogo University MVP program, the researcher benefited from exposure to Vocational Participatory Action Research (VPAR), a component that is emphasised in Masters in Vocational Pedagogy (MVP) program. The above therefore laid a platform for the researcher to address the concern of producing competent graduates. This is because VPAR always ends with an improvement of vocational training in schools and enterprises (Johnstone. et al, 2016). This particular characteristic of the VPAR approach triggered the researcher to conduct this study because it provided her with an opportunity to spearhead the campaign for the improvement of vocational training activities in the IPS subject at Shimoni CPTC. It is on this basis that the researcher used the work process

analysis model to study the on-going teaching-learning processes of HE in IPS subject at Shimoni Core PTC, as findings from the situation analysis were presented in the subsequent sections.

1.7 A situation analysis of the teaching-learning processes of IPS at Shimoni CPTC

The situation analysis was conducted in the ICT lab at Shimoni Teachers' college with the administrators, tutors and the students using focus group discussion. Participants were registered (See Appendix 2: An attendance list for the situation analysis). Discussions with the stakeholders revealed that there are various gaps in the teaching learning processes of IPS. These gaps were believed to be the causes of students' low enrolment in the subject. The aim was to collectively identify the intervention strategies that can be applied to improve hands-on acquisition in IPS. The table in appendix 3 shows the challenges identified by the participants which were further deliberated upon during a future workshop.

1.7.1 The Future Workshop

A Future Workshop (FW) model is an important tool in Action research that researchers use to aid research participants in generating common challenges and laying strategies for possible solutions for challenges identified. Some scholars refer to FW as a method of research, for instance (Vidal, 2006) holds that a Future Workshop is used as a method of participatory research. As well as Future Workshops are underpinned by an emphasis on "critique, learning, team work, democracy, and empowerment", making them particularly suitable for use with oppressed and marginalized groups to develop solutions in their communities. However, the researcher used the FW as a tool to generate information from research participants. This tool consists of five phases, namely; preparation, critical, fantasy, reality and implementation stages.

1.7.2 Findings from the Future Workshop

The Future Workshop began with sending out invitations informing participants about the date for the FW; then the researcher prepared the workshop requirements such as; meeting venue, organized stationery and refreshments. On the day of the FW the researcher asked participants to register. During the Future Workshop session, the researcher facilitated the exercise by guiding stakeholders to provide answers to practical questions so as to devise action plans for achieving the desired future of improving the teaching and learning processes of IPS at Shimoni CPTC. The stakeholders in the Future Workshop discussion included; Twelve (12) Year two IPS students, one (1) IPS tutor, one (1) Alumni, three (3) College managers, Director of Studies (DOS), the Deputy Principal –outreach and Deputy Principal – Pre-service

Figure 2: Stakeholders at a Future Workshop Discussion at Shimoni CPTC

Source: Primary data (Future Workshop, 26th February, 2018)

First, the researcher shared her findings from the work process analysis of the pre-intervention teaching learning status of IPS with stakeholders as revealed in the workshop in phase one. The researcher facilitated the stakeholders to indicate if their comparative study of the

two scenarios revealed any aspects for improvement. The stakeholders unanimously agreed with the information which indicated that practical teaching and learning of IPS subject was grossly inadequate.

Through documentary analysis and individual interviews administered to students and tutors, the researcher was able to explore the work processes involved in the production of an IPS graduate at Shimoni CPTC. The IPS subject is taught as a core subject in year one and as an elective in year two. The bulk of the IPS topics are taught in year one where it is offered as a core discipline. This arrangement enables student teachers to learn many IPS skills that are required to enable an entrepreneur relevantly fit in the world of work. This is intended to enable student teachers who do not opt for IPS in year two to also graduate with competences required for them to teach the subject in Primary schools and to set up personal businesses.

Based on the aforementioned findings, the researcher asked stakeholders to identify the possible reasons why practical teaching and learning of the IPS subject was grossly inadequate. The stakeholders cited the following categories of causes: limited time due to the one- hour single lessons on the time table; lack of financial support from the parents; few IPS tutors at the college *"only two of them, of which one of them is a Center Coordinating Tutor (CCT), so he is a visiting tutor"* students have a negative attitude towards the subject; students' ignorance of the value of IPS; tutors' dislike to teach IPS practicals, material requisitions for IPS practical sessions are not presented by the tutors, materials for IPS are expensive. In some primary schools, the subject is not time tabled and if time tabled, only the Art and technology component is indicated. This leaves student teachers wondering about the relevance of the subject.

The researcher then asked the stakeholders to explain why the situation of inadequate practical sessions experienced by students in the teaching and learning of IPS at Shimoni CPTC should be improved. One of the tutors explained that the aforementioned scenario has led to several undesirable consequences. These included; the Vocational Pedagogy (VP) Competence Based Education and Training (CBET) approach of integrating theory and practice as a strategy for facilitating learners' acquisition of skills in the teaching learning processes of IPS. Consequently, IPS students finish training in year one without acquiring the relevant skills for producing quality products required in the market. In this context, such student teachers from Shimoni CPTC graduate with inadequate IPS competences required for overcoming poverty in the world of work. Such graduates are also unable to teach IPS effectively in the Primary schools. This scenario goes against the very essence for which the IPS subject was introduced in the PTE curriculum.

Another tutor observed that the poor Integrated Production Skills (IPS) foundation that students receive in year one leaves them with a lot of catching up to do in year two, yet students dread such enormous work. A number of year two student interviewees also said that the absence of hands on experiences in the learning of the subject renders them incompetent to successfully undertake the IPS summative practical national exams; 'we do not want to fail for free' (A year two female interviewee, 26/02/2018). In this context, it is important to observe that the practical component in the summative assessment of the IPS subject in year two cannot be done successfully by students who did not acquire competences during the teaching and learning process of IPS in year one. This means that inadequate integration of practice and theory during

the teaching learning process of the IPS subject render students ill prepared for the summative practical examinations.

Tutors explained that due to the aforementioned reasons, most students at Shimoni CPTC do not enroll for IPS in year two. For instance, in 2018, out of 208 only 08 students enrolled for IPS. This means that two hundred students dropped IPS in year two. In the absence of practical experiences, this scenario implies that many student teachers graduate from Shimoni CPTC with minimal or no IPS skills.

The above-mentioned discussion formed the basis upon which the researcher asked the stakeholders to identify intervention strategies for increasing students' hands-on experiences in the teaching learning processes of the IPS subject at Shimoni CPTC. The intervention strategies (Appendix 8) identified by the stakeholders by category included: Students should have Practical lessons beginning from year one; selling of IPS products that have been made by students; forming an IPS club at the college; tutors should give adequate attention and time for demonstration of practical procedures; students should have additional time for IPS practical lessons besides the 2 hours indicated on the time table; tutors should be available during the time for additional practical lessons in order to offer guidance and morale to students; tutors should mobilize resource persons to teach the IPS vocational subjects which do not have tutors; and administrators should provide materials for the IPS practical lessons right from year one (Refer to appendix 4 for details of the solutions generated by stakeholders in IPS).

1.7.3 Integration of Environmental resources in teaching IPS

Using resources collected from the local environment in teaching vocational subjects in the IPS discipline is another integration aspect that is mandatory in Vocational Pedagogy.

Bautista (2015), points out that competence based learning requires resources associated with learning and practice that are environmentally relevant and user-friendly. This enables learners to acquire competencies required for harnessing different tools, materials, processes, and conditions in the local environment (MoES, 2012). Environment is a vital resource in teaching and learning vocational subjects. Not only does the environment provide raw materials to be used in teaching and learning, it also acts as a source of inspiration for learners. The one major reason for poor performance among learners of vocational subjects, is the abstract manner of which the courses are taught to them as cited by (Yeboah, et. al 2016), are of the view that the absence of instructional resources such as pictures, models or real objects make it difficult for learners to understand communicated information. The use of the environment as a source of resource and inspiration is embedded in the global Sustainable Development Goals (SDGs) especially goal number 13 which focuses on climate action. Many littered objects such as water bottles, fabrics, scrap metal and other materials that negatively impact on environmental wellbeing, can be creatively recycled during classroom learning. In effect, learners would be gaining critical knowledge on how to protect the environment sustainably. Within the IPS subject, lessons within the art and design component such as weaving, decoration, among many have benefited from the trash within the environment. Learners were encouraged to look into the environment to pick certain waste resources and use them for their classroom projects. This also serves another purpose of improvisation, where resources for learning especially instructional materials are scarce.

1.8 Statement of the Problem

The objective of introducing IPS in the PTC curriculum and HE in particular, was to produce competent graduates with practical skills. The current version of IPS syllabus integrates vocational skills, specifically designed to achieve the wider vocational skills for the learner. The IPS in the Ugandan PTE curriculum is made up of four vocational subjects; Home Economics, Technical Education, Art and Technology and Entrepreneurship. Much as the objective of introducing IPS in HE curriculum has had great benefits to the graduates, results from the situation analysis and future workshop conducted, reveals some hindrances in the quality of teaching and learning resulting from students not having inadequate exposure of hands-on opportunity for integrating the use of environment. This study therefore, is an intervention resulting from decisions made by the researcher together with stakeholders to collaboratively address the lack of hands-on experiences in IPS with a focus on HE. If this highlighted problem is not addressed, learning will remain theoretical and the objective of hand - on experience in IPS as laid out in the curriculum will not be achieved.

1.9 Purpose of Study

The purpose of this study was to enhance students' hands-on experiences in the teaching and learning of the Home Economics (HE) a component in IPS at Shimoni Core PTC.

1.10 Objectives of the Study

Specifically, the study sought to;

i. Identify intervention strategies for increasing students' hands-on experiences in the teaching and learning of the Home Economics component of IPS.

ii. Implement the intervention strategies for increasing students' hands-on experiences in the Home Economics component of IPS.

iii. Evaluate the effect of the implemented strategies on increasing students' hands-on experiences in the Home Economics component of IPS.

1.11 Research Questions

i What are the intervention strategies for increasing hand on experiences in teaching IPS?

ii How can the intervention strategies be implemented in the teaching – learning process of the Home Economics component in the IPS?

iii What is the effect of implemented strategies on students' increased access to hands-on experiences in the Home economics, a component of IPS?

1.12 Significance of the study

The study was based on self-reflective ways of how teaching can be improved from theory to practice; thus benefiting the researcher as an advocate for seeing HE become more hands-on in approach. This study will continue to benefit the students of Integrated Production Skills (IPS) at Shimoni Core Primary Teachers' College by offering them opportunities to acquire competences in the subject as well as improving the researcher's competences in research methodologies. The study unveiled the gaps associated with the teaching and learning of vocational experiences in HE as a component of IPS.

However, this resulted into intervention strategies that were designed together with the stakeholders to solve the problem of inadequate acquisition of vocational experiences. The experiences acquired from the research study, have enhanced knowledge, abilities and understanding of carrying out action research which has had a positive impact on the improvement of the researcher's practice and that of Shimoni Core PTC.

This study will benefit MVP students of Kyambogo University, Ministry of Education and Sports officers in charge of TVET and other stakeholders by using the documented findings and recommendations to inform further research and policy.

1.13 Scope of the Study

The scope of this study focused on the following: geographical, content and time frame.

1.13.1 Geographical Scope

This study was carried out in Shimoni Core PTC. Shimoni Core Primary Teachers College is located in Kira Municipality in Kampala district. It is approximately 17 Km from Kampala City Centre. The study was conducted at Shimoni Core PTC because the researcher is a practicing tutor in the same college. It was therefore convenient in the implementation and follow up processes of the study.

1.13.2 Content Scope

The content scope of this study was based on the three objectives focusing mainly integrating theory and practice as a strategy for facilitating learners' acquisition of skills in the teaching learning processes of IPS. The researcher specifically addressed; students the teaching

of Practical lessons, selling of IPS products, forming an IPS club, tutors should give adequate attention and time for demonstration, additional extra time for IPS, tutors should be available during the time for additional practical lessons. In addition, the study was based on; intervention strategies identified for increasing students' hands-on experiences, lessons learnt from implementing the strategies for increasing students' hands-on experiences and the impact of the intervention strategies on students' access to hands-on experiences in the teaching and learning of the Home Economics subject in IPS at Shimoni CPTC.

1.13.3 Time Scope

This study was conducted within an academic year calendar of the Masters in Vocational Pedagogy (MVP) program. The program expected the researcher to start the study in September 2017 and do a summative evaluation in September, 2018. Though this was the case, Action Research (AR) is spiral in nature, so the time the research would end was not definite.

1.14 Limitations of the Study

Funding; the research funds were given late and this led to delays in starting the research process. To be able to work the researcher had to use other sources to facilitate the future workshop. The funding was later availed to facilitate other research processes such as implementation and evaluation. The researcher also faced the constraint of transport, accessing and down loading articles and printing that went beyond her planned budget.

Timing; balancing time between responsibilities at college and research study especially during examination period was wearisome and not easy. The implementation process was interrupted by the termly break offs which then delayed other research processes such as

evaluation. Therefore, the research process which was meant to be completed in September was interrupted when the evaluation stage of the research process was carried out.

1.15 Definition of Terms

Adequate practical: in this concept of research, adequate is a reference of the time allocated to IPS on the time table versus the time undersigned by the curriculum which three hours minimum for practical learning.

Competency: the ability to carry out practical activities on their own and also be able to teach them to the pupils in the primary school confidently.

Enhance: to improve the quality, amount, or strength of teaching and learning of practical experiences in Integrated Production Skills.

Experiences: repeated practicals with the aim of acquiring hands-on skills in order to master the content.

Skills acquisition: refers to a students' potential in performing work oriented tasks efficiently when all the activities are on their fingertips

Strategies: refers to the methods put in place during the research process to facilitate learning most especially for, practical skills acquisition.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

In this section, the researcher reviewed available literature in regard to the objectives of the study that is to; identify the current teaching learning practices implementation of the identified strategies as a way for bridging the existing gaps in the teaching of Integrated Production Skills and evaluating the effects of implemented strategies. The researcher therefore used the "learning to learn" theory, which explains key elements in an attempt to bridge the gap between learning and practice, as explained in the subsequent section.

2.2 Intervention strategies to increase Hands-on experiences

In order to successfully develop and implement strategies that enhance hands-on experiences, in the context of this study, the guiding approaches were collaborative and project based learning. On one hand, the collaborative approach as closely related to Action Research, aims at bringing together different stakeholders to think and act together to solve a common challenge (Laal, 2011). On the other hand, the Project Based Learning approach as a learner centered approach is emphasized within this study as an approach used to enhance hands-on experiences within the vocational fields of study (Aksela & Haatainen, 2019)

2.3 The Theoretical Framework

This study was based on the "learning to learn" theory developed by Holmwood House Preparatory School (HHPS) (2017) based on collective efforts that learners as individuals put in the learning process with an aim of accomplishing tasks that would translate into various competencies. "Learning to learn" concept prepares students for evolving challenges in the world

of work. Its emphasis is to train responsible citizens who are self-directed and empowered through hands-on acquisition of skills. This idea is highlighted by a number of scholars. For example, Hoskin & Fredrick (2008) defines Learning to learn as the ability to pursue and persist in learning, to organize one's own learning, including through effective management of time and information, both individually and in groups. Relatedly, Hautamäki, et.al (2002) define learning to learn as the competence and the willingness to adapt novel tasks. They further expound on the task as that which is seen to activate a complex system of interrelated competencies and beliefs, leading to learning action.

Learning to learn emphasizes a learner centered approach to learning where learners are encouraged to be aware of different opportunities surrounding their learning process. This is highlighted by Hautamäki, et.al (2002) who holds that learning includes awareness of one's learning process and needs, identifying available opportunities, and the ability to overcome obstacles in order to learn successfully. Furthermore, "learning to learn" engages learners to build on prior learning and life experiences in order to use and apply knowledge and skills in a variety of contexts: at home, at work, in education and training (Yale, 2017). The idea behind "learning to learn" feeds into my study in a sense that Home Economics (HE) as a component of Integrated Production Skills (IPS) subject, is regarded as a vocational training experience. It is a vocational training due to the fact that learners are required to use the knowledge and skills gained in their lives, hence enhancing lifelong learning.

The enhancement of practical skills gives learners an opportunity to individually apply the knowledge acquired theoretically from books and from Tutors' demonstrations into practice. Furthermore, using the instructional materials, tools, and equipment increases students' chances

of acquiring competences and confidence required for them to work effectively in the labour market as entrepreneurs. Holm's (2017) stresses that, in order for learners to successfully acquire competences through applying theory into practice, they must adopt the 5Rs in the philosophy of "learning to learn". According to Holm (ibid), the 5Rs include; Resilience, Resourcefulness, Responsibility, Reasoning and Reflection. It is believed that, these competences are critical to each student's achievement and development. Tutors ought to create opportunities for their learners that would enable them develop the skills highlighted by Crick (2014) through their participation in different learning activities.

The first element of "resilience" indicates that learners are able to persist in their learning in a positive way even when the going gets tough. Souers (2016) claims that when students are taught coping skills and productive ways to communicate their needs, their behavior, social skills, and sense of self-worth improve. The researcher holds a view that it takes resilience for learners to not only retain what is being taught in the classroom setting but also commit to persistent interrogation of knowledge.

The second element of "resourcefulness" refers to learners who are able to question and interrogate various processes in learning and build on previous results to generate new findings. Such learners generate creative and imaginative ideas to complete tasks, gather and select information from different sources in order to learn (GENÇ, 2016). They use their initiative to develop ideas, innovate solutions to problems independently and in groups. Resourceful learners are able to express themselves clearly and effectively verbally, in writing and using ICT. This is supported by. Holm (2017), who defines resourcefulness, as the quality of being able to cope with a difficult situation in one's attempt at succeeding. Learning through experience therefore,

feeds into the pedagogy of "learning to learn". This is true as it necessitates learners to involve critical thinking, creativity, research and to ask questions in the process so as to develop ideas and innovate solutions to various challenges encountered during learning.

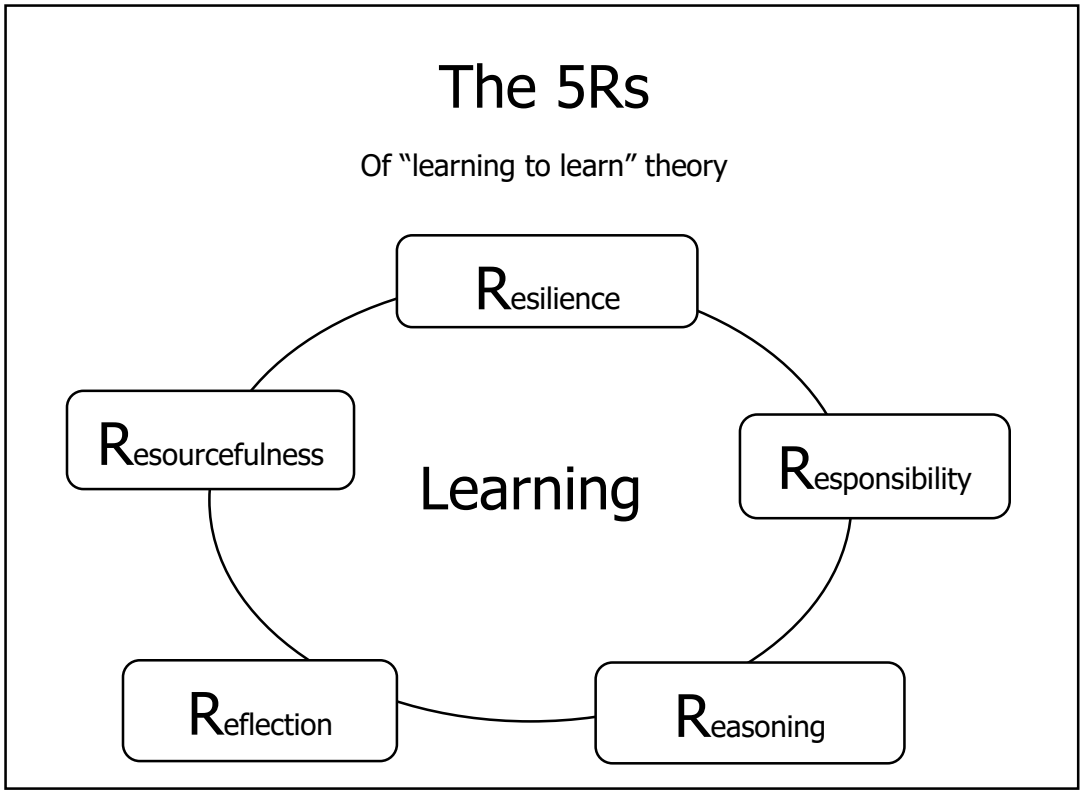
The third "R" in "learning to learn" theory advocates for "responsibility" among learners. Responsible learners are ever ready, self-motivated and prepared to think and learn (McCombs, 2020). They contemplate on the things they want/need to learn themselves and find out the facts about them independently. They understand the need to refine and practice skills and ideas, contribute effectively and sensitively to group discussions and more so are able to organize and delegate effectively and sensitively. By involving the stakeholders in the Future Workshop, responsibilities were factored into this research. This involvement needed full time participation of learners as stakeholders. The didactics in the Future Workshop included student based learning in the sense that called for research, creativity, group learning, collaboration and hands on learning. This enabled the learners to own their learning.

The fourth "R" in the "learning to learn" theory is "reasoning". Learners who reason are able to draw together evidence and information to arrive at a conclusion. They can easily apply the existing facts and knowledge in an organized and logical way to solve problems, evaluate and assess their work (Aronson, 2012). Such learners are also able to identify ways in which they can improve their work processes within the learning process, and explain their thinking. This study portrayed that by using the previous learnt knowledge, the learners were able to perform certain independent activities such as establishing a club that supported their learning. Through a study club, students with better ideas demonstrated to their fellows how to do different activities, thus making learning interesting.

The last “R” in support of “learning to learn” theory is “reflection”. According to Aronson (2012), reflection is principally a cognitive process, it requires engaged examination of both self and situation, and its goals are learning and improving future personal and professional effectiveness. Reflective learners are always said to be able to think deeply, pausing to look, listen and consider different views and dimensions which considers the next steps and sets clear targets. They respond positively to constructive feedback and advice, review progress and plan ways to improve, either on their own or after discussion with mentors. Through reflection, element stakeholders are capable of describing their progress and discuss their experience, emotions and responses. In view of all the 5Rs revealed in Figure 3 which support the theory of learning to learn. Figure 3 shows the visualized elements of the 5Rs in the “learning to learn” theory.

The researcher found it viable to base her study in this theory because the pedagogies employed in it were basically learner centered. All the 5Rs in learning to learn theory were vital for the success of the implementation processes of the study

The theoretical framework



5Rs of "learning to learn" theory

Source: Holm (2017)

Through the involvement of student stakeholders in this AR study, the researcher created opportunities for all student to develop these skills through their participation in the acquisition of vocational experiences in HE and using it in their learning processes. Resilient learners are able to persist in their learning in a positive way even when going gets tough, collaborate in

groups and remain committed throughout. It's not a guarantee that this was achieved a hundred percent, the transition from theory to practice with confidence and effectiveness was a little bit difficult in making the transition from theory to practice, integrating both theory and practice into the same course in the curriculum in ways that are relevant and meaningful to the student. However, through using problem based learning, students were supposed to learn by doing as one of the pedagogy of learning to learn. In this case they had to involve critical thinking, creativity, research and to ask questions in the process so as to develop ideas and innovate solutions for the problem. Responsible learners are ever ready, self-motivated and prepared to think and learn (Holm, 2017). Students would plan on the things they needed to learn themselves and find out the facts independently.

2.2.1 Collaborative strategies

In the context of this study, collaboration was undertaken in different forms. Firstly, is between various stakeholders (students, administrators, and the researcher), also between the institution and the workplaces. For any learning process to be successful, collaboration is required, whether learners collaborate between themselves to combine knowledge and skills in order to achieve learning outcomes (Bhroin, 2019) or whether the collaboration is between the learners and the tutor, or between the tutor and the administration. It is always important to have various collaborative processes to ensure learning outcomes. This is because learning is a collaborative process as supported by Laal (2011) who defines collaborative learning as an educational approach to teaching and learning that involves groups of learners working together to solve a problem, complete a task, or create a product.

Collaboration between learning institutions and the workplaces is vital if learners are to be equipped with relevant skills. Teaching students to acquire adequate skills as required by the world of work is a costly venture that most teaching and learning institutions are unable to fulfil. This strategy is in line with the principle of learning in the workplace as a model recommended in the didactics of vocational education (Mjelde, 2006). Moreover, additional sessions outside the timetable enable learners to experience repeated practice of the vocational content learnt in class, thus, upholding the concept of 'learning by doing'. In the process of practicing students gain confidence and mastery of knowledge and skills. Practice by doing enables one to learn from his/her actions, including "trial and error learning, discovery versus instruction, practical experience versus book learning and 'proof upon practice" as cited in (Wrenn, 2009).

Bringing together learners in manageable groups while doing their projects enables them to experience a variety of skills such as leadership, interpersonal relationships, delegation, responsibility, communication skills and being committed to accomplish the tasks. This helps learners to experience the feel of workplace environments where one has to relate with various persons. This is supported by the European Centre for the Development of Vocational Training (Cedefop, 2015) who stated that, it is important to ensure that vocational education and training (VET) gives learners the opportunity to acquire a blend of skills that combines theory and practice, allowing them to perform a specific occupation. This in turn helps learners upon graduation to face the world of work well equipped with a blend of skills and experiences that translate into their performance at their workplaces (Shanmugaratnam, 2014).

College clubs as tools used to facilitate collaborative learning, are important in teaching and learning of vocational subjects (Poth, 2018). According to the Lagos State Ministry of

Education Report (2008), college clubs in general motivate students to develop interest in schooling. They enable student teachers to discuss their issues and to put forward their suggestions to the club members and the facilitator. Similarly, in Uganda, the Ministry of Education and Sports (2012) report indicates that clubs are a powerful and enjoyable way to engage students in acquisition of skills by means of delivering a wide range of tasks. Secondly, IPS club in primary teachers' colleges ignite a new interest in Home-economics students provided a platform for others to extend their learning.

Furthermore, when students carry out tasks through clubs, they collaborate to perform real life tasks which gives them greater engagement, exploration opportunities and a deeper understanding of the task at hand (Poth, 2018). The students get an opportunity to explore the Home-Economics topics in an imaginative and innovative way (Ministry of Education and Sports, 2012). Similarly, Herald (2019), points out that a club stimulates interest in the profession of Integrated Production Skills and related fields, a spirit of cooperation and mutual helpfulness among students and provides an opportunity for wide acquaintances among students and professional workers. On the other hand, Nwankwo, et. al, (2015) argues that student teachers gain a sense of belonging and work together to see the club developing since it is always done along the subject content.

Similarly, (Hofferth, 2001) argues that Club membership provides an opportunity to participate in new roles because the leadership roles that are available in clubs provide a valuable experience that is not generally available to young people. He further asserts that learners who are drawn to participate in a science club, have been more successful academically prior to joining than non-participants. Wesley (2020) stresses the importance of appreciating the impact

of skills a student can obtain from being part of a club at college. Clubs can offer important life skills that a learner can use for the rest of his or her life. In this learning context continuing students transfer their experiences to new students through mentoring hence accomplishing learning tasks, as supported by (Mjelde, 2006). This is also in relation to the real life situations where different people come together with different ideas to come up with solutions to a common challenge. This is supported by Luca (2002), who contends that, in real life contexts, experts work in teams, share knowledge and apply it, revise and transform it through discussion, application and analysis.

2.2.2 Selling IPS products

Apart from coming up with products through hands-on activities that learners practice within the teaching and learning of vocational subjects, it is important to expose learners to the processes within the chain of production, which includes but not limited to selling of products. UNESCO (2014) holds that when learners are engaged in such activities like selling of their products within the school setting, it develops their personality traits such as self-confidence, risk taking, innovative behavior, perseverance, creativity, uprightness, self-determination, habits of discipline, positive motivation towards work, ability to think in overall context, ability to solve problems, independence, team work, willingness to learn, flexibility, independent decision making, concentration, responsibility, precision, information processing, independent learning, reliability, quality consciousness, cleanliness, thoroughness in one's work, development of self-esteem and assuredness.

Won (2010) on the other hand, asserts that one way of generating income from hands-on is by connecting “learning by doing” to teaching students how to earn income from the skills

acquired which results in an even more powerful methodology of “learning by doing and earning”. Educating students in an entrepreneurial environment in which technical knowledge is combined with the business practices and business management generates income to support the financial self-sufficiency of the school, thus making students successful upon graduating from school.

Cedefop (2012) said that Vocational education and training includes agricultural, commercial and technical programmes. Students are required to acquire entrepreneurial training which enables students to access the market as skilled workers. This bridges the gap between IPS and vocational Training because student’s opportunity to gain both vocational qualification provides direct access to the labour market and general qualifications providing the same opportunities of continuing in higher education as students in the world of work (Cedefop, 2012, p. 5-6). Similarly, (Johnson, 2016) because it aims at equipping students with practical skills allocated in the curriculum and it is associated with real needs and practical labour used to help create local jobs, thus contributing to poverty reduction. In other words, vocational training is closely connected to production and business labour use Mac Van Tien (2009).

2.2.3 Project-based learning approach

According to (Pham, 2018) Project-based learning drives teaching and learning in accordance with skills, engages learners into the learning process, motivates and develops learners' creativity. Roessingh, (2011) asserts that Project-based Learning (PBL) is a teaching mode based on "project". It originated from Dewey's teaching concept of learning by doing. John. W. Thomas (2015) believes that the so called "project" is a complex task based on challenging issues that encourage students to participate in planning, problem-solving, decisive

and giving students the opportunity to learn independently over a long period of time and ultimately produce viable results.

Through cost sharing as a strategy to help bridge the gap of inadequate resources, learners and the institution collaboratively promised to work hand in hand in acquiring learning instructional materials (Mushi, 2014). With the provision of instructional materials, learners' ability to engage in practical training, improved. This is possible through the use of different pedagogical strategies that ensure learners come together to harmonize their ideas through discussions, and reflective practice, consequently enhancing effective instructional design for executing learner centered strategies such as project-based learning, discussion and hands-on learning (Wells, 2004). Learning strategies such as forming a club for a particular subject come handy in ensuring students easily share ideas with their peers hence collaborative peer teaching (Briggs, 2013)

2.2.4 Extra time

It is important that students are allocated extra time to enable them to solve tasks through hands-on experience. McLeod et al, (2003) advocates that although teachers have little control over time, creating extra time for practical activities enables learners to acquire practical skills. Wrenn (2009) also affirms that increasing hands-on experiences requires provision of extra time. In the same vein, Middleton (2007), points out that creating time outside the time table does not necessarily mean abandoning allocated time of the subject to enable students to acquire practical skills, but rather give learners enough time to interact with the knowledge, content and materials. Similarly, Lee & Lai (2017), agrees that student teachers' hands-on experience enhances their knowledge and improves their skills required for higher knowledge when given adequate time.

Creation of extra time for hands on experience and students' learning outcomes requires time on task and this alone is an important reason for improving vocational learners with lots of 'hands on' opportunities (Lucas 2012). Said's (2014) on the other hand states that some vocational students in higher institutions' were capable of achieving excellence in less time than was commonly allocated while others were only capable of doing so when some extra time outside the time table.

According to (Reese, 2011) practical learning is where students translate their vocational theory into practice. He continues to expound that Learning by doing means learning from experiences resulting directly from one's own actions, as contrasted with learning from watching others perform, reading others' instructions or descriptions, or listening to others' instructions or lectures. This enables students to master knowledge and develop the skills needed to perform tasks. Through the practical experience students develop competence as they reflect on the tasks and activities in the practical learning processes. Blackwell (2001) claims that, work experience can contribute to higher educational standards in schools and in higher education and the development of a flexible, highly-skilled and enterprising labor force.

Because of economic realities, tertiary educators are compelled to consider new content delivery strategies and approaches towards developing lifelong learners. Recent discussions of higher education would seem to portray a view that the aims of higher education are consistent with the demands of working life (Luca, 2002). This is supported by (Mcloughlin, 2002) who argues that development of personal transferable skills that will require professions which includes integration of theoretical and practical knowledge, communication skills, reflection on one's own knowledge and management of self, others and information. The researcher's view is

that until institutions of learning begin to use simulated working environments within the teaching and learning processes, learners are still leaving the training institutions unable to execute tasks at the workplaces.

2.2.5 Blending Theory and Practice

Many scholars argue that vocational subjects require much more emphasis on practice than theory so as to ensure learners are exposed to as many real-life situations as possible. Kennedy (2011) for example, states that, since VET is intended to be practically oriented, fewer theories than practical components should be taught. Similarly, (Maeko. M, 2014) holds a view that practical subjects must include enough practical components so as to provide the much needed practical experience. (Burnett, 2005). This is contained within the training and competences developed in the traditional pedagogies of workshop-type technical subjects which were and still are, in many cases, 'demonstration and follow' (Maeko, 2014).

During learning, learners experience problem based learning through executing their practical projects simulated to resemble real life setting. This increases their enthusiasm as they handle the tools and materials physically while seeing the outcomes of their learning processes. Through experimentation learners reflect on their work through repeated activities thus developing their skills and knowledge. This is aimed at promoting an individual learner's ability to solve real-world problems by integrating specifically relevant knowledge of structures, materials, technological processes and systems (Cedefop, 2015). Ultimately the student should be able to acquire industrial skills as well as thinking skills.

2.3 Effects of implemented strategies on students' increased access to hands-on experience

To afford more time for practical lessons, additional periods for HE in the College time table was created. Saturdays was added from 10.00am -1.00pm to enable practical lessons to be conducted effectively. The construction of earthen oven was used for baking instead of electric oven. Furthermore, due to the rampart power irregularities, the construction of an open shade for HE to conduct baking practical lessons using the earthen oven made baking effective.

When students are engaged in practical lessons, opportunities to manipulate objects or materials it improves their understanding. This is in line with (Cakiroglu, 2011) who said that students who have hands-on demonstrations, achieve skills better than students who are taught theoretically. By working with materials or objects, students become more motivated and excited in the teaching and learning process which makes students critical thinkers and active students.

In conclusion, enhancing learners' practical experiences in the acquisition of integrated production skills is supported by most scholars in relation to vocational education and training. It provides a holistic learning environment which facilitates acquisition of hands-on experiences.

Practical teaching and learning of HE enhances hands-on experiences in the acquisition of vocational skills, creative use of resources; time, environmental materials, recycling materials and committed involvement of the HE Tutor, to consolidate teaching and learning. This is a transformation of teaching and learning in the subject that will make knowledge applicable wherever the graduate teacher will be employed to the benefit of self, society and country.

CHAPTER THREE: METHODOLOGY

3.0 Introduction

This chapter presents information on the methodology that the researcher used to collect and analyse data. It describes the research design and approach, study population, sampling technique, methods of data collection, instruments of data collection, data collection procedure, data analysis, and ethical considerations.

3.1 Research Design and approach

The researcher employed a participatory action research design and a qualitative approach for data collection and analysis.

3.1.1 Participatory Action Research design (PAR)

In this study, the researcher employed a Participatory Action Research design in an attempt to identify strategies that can be used to enhance students' hands-on experiences in teaching and learning of the Home Economics (HE) component of Integrated Production Skills at Shimoni Core PTC. Participatory Action Research design aims at improving the Vocational Education and Training practices in schools (UNESCO, 2014). The PAR model helps in achieving results that validate the action research process. The PAR design upholds the theory of *'learning to learn'* as a theoretical framework that underpins the practices adopted in the Vocational Pedagogy for the achievement of professional competences in VET. Therefore, the research design enabled the stakeholders and the researcher to systematically find solutions to the problem of inadequate practical training opportunities that the learners experienced during the teaching and learning of the Integrated Production Skills subject at Shimoni CPTC.

Through this design, the stakeholders worked collaboratively with the researcher to determine the challenges affecting the teaching and learning of HE in IPS in their institutions, developed interventions to address the challenge, implemented, and evaluated the impact of the interventions. During the collaborative research, the respondents became co-researchers and change agents at the workplace (Cornwal 2008) who claim that those affected by the problem ought to actively participate in the research process**.** Similarly, Engeström (2001) too, advocates for goal directed and group actions to reach an outcome. Thus, the PAR approach was useful because it focused on both problem-solving and knowledge-generation. The researcher's involvement in problem-solving activities, knowledge-generation, and documentation of the research process as it unfolded is in line with the PAR approach. This is emphasized by scholars such as Whitehead and McNiff (2006) who hold a view that knowledge is collaboratively constructed for the benefit of society. Similarly, Reason and Bradburry (2001) hold that socially, knowledge is constructed and embedded within the society.

The Participatory Action Research (PAR) design project used in this study was cyclic in nature, which involved four steps, namely; planning, acting, observing and reflecting as presented in figure 3. In PAR design, any implementation gaps that are observed in the reflection process triggers another PAR cycle to address them. The cyclic process is done to ensure that the research outcomes lead to improvement in the quality of production processes and the products for the market.

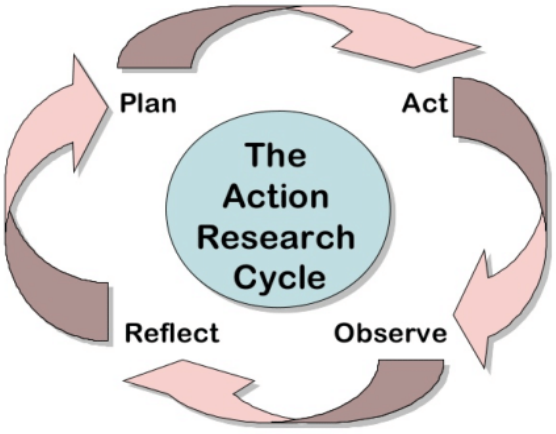


Figure 3: The Action Research Cycle

Source: Nelson (2014)

3.1.2 Qualitative Approach

The study employed a qualitative approach for data collection and analysis because only qualitative responses were collected from participants with the purpose of solving an institutional problem through the participation of the stakeholders. Use of qualitative data enabled the researcher to capture stakeholders' experiences in a narrative form in regard to the work processes involving the teaching and learning of IPS in PTCs). The use of the qualitative research approach thus enabled the researcher to connect with the participants and to see the world from their own point of view (Creswel, 2009).

Consequently, the captured experiences of the stakeholders enabled the researcher to improve her understanding of the phenomena in the study through data collected (Devers & Frankel). The researcher took a lead role in collecting information using various methods like interviews, observation, and document analysis with different tools such as interview guides, observation checklist, and existing documents for the purpose of triangulating information. The

information gathered was later presented in themes according to the specific objectives. This was done to create a deeper understanding of the problem and the impact of the laid strategies in the context of teaching and learning of HE component of the IPS subject (Zubin, 2015). Therefore, the observation and interviews were key data collection methods within the research process.

3.2 Study Population

The population of Shimoni Core PTC was randomly picked from a population of 248 students who were undertaking PTE curriculum. However, with special reference to this study, the study population comprised of the following category: 4 (four) administrators, 1 (one) tutor, 45 (forty-five) year one students and 12 (twelve) year two students

3.3 Sample size

The table below shows the size of the samples picked from the different categories of participants.

Table 2: The distribution of the study population categories

Sample	**Target Population**	**Sample size**	
Administrators	04	04	
Tutors	02	01	
IPS Students year 1	228	45	
IPS students Year 2	14	12	
Total	**248**	**62**	

Administrators

The administrators and IPS tutors were purposely selected because of their positions as managers. They facilitated the implementation process of the teaching of IPS. The administrators

were knowledgeable about the challenges the College was experiencing in the teaching of IPS, and were also in a better position to financially and technically determine the feasible intervention strategies for addressing the identified challenges

Tutors

The tutor was selected because he was Art and Technology tutor who provided information regarding the teaching learning processes of IPS.

Students

Out of the two hundred and forty-eight (248) students forty-four (45) students were from year one. Twelve (12) second year two students were involved in the process because they offer the subject as an elective. The year two IPS students were also selected to participate in the study because of the experiences they acquired during their year one IPS lessons and they were available by then as stakeholders in the Future Workshop. The researcher deemed the knowledge and skills they acquired prior to the study, as vital for the success of the research. These two qualities enabled the year two students to provide authentic information on the subject under study as their responses were based on lived experiences.

3.4 Sampling Technique

The researcher employed a purposive sampling technique to select all the participants in the study to provide information on the learning processes involved in IPS subject. Lund Research Ltd (2012) emphasizes that the main goal of purposive sampling is to focus on particular characteristics of a population that are of interest. Tutors were selected because of their knowledge and expertise in implementing the subject, and the administrators' due to their

experiences in various college activities. The researcher together with the stakeholders selected individuals and sites to learn. Consequently, they were able to identify; the areas for improvement, the strategies for addressing the gaps, implement, and evaluate the impact that the study brought to college.

3.5 Methods and Instruments of data collection

The researcher employed observation, interview, documentary analysis, and future workshop methods while collecting data for the study. Consequently, the researcher employed observation checklist, and future workshop guide, as instruments of data collection. Other tools that helped in collecting and processing data included audio and video recorders, cameras and notebooks. All images in the study were contented for use of this study all are rights reserved.

Table 3: Summary of data collection methods and tools

Method	**Tool**
Observation	Observation checklist
Interview	Interview guide
Future Workshop	Future Workshop guide
Documentary analysis	

3.5.1 Observation

Participant observation enabled the researcher to partake in the research activities and derive meaning from the process of action. The data obtained through participant observation served as a check against participants' subjective reporting of what they believe and do (International, 2004). Participant observation was done with the help of an observation checklist as seen (Appendix 7). This enabled the researcher to note events about the study in the different key areas of practice.

Participatory observation was also employed during the teaching-learning process as the researcher allowed the students to work on their own during practice to observe if the employed methods actually had an impact on students' learning. observation checklist was drafted, clearly indicating the areas that needed critical observation such as equipment available and its functionality in the training process.

3.5.2 Interview

Information required from the participants was gathered by the researcher asking questions in an interview process. Nigel and Hunn (1998), asserts that information can be collected from individuals about their own beliefs and experiences of the teaching- learning process using interviews. The interviews were conducted during the situation analysis and future workshop in which the researcher asked questions well guided by the interview guide (Appendix 6). An interview guide containing a set of guiding questions that prompted the participants to unveil the information they had concerning the research topic was used. This helped in collecting data.

3.5.3 Future workshop

The researcher conducted a future workshop for identification of the problem concerning the teaching and learning of practicals in Shimoni CPTC. The Future workshop started with introduction of the researcher and the participants. The process was guided through phases of data collection by the supervisor. These phases are preparation phase, critical phase, Utopian phase and reality phase. Preparation which involved the organization and preparation of the room and equipment. Critical phase involved the formulation of general and critical question of the problem and clustering the problems with the stakeholders' opinions were treated equally. Utopian phase involved the imagination of the ideal situation, which allowed the researcher together with the Stakeholders to turn around to the critical points from bad to good. Everyone was allowed to give his or her opinion. And lastly reality phase involved the working out what was possible and preparing the action plan meant for the implementation of the best ideas together with the stakeholders as shown in the future workshop guide (Appendix 8).

3.4.2 Documentary analysis

Documentary analysis enabled the researcher in the initial stages of the research to identify and shape the problem, establish the theoretical underpinning of the study, clarify ideas, and develop the methodology (Kumar, 2005). The documents analysed included Integrated Production Skill (IPS) curriculum syllabus, Shimoni CPTC class registers, and various Journal articles related to the study. The documents were analyzed to triangulate the information in them with that got from the interviews and focus group discussions. Existing documents such as the curriculum to indicate whether the curriculum is compulsory or an elective, a register to show the number of students that had been offering the subject over the years and timetable to indicate the time available to teach the subject on the timetable with reference to the periods given on the timetable.

3.6 Data analysis

Data was collected and systematically coded and analysed in themes according to the objectives of the study. Since the study was qualitative in nature, the researcher employed qualitative techniques of data analysis such as transcription, coding and categorizing, presentation and interpretation, of the data (Sutton &Austin, 2015).

3.6.1Transcription

The researcher documented the data obtained from stakeholders through various group discussions. Later she grouped the transcribed data and shared it with the informants for validation. This was done to ascertain whether the transcribed data was corresponding to the informants' views at the time of the interview (Mero-Jaffe, 2011), such as blending theory and practice in the teaching and learning of HE a component of IPS.

3.6.2 Coding

Data generated from discussions and secondary sources such as textbooks and reports, was organized through descriptive codes. This was done in order to highlight ideas and phenomena that converged on similar constructs from various data sources (Saldaña, 2013). Therefore, after transcribing the data, the researcher classified it into meaningful themes and sub-themes based on the objectives of the study. For example the following codes (A,B,C,D, & E), were developed to represent the respective themes developed during the future workshop discussions as seen in pairwise matrix ranking (Appendix 5); A represented extra time for practical in IPS, B represented effectiveness of Tutors, C represented provision of Materials for teaching Practicals in IPS by the management, D represented mobilisation for resource persons by both management and resource persons, and E represented sensitisation for students by both management and IPS department.

3.6.3 Presentation

The researcher presents the transcribed data under the categories A, B, C, D and E. The pairwise ranking enabled the researcher to come up with the top ranking problem statement of the study. All that was presented emerged from the raw data collected in the initial stage. The researcher presented the data that was collected in response to the objectives and research questions which are related to challenges affecting the teaching and learning of HE in IPS in Shimoni CPTC. This employed Pairwise Matrix ranking as seen in (Appendix 3)

3.7 Procedures of Data Collection

An introductory letter seeking permission to conduct the study at Shimoni Core PTC was obtained from the coordinator of the Masters in Vocational Pedagogy (MVP) program and delivered to the College Principal (Appendix 12). Prior to proceeding to conduct a situation analysis, the researcher formulated questions for the stakeholders. Once permission was granted, the researcher made appointments with various stakeholders, to have one on one interactions. A situation analysis of the teaching and learning processes, was conducted on 26th/2/ 2018. This was aimed to identify gaps within the teaching and learning processes of the Home Economics component of IPS.

The outcomes from the situation analysis were used by the researcher together with stakeholders during a Future Workshop held on 26th/2/2018 with an aim of finding practical solutions to the gaps identified under the guidance of the supervisors. Stakeholders unanimously agreed on a problem statement, which culminated into a research title *Enhancing hands-on experiences in the teaching and learning of Integrated Production Skills* that this study was based upon.

3.8 Ethical Considerations

To address the ethical issue, 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. The researcher solicited consent of the interviewees and ensured confidentiality in all matters relating to handling data and information on the research findings (Walliman, 2011; Silverman, 2016; Kothari, 2004).

3.8.1 Informed Consent

The participants were provided with sufficient information about the research topic by verbal explanation. Participants were also informed about the expected duration, procedure as well as their right to decline information and withdraw from participation at will so that they would willingly and knowingly participate (Fleming, 2018)

3.8.2 Confidentiality

The researcher observed extreme confidentiality and ethical guidelines while handling the data of respondents. Confidentiality was ensured by keeping the acquired information secure, private and by making sure that the information was used only for the purpose of the study (Dempsey, 2016). The researcher also employed use of pseudo names for reference to various participants who provided relevant information. This was done as a form of keeping confidentiality of the participants.

3.9 Validity and Reliability

The validity of the data was based on the researcher's involvement in the research processes with the research participants. To ensure that data obtained from the participants was valid, it was triangulated through comparing what all the participants had to say about a similar situation. The other way of ensuring that valid information was obtained from the participants was by comparing with that in the existing documents and use of existing documents. Reliability on the other hand was the consistency of research procedure demonstrated in the study. Thus the researcher used the instrument to obtain the information. Reliability was guaranteed by triangulation of data collection methods in which interview guide, FDGs and observation from

future workshop. The researcher pre-practiced focus discussion and interview methods with different individuals to see that the key questions could easily be understood and to see whether they could bring useful answers. The researcher found out that the key questions were easily understood and could yield youthful results when administered.

The researcher designed the sets of data collection tools on work process at Shimoni Core PTC. These tools were later presented to the supervisors and key stakeholders who provided their guidance in relation to collecting relevant data aimed at answering the study questions. Following the interviews and FDGs from the situation analysis, the researcher analysed the data collected. Adjustments were made to what was relevant to the work process.

CHAPTER FOUR: DATA PRESENTATION, DISCUSSION, INTERPRETATION AND ANALYSIS

4.0 Introduction

This chapter is a presentation, analysis and interpretation of the study findings in line with the research questions that emerged from the objective in chapter one. It illustrates a story of action presenting learning experiences of the researcher and that of participants as it unfolded in the study. A collaborative approach between the researcher and other stakeholders was used. In the subsequent sections, findings linked to the implementation of the future workshop intervention strategies are presented. The findings are presented in relation to objectives ii and iii of the study. Thus, implementing the strategies identified by the participants to solve the major problem in the teaching learning processes and Evaluating learners' hands-on intervention strategies adopted by the IPS department.

4.1 Strategies for increasing student's hands-on experiences

Findings in this section are presented in relation to the research question one that is to say, what intervention strategies can be used to increase students' hands-on experiences in the teaching and learning of the Home Economics component in the IPS subject? Responses to this research question were based on question items (i and ii) in the Interview Guide for phase one of the Future Workshop discussion with stakeholders (Appendix 6).

During the Future Workshop, the researcher asked stakeholders to: identify roles of stakeholders in the implementation of each intervention strategy; assigned the roles to the various categories of stakeholders; and agreed on the time frame for implementing each role as distributed in the work plan (Appendix 11).

Stakeholders suggested five different intervention strategies which included the following: Practical learning within the classroom, creating extra-time for hands-on experiences, Tutors giving adequate attention and time to students during the extra time hands-on learning activities, forming an IPS club at the college, and Selling IPS products made by learners during the HE lessons. In the following sub-sections, the researcher presents each of the aforementioned intervention strategies.

4.1.1 Practical learning within the classroom

The concept of practical learning within the classroom was developed during the future workshop. The participants identified the strategy as a potential method for learners to acquire skills through individual and collaborative participation in practical lessons. In this study, the stakeholders perceived practical learning in the classroom as pedagogy that enabled students to

practice theoretically learnt concepts. By implication this intervention strategy is a learning model involving integrating theory and practice. It discourages the learning approach that makes students to learn HE curriculum theoretically. (Table 2: distribution of IPS theoretical and practical training section in chapter one)

The situation analysis in this research, for instance, revealed that sewing and weaving were taught theoretically; (Table 2 distribution of IPS theoretical and practical training section in chapter one). Part of this finding was confirmed by a year two female student who said that:

> "… in IPS we do not learn things practically… to-date, I still have un-utilised the piece of material that year one students were asked to buy for practicing sewing in HE … we did not get the opportunity to sew anything …." (Situational Analysis interview 26/2/ 2018)

The theoretical teaching of the IPS subject, HE inclusive, was due to various factors. In phase one of the Future Workshop, one administrator, (Deputy Principal Pre-service), said HE tutors always made late requests for instructional materials to aid practical activities. In some instances, they did not submit any requisition. Such late requests would be over taken by events and students would not use the instructional materials for any practical lesson. Stakeholders also revealed that HE instructional materials were hardly purchased by the college administration because of the high costs. The college vote for these instructional materials was too small to adequately cater for the requisitions. Worst of all, stakeholders also observed that tutors hardly made any effort to improvise materials such as discarded paper in the environment to recycle as instructional materials for practical lessons.

4.1.2 Creation of extra-time for students' hands-on experiences.

According to the interviewees (stakeholders) creating extra time referred to identifying and using time outside the official teaching hours to create opportunity for students to have more hands-on experiences in the learning of HE. This intervention strategy was identified as a means of increasing time for IPS students to conduct hands-on learning activities. This intervention strategy was identified by stakeholders during the interview conducted in phase one of the Future workshop discussion.

The stakeholders also noted that, the College teaching timetable allocated limited time for the four components of IPS, including HE. The time table allocated two hours per week for all the five components of IPS to implement both theory and practical aspects (Appendix 9). This strengthened the stakeholder argument suggesting extra-time to be created such that learners get adequate time for the subject. The stakeholders identified 'every Saturday from 10:00 am to 1:00 pm' as the ideal extra time that students could use for more practical activities in HE component of the IPS subject, which is in line with the theory of learning by doing and re-doing because practice makes one perfect competency acquisition.

4.1.3 Tutor to give students adequate attention and time in extra time activities.

The Tutor was required to give adequate attention to students during the extra time sessions. This was perceived by the stakeholders to mean that the Tutor would be "fully present in all sessions of extra time that was identified. "Giving adequate time referred to the tutor consistently giving relevant individual or group support to students in the hands-on learning activities during the extra time whenever requested. "…*the requests should never be ignored, said another year two female student…*" (26/02/2018).

The stakeholders too, equated adequate attention to the support given by the Tutor to students during demonstration lessons in all the different HE activities carried out by students during extra time sessions. Furthermore, the stakeholders also perceived adequate attention given by tutors as the provision of relevant support to students according to their individual learning needs. A male tutor (interviewee) affirmed this when he explained that, "…*some learners are slow while others are fast at grasping concepts taught…"* (26/02/2018).

This implies that giving individual attention to learners by the HE tutor in practical activities during extra time sessions is an attribute of adequate attention. Integrating theory and practice in teaching and learning of HE in IPS was upheld by the College Administration in the effort to improve teaching and learning of practicals. There was however, a funding constraint due to delays of grants from the Ministry of Education. To address the delays partial funding was afforded by the College.

4.1.4 Forming IPS Club at the college

In phase one of the Future Workshop, the stakeholders requested for the formation of an IPS club. They also guided that this club would operate every Saturday from 10.00 am-1.00 p.m. During the Action Planning Focus group discussion meeting, it was agreed that the IPS Tutors guides students in the formation of the IPS club and the selection of club leaders. Tutors were also tasked to; plan for practical sessions of the IPS subject, allocate time for practice activities and make requisitions for materials to be used in each practical session. The stakeholders explained that the IPS Club would help students to acquire and strengthen competences in the areas of marketing, selling, and book-keeping. The stakeholders also guided that the IPS tutor

would be committed to guide the students further in forming the IPS Club. In addition, stakeholders also encouraged Tutors to use the IPS club activities to facilitate students to experience and appreciate teamwork as well as develop resilience, resourcefulness, responsibility, reasoning, and reflection fulfilling the theory of learning to learn through practice.

4.1.5 Selling of IPS products made by learners during the HE lessons

The fifth and last strategy that the stakeholders identified to ensure hands-on experiences for HE in IPS, was selling of the products made from the IPS club as well as practical learning within the classroom**.** Stakeholders intimated that it is embarrassing to find graduates of IPS making products but failing to sell them. One of the stakeholders said that: "…*the learning cycle is not complete until a student is able to sell the output to the market around the society*…" (26/2/18)

It is from this background that one of the tutors suggested that, students should be encouraged and helped by the institution to sell their products. This would give students the needed skills in marketing, customer care, book keeping, negotiations, which are vital in the world of work. The stakeholders suggested that: "…*students should use the IPS Club to create a market base among the college population and beyond to be able to sell their products*…" (26/2/18)

4.2 Implementation of the intervention strategies developed for increasing students' hands-on experiences in the Home Economics component of IPS.

In this section, the researcher documents and presents the processes undertaken to implement the strategies aimed at improving students' hands-on experiences in HE in IPS. It is based on the action plan; a document that lists steps that must be taken in order to achieve a specific goal. The collaboration between this active implementation involved key stakeholders such as the administrators, tutors, and the students. In this dialogue, the researcher requested support of each stakeholder involved in implementing their respective roles and responsibility for successful improvement of teaching and learning.

4.2.1 Practical learning within the classroom.

Cakes are baked using an earthen oven; The earthen oven was constructed in the ground outside the HE laboratory by digging a hole of approximately 60 cm wide by 60 cm long and 40cm deep. Some students were assigned to pre-heat the earthen oven using firewood. The Tutor taught the learners how to regulate fire by moderating embers [charcoal] to avoid excess heat as seen in (Figure 5). In line with the intervention strategy of integrating theory and practical work within the classroom, the earthen oven was one improvised equipment used by the stakeholders to improve the teaching and learning of HE in IPS. In the process of baking, the earthen oven hole was preheated using firewood to the required temperature and some charcoal embers were removed and placed on top of the earthen oven to heat the surface in order to obtain an even baking. Once the baking was complete, the charcoal embers on top of the oven was removed and the baked product removed.

Figure 3: One of the students of HE removing excess fire [charcoal] from the earthen oven

Source: A photo taken by the researcher during one of the practical lessons in HE at Shimoni CPTC in 2018.

***Creaming the cake mixture*;** Students were able to follow the procedure under the instruction of the tutor. Students weighed all the required ingredients in correct proportion and quality of the recipe to achieve the right combination; Sugar, fat, wheat flour, eggs, baking powder were used as ingredients for basic mixture. The creaming method was used in the process of mixing. In this intervention students integrated theory and practice because, students were engaged in creaming as a class time activity during which, students were able to measure the amount of ingredients used in the preparation of a cake. There was hands-on experience among the learners, where they were able to perform practical work by following the procedure of creaming under the close supervision of the Tutor. (Figure 5). The challenge was that, there was a limited quantity of ingredients compared to the number of students for effective participation.

Figure 4: Some the students of HE mixing the cake ingredients

Source: A photo taken by the researcher during one of the practical lessons in HE at Shimoni CPTC in 2018.

In groups, the Tutor gave all the students the opportunity to experience the procedure. Each group came forward to mix the ingredients, place the cake mixture in tins, and the whole class went out to place the creamed mixture in the earthen oven for baking. (Figure 6). The process of baking took ten (10) to fifteen (15) minutes for the queen cakes to get ready. This revealed practical learning in the classroom and students were able to follow practical procedures under the guidance of the tutor.

Figure 5: Unbaked cakes placed in the earthen oven by students

Source: A photo taken by the researcher during one of the practical lessons in HE at Shimoni CPTC (2018)

***Peeling and steaming of green bananas*:** Preparation of green bananas was another practical activity that was carried out under cookery. Students, were guided by the tutor, to prepare green bananas using water, banana leaves, saucepan, knives, banana fibers and a basket. Students were asked to demonstrate to their peers how to peel green bananas. Male students were as well encouraged to engage in peeling green bananas as seen in (Figure 7).

Figure 6: A male student demonstrates how to peel green banana

Source: A photo taken by the researcher during one of the practical lessons in HE at Shimoni CPTC in 2018.

Students were able to use the steaming method to cook green bananas by wrapping the bananas in banana leaves and placing them in the saucepan to cook. The banana wrap is kept suspended from the boiling water using banana stems placed at the bottom of the saucepan. The steam cooked the bananas. In (Figure 8), a female student wraps green bananas in a saucepan using banana leaves ready for steaming.

Figure 7: A female student wrapping green bananas ready for steaming

Source: A photo taken by the researcher during one of the practical lessons in HE at Shimoni CPTC in 2018.

4.2.2 Tutors give adequate attention and time to students during their extra-time hands-on learning activities.

The study found out that to solve the problem of limited attention and time given to students by the Tutors, the stakeholders advocated for Tutors to be present in class as students use the extra hours allocated to increase time for hands-on experiences during HE practical activities. The researcher allocated extra-time on the time table and ensured presence for learning areas of weaving by recycling old T-shirts which the students were able to turn into table mats; recycled paper to make table mats and baskets (see Figure 10); and decorating bottles (see Figure 11). To overcome the budget limitation, the Tutor recycled materials e.g. students turned waste

paper into table mats and baskets. The students also used materials from the environment, such as banana fibers, palm leaves, nylon sacks, pine leaves, among others to generate products and acquisition of skills. The tutor allowed students to continue exploring on their own until they completed the work as displayed in Figures 9 below.

Figure 8: Table mats that the students made using waste paper material during extra-time. Source: A photo taken by the researcher during one of the practical lessons in HE at Shimoni CPTC in 2018.

The researcher and the stakeholders realised that this learning experience entails creativity in problem solving, enhancing hands-on experiences and giving adequate attention to students when integrating theory and practice yields great results and improves performance of learners in HE.

4.2.3 Creating extra-time for hands on experience and Students learning outcomes.

The study established that there was need to create extra time for students' hands on experiences. Finding extra-time was done to help the Tutors teach students practical lessons that could not be achieved in the one-hour period provided for HE in the official teaching timetable. The overall time allocated to IPS was two hours to teach both theory and practicals of the four components in IPS (Appendix 9). The stakeholders, suggested that tutors avail themselves on Saturdays to guide students during practical lessons from 10:00 am to 1:00 pm in cookery, weaving and sewing lessons to afford enough time for practical work to make products with guidance of the Tutor.

Allocation extra-time further helped the students to learn from one another, gain mastery and confidence in performing vocational activities taught in HE a component of IPS subject. This is because when the students have enough time to work together, they assess their work, discuss challenges that they encounter during the practice, and forge a way forward during learning. This implied that student competences would improve as they do more work in the extra time. In the end, the students gained enough knowledge and skills in teaching and learning HE.

Practice also afforded learners time to reflect on the practice and correct their mistakes. Learning occurs through experiences that have a formative effect on the way individuals think. This new venture became an insight that skills are attained through practice both at individual and group level which gave the stakeholders courage to demand enough time to practice under the guidance of a tutor. The stakeholders and the tutor were able to do this by cross checking

with the course outline and what they covered in a way of matching theory and practice using the college PTC curriculum. Whenever students are in a leading role for their learning, it means that they are interested in what they are doing and they pay attention to what they are being taught. All in all, allocating extra-time for further learning during the research period enhanced students' acquisition of competences.

4.2.4 Formation of Integrated Production Skill (IPS) club and students learning outcomes

In the future workshop conducted on 26/2/2018, participants agreed that the IPS club should be formed at the beginning of first term 2018 (Figure 10). As a follow-up activity for implementing the intervention strategy of forming the IPS club generated in the Future Workshop discussion, IPS tutor chaired the first meeting on 3/4/2018. In this meeting, the students elected their leaders; the chairperson, secretary, treasurer, and their assistants (Appendix 10). This was aimed at creating a sense of belonging and responsibility among the students through active engagement in learning activities related to the subject, outside the classroom. In the same meeting, the students also made guiding rules to govern conduct of the club in its activities. After electing the IPS club committee, students requested the tutor to always avail herself to guide club in relation to HE a component of IPS.

Figure 9: IPS formation meeting with first year in ICT Lab.

Source: A photo taken by the researcher in Shimoni CPTC.

The way forward for the club was that the students would generate resources from the environment to do their work as they waited for the contribution of the college. This also implied that the Tutor together with the stakeholders would assist each other to complete their tasks on time. However, the students did not pay membership fees which would boost the club. Initially, the students were expecting the College administration to fund the club in order for them to purchase the requirements needed for practical learning. When it became apparent that the college would not provide the necessary financial support, the students resorted to using resources from the local environment. The stakeholders explored various techniques and designs of recycling materials from the internet at the college computer laboratory. After gathering information from the internet, the students started recycling the used materials from the environment. The creative activities included decorating bottles collected by students, recycling paper to produce baskets (see Figure 11) and table mats (see Figure 12).

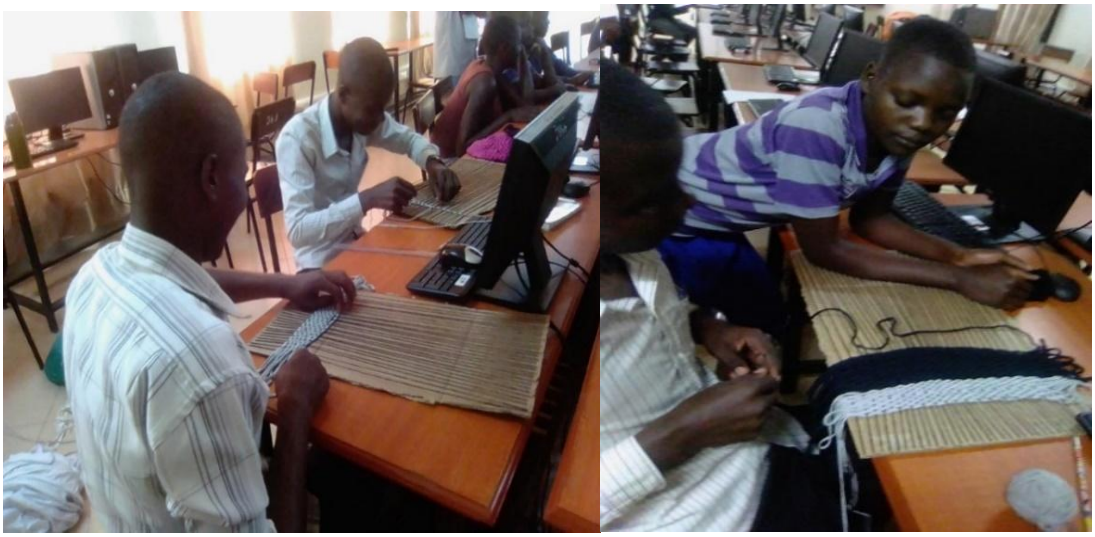


Figure 10: Students weaving table mats from old T-shirts

Source: Photos taken by the researcher during one of the practical lessons in HE at Shimoni CPTC in 2018.

Furthermore, instead of using wooden looms, the students used old paper boxes, yarn, and strips of cut outs from the old T-shirts. Consequently, the students were able to weave a set of table mats on their own. The formation of the Integrated Production Skills (IPS) club, was effective in such a way that the students engaged in various activities and were also able to learn from each other. Since each activity had a unique learning opportunity and was used in a systematic manner, it provided a solid co-curricular support for teachers (Wu, 2009). Learning is affected by the level of motivation and the use of the club as a teaching strategy helped to motivate students. It gave them an opportunity to learn outside the classroom. It also facilitated the interaction between the students and the Tutor. The tutor and students alike appreciated that there are career opportunities relating to the club aspect of the IPS subject. It also helped the

learners to break the boredom of learning in a static environment, hence bringing excitement in their training experience.

4.2.5 Selling of IPS products.

The researcher together with stakeholders in the study found out that in the implementation the selling of IPS products, students had to be engaged practically. In the process of producing different items, students made products suitable for sale in the community. These products were sold from within the IPS class practical sessions and from the club. Cakes that were made by students in class lessons were sold to fellow students. Some of the baskets, mats, and other crafts made by students in the class and IPS club were sold to members of the community and some visitors that occasionally attended workshops at Shimoni Core PTC. The target market was mainly from within the workshop participants.

As a follow up of the knowledge gained from costing, marketing and saving, students were involved in the making and selling of their products. The money received from the sales was kept with the college Bursar. This meant that students learnt financial skills of receiving money from sales, banking the money and managing other resources. Students learnt to be self-reliant through making and selling of products. For instance, (Figure 12) shows some of the woven baskets and other products made by students during the practical sessions, which were put on display for the community to buy. Also, decorated bottles used as flower vases, were displayed for sale

Figure 11: A display of students' finished woven products priced for sale

Source: A photo taken by the researcher during one of the practical lessons in HE at Shimoni CPTC in 2018.

The students also bought their own cakes after baking using the earthen oven. Having learnt entrepreneurial skills in the HE component of IPS subject, students were able to cost and set a price for their products. The club Treasurer was responsible for receiving financial contributions for the club activities from the students and collect money from the sales.

However, students committed less time to marketing and selling of the IPS club products due to other competing college activities such as the child-study programme and other college activities that are in the timetable.

4.3 Evaluation of learners' hands-on intervention strategies implemented to improve teaching and learning of Home Economics a component of IPS subject

To critically assess the impact of implemented intervention strategies, an evaluation was done on the impact of; creating of extra-time for hands-on experiences, formation of IPS club, and practical learning within the classroom, as strategies for improving students' exposure to practical experiences in the teaching and learning of HE component of IPS subject. In reference to Appendix 6 participants (administrators, tutors and students) agreed that the intervention plan from the future workshop should take one year. They agreed the use of planning tools such as calendars and notebooks, for record purposes. They also agreed the use of registers for students and record book issued to student coordinator for tutors to sign after teaching.

4.3.1 Practical learning within the classroom.

***Cookery*;** Cookery sessions sought to give students skills in preparing the earthen oven, baking and preparing local dishes such as steamed green bananas. During the theory sessions, students learnt the procedure of cake making, creaming, sifting, baking and measuring cake ingredients. The Tutor then demonstrated the whole procedure of cake making and baking to the students in March, 2018. Furthermore, the students were encouraged to learn from one another as they performed the practical of cake making under the observation of the researcher. Students successfully baked cakes using the earthen oven following laid down the procedure. Prior to this activity, students only associated baking with the use of a modern electric or gas oven and charcoal stove and sand. The baked cakes were then displayed. (See Figure 13). Some cakes were burnt, while others were well baked. The IPS correctly accounted for the appearance of

their queen cakes. This post intervention evaluation assessed competence of the IPS students in cake making. The knowledge and competence level in the trade was found satisfactorily good.

Figure 12: Cakes ready for sale

Source: A photo taken by the researcher at Shimoni CPTC in 2018

The construction of the earthen oven was exciting due to the fact that it can be constructed anywhere, and by anybody. One of the students excitedly said: *"I had an idea of baking but I didn't know how to go about it, now that I have skills, I can even bake from home."*

The researcher chose the local earthen oven because most students come from humble backgrounds with no access to modern manufactured ovens. Secondly, not all of them have access to electricity. The earthen oven was therefore ideal for use in both semi-urban and rural areas where there is no electricity supply. Students enjoyed eating some of their products such as queen cakes which excited them. Some students promised to use the same appropriate technology at their homes to produce and earn a living from the products. One female student

stated: "…*I think this is an idea I can make a business, when I go home, I will make the same products and sell…*" (26/2/2018)

Sewing; During the sewing sessions, the teaching became more practical than previously as the Tutor gave vivid illustrations using available resources. The topic on parts of the machine for example, was taught well because the tutor was able to point and the students would observe the real parts of the sewing machine unlike in the past where such a topic would be taught theoretically. The students who had prior experience of threading a sewing machine were able to demonstrate in front of the rest of the class as the others watched. This greatly boosted the morale of students towards sewing sessions. Students were also excited to see one of their colleagues actually thread and sew. The challenge was that only one sewing machine was available for the whole class of 56 students. However, this did not stop students from producing sewn items such as baby dresses, aprons, patchwork and applique as they resorted to use of hands to produce work articles under the guidance of the tutor as seen in Figure 14.

Figure 13:Students using hands and needles to stitch

Source: A photo taken by the researcher during one of the practical lessons in HE at Shimoni CPTC in 2018.

Although the college has one sewing machine that the tutor used mainly for demonstration, learners managed to use hand sewing to come up with products as seen in (Figure 16 a & b)

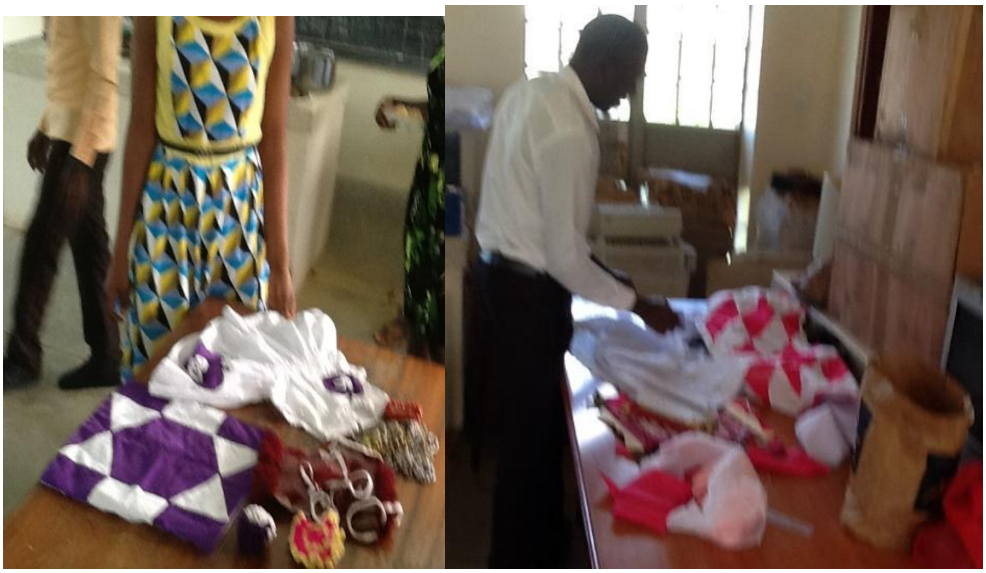


Figure 14: Students displaying products made with hand sewing

Source: A photo taken by the researcher during one of the practical lessons in HE at Shimoni CPTC in 2018.

Recycling and weaving; Recycling has created a lot of impact in the students' way of life because they no longer see waste material as useless. It can be changed into something useful all around them for producing valuable articles. For example, recycled paper and nylon sacks, were turned into functional articles such as table mats and baskets. Students were encouraged to look for old materials especially fabrics. Students also brought their old clothes for recycling. Some

recycling activities were carried out in groups while others were performed individually. Nylon sacks were woven with Cyprus tree leaves to produce baskets and mats.

Figure 15: Different woven products

Source: A photo taken by the researcher at Shimoni CPTC in 2018.

From the few products that were made, students confessed that; *"…every T- shirt or old cloth they come across will not survive because they will use it for producing articles for sale"*. They promised to be change agents of home economics, and use the skills learnt to produce products for sale, to enhance their income.

4.3.2 Formation of IPS Club.

Forming an IPS club brought in a number of positives especially to the students. The IPS club helped students to develop skills in teamwork and team building. This is a key component of learning, where students learn to work as a team to achieve academic tasks. Learning to learn in this case was centered on different opportunities surrounding their learning process

The activities of the IPS club helped the students to practice entrepreneurial skills through marketing, costing, and advertising of products. Forming a club also excited the researcher's fellow colleagues at Shimoni Core PTC, who saw her as a successful Tutor in Home Economics. The IPS students were very productive and engaged most of the time. The Tutors suggested that there should be continuous professional development (CPD) seminars organised at the college so that the researcher can share some tips on how to actively involve learners through forming clubs in their departments. This would help boost the teaching and learning of their subjects. The tutors wanted to know how the researcher managed to; mobilise students, practically involve them, and motivated them to produce items within a short period of four months. The club became a reference point for pedagogical space; the teaching and learning process as the students tried on their own to reflect on the aspects of theory that had a practical component.

The fact that students are encouraged to work on projects that can earn them money encourages them to work harder to attain vocational skills to make money. The potential of the projects to generate income makes students appreciate the subject as related to fulfilling their future needs to lead a holistic life. More so, the College Administration was encouraged to further support students' activities when it saw their effort.

The researcher observed that educational clubs helped students gain a sense of belonging and working together as club members to achieve their own development. Clubs also enable the learners to gain a deeper insight of the content through club activities because of the high level of participation where students discuss issues and generate solutions. The suggested solutions are

made to the club leaders. Therefore, the students can use the knowledge gained from participating in club activities to benefit the individual, community, home, and workplace.

4.3.3 Use of extra-time for more practical learning.

Allocating students extra-time during Saturdays increased their experience in practicals. One of the year one students testified that they were very happy with the teaching and learning of practical skills by integrating theory to practice, because it has enabled them to master knowledge and develop the skills needed to perform tasks. Through the practical experiences, students developed competences as they reflect on the tasks and activities in the practical learning processes.

4.3.4 Selling of products.

Selling of products helped students to translate classroom knowledge into income generating activities and revealing the relevance of IPS to the needs of individuals for improved income. Students were assigned to sell the products, while the Club Treasurer collected and recorded the money. They registered their capital, sales, and profits in a book. The profits generated were re-used to stock materials for further use in the teaching and learning of HE component of IPS subject.

Selling of products also helped students to gain skills in record keeping as a key competence in business management. Students participated in recording the sales as well as determining the profits from the initial capital invested. This helped them to reflect on the processes of managing a business and avoiding unnecessary losses.

The activities of the club were also appreciated by the college administration. In the subsequent term, requisitions were made by the researcher for purchasing materials, tools and

equipment for practical use and the College Administration promptly honoured the requisition as discussed in the Future Workshop meeting. The College Administration therefore responded according to the work plan as discussed in the workshop by providing the researcher with finances for buying sewing equipment, and other materials used in cookery. Students were able to improve their baking, weaving and sewing skills through continued practice.

In conclusion, these findings revealed that, implementing interventions improved skills acquisition among students in cookery, weaving and sewing. Both male and female student participants benefited from practical lessons. The three interventions would continue to be enhanced in the teaching of HE.

4.4 Discussion

A thorough analysis of the IPS challenges in Shimoni Core PTC, followed by identification of challenges affecting the teaching and learning practice as well as suggested solutions, was a point of departure from theoretical learning to include practical work. This approach to learning was intended to empower the student to learn experientially by getting involved in the acquisition of practical experiences in learning IPS through sharing their experiences, and personal reflections on ideas about a task at hand. As students worked individually and in groups the idea floated by Hoskin & Fredrick (2008) was confirmed when student learn, through effective management of time and information, both individually and in groups.

4.4.1 Practical learning with emphasis on learning by doing

Findings revealed that students acquired practical skills through hands-on experiences they engaged in. For example, during clothing and textiles lessons, students were able to take their own measurements and utilise pieces of fabrics they had, to make different designs. They were able to make aprons and other articles with the help of the Tutor. Students were taught how to make both temporal and permanent stitches. Similarly, during a cookery lesson, students expressed a great deal of enthusiasm while practically engaging in various activities of preparing a local dish and baking cakes. During the local dish preparation, students were introduced to steaming green bananas, which involves use of steam to prepare green bananas, something most of them had not practically done. This study revealed that, for effective learning to occur it requires exposing learners to relevant knowledge which can be meaningful to their lives.

For students to appreciate their environment and culture was confirmation that the effectiveness of all education systems depends critically on the quality of teaching and learning in the classrooms, workshops, laboratories, and other spaces in which education takes place (Lucas, 2012). Learning by doing helps make learning feel more meaningful and more interesting. The researcher concurs with Chi Lee and Sulaiman (2017) that practical work attracts students' excitement and raises interest. Students who undergo practical work are excited to see the phenomenon, handling tools, and equipment, enjoy practical lessons, and eventually build up their desires to learn.

Findings further revealed that learners acquired entrepreneurship skills through employing marketing, costing, pricing, and selling various products they produced. During the practical lessons, students were introduced to the costing of materials to be used to produce

various products. This is a vital skill required in the world of work where production is involved to avoid making losses and also calculate profitability of any enterprise. Relatedly, learners do not only acquired tips on how to start, maintain, and manage a business, but also the benefits of starting an enterprise and making profits. The researcher strongly believes that, learning from an institutional setting ought to mimic real life situations in the workplace (Lateef, 2010). This was emphasized during a task which required students to develop a simple business plan, which gave learners valuable tools needed in the world of work.

4.4.2 Group learning

Implementation was carried out mainly in groups quite vital for learners to share experiences and develop problem solving, critical, and creative thinking skills. A number of activities were introduced and demonstrated to learners in groups of 6 students. For example, weaving and cookery were done in groups. This was due to the fact that materials were insufficient to cater for individual learning. However, learning in groups made more sense and brought out each student's strength and helped in solving their weaknesses as each one worked towards a common goal while inculcating team work. The researcher therefore is in agreement with Alfares (2017) who cites (Harmer, 1991) with the idea that group work is a strategy that enables students to discuss issues and engage in joint activities with each other. Alfares (2017) and further narrates that groups allow students to be more independent, due to the fact that they are encouraged to teach and learn from each other. This instills teamwork and develops problem solving skills among students.

The researcher employed group learning as a strategy to address the challenge of inappropriate methods of teaching currently practiced in VET institutions. This strategy was

adopted from the beginning of lessons as a means of encouraging the participants to actively get involved in their learning as well as being responsible for each other's learning. In addressing this strategy, group formation, leadership in the groups, rules governing learning groups, and group meetings, were considered. The initial stages of group formation were dependent on what prevailed in the class at that time. Therefore, there was no definite criterion employed. By consensus, participants agreed upon working as one group for the first tasks of describing IPS and identifying its purpose.

Group learning has its own challenges especially due to its dynamic application. It is challenging to cater for interest of all learners' s in a group. Many students are left in a bandwagon pretending to have learnt the concepts when in actual sense they have not. The fact that space has never been enough, especially for big classes such as the one of IPS at Shimoni CPTC, poses a challenge to successfully conduct the lessons. As Barkley (n.d) states, in a brainstorming conversation on how to cater for challenges of how to overcome: limitations of space, accountability, teams finishing at different rates, technical ability related to mastering the necessary technologies to achieve the class goals of collaborative learning, students' struggle to communicate well with their peers, ensuring that the final product is well integrated, some students' dominance of learning conversations and management of conflict in the team. It became apparent during the implementation that these challenges, when not catered for, would affect learning.

4.4.3 Complexities and contradictions

Implementation of strategies revealed complex and contradictory issues, which influenced the processes. These issues included Multiculturalism, learning interests, timetable, gender issues, curriculum, and religion.

***Multiculturalism*:** this is the co-existence of diverse cultures, that includes racial, religious, or cultural groups and is manifested in behaviours, cultural assumptions and values, patterns of thinking, and communication. Shimoni CPTC admits students from different parts of Uganda. Students come with their cultures, which influence the way they learn and relate aspects in a learning environment. It is common for students to use their cultural backgrounds as references to study phenomena (Diallo & Maizonniaux 2016) During implementation, for example, weaving was done in groups. The core aspect of this was to allow learners to relate weaving to their experiences. Learners from Western parts of Uganda have their own weaving techniques different from those of Northern, Eastern, and Central regions. Aspects of design, different materials from specific areas and application, were encouraged among students. The same applies to cookery and recycling, where different parts of Uganda look at these aspects differently. These cultural differences hugely influenced the ways we implemented activities.

In some cultures, men are not supposed to cook. This was evident among some male students who were initially hesitant to freely participate in cooking activities. Moreover, their female colleagues were shocked to find out that some male students knew how to peel green bananas. Dealing with these cultural issues in an effort to successfully conduct a lesson, was challenging.

***Learning interests*:** learners have varying interests which influence their attitude and motivation towards learning. A number of learners, especially the male ones, have a negative attitude towards practical lessons in IPS. IPS comprises home economics, Technical education, art and technology, entrepreneurship. This poses a challenge for students who are already biased on which areas they are interested in. For example, male students are more interested in technical education, art and technology and entrepreneurship, whereas female students are more interested in home economics. These biases tended to influence how students reacted to various activities that we set out to accomplish. Weaving, for example, was a female dominated area where their male colleagues showed a low enthusiasm. This became a complex issue in this study. Linvill (2014) emphasizes that students' interests and engagements have been found to be important communication related traits linked to student classroom outcomes, including student learning and student retention. I agree with Linvill's argument as the findings in this study reveal that when students are interested and practically engaged in an activity, their level of retention increases and the learning objectives are achieved.

Timetable: IPS is one of the complex subjects to be timetabled on the general school timetable due to its nature and scope. It covers a range of different components which require more time than provided. For example, on a general timetable, IPS as a discipline is allocated two hours per week. Breaking up these hours to cater for each component within the IPS discipline is complex. Moreover, theory and practice of each component is required to be taught concurrently. This possessed a great challenge to tutors and a basis upon which strategies such as allocating time outside the timetable, were developed. The issue of lack of enough time also is influenced by the scope of content to be covered which is highlighted on the syllabus. Usually,

the pressure is on how to cover the syllabus rather than how the lesson has been taught and learnt. A number of areas are left uncovered due to a race to cover the syllabus. This therefore, influenced participants to suggest utilizing Saturdays as extra time for learning practical lessons.

***Gender issues*:** gender and its related issues such as stereotyping, mainstreaming among others, was evident during the course of this study (Ridgeway, 2011). Embedded in our traditional cultures, gender issues are complex issues to deal with. Some of the learners felt activities were degrading due to associating them with a certain sex. For example, peeling bananas, sewing and weaving, are more of a female activity than male. This therefore would be reflected on their facial expressions for example when female or male students discovered that a male student was good at peeling green bananas. Male students sometimes question why they are for example doing home economics, a component of IPS. When they are joining college, they presuppose they will only cover the traditional primary teachers' college subjects of English, social studies, mathematics, and science. They therefore get shocked to find IPS subjects, which to them should be taught to female students.

***Curriculum*:** IPS as a subject is very important and relevant to individuals but also to society as per the ministry of education of Uganda, which is trying to promote vocational education and training at various levels in an effort to give hands-on skills to individuals. However, it is very difficult to convince a college student aspiring to teach in a primary school, why they need IPS. IPS is not catered for in primary schools, a thing that has been a contention as to why primary teachers need to study it in colleges. Moreover, its scope is wide yet what is covered is little. All its components are not fully covered.

Resource allocation and availability: One of the issues that the researcher had to deal with, was limited resources, tools and equipment to conduct practical lessons successfully. The root cause of this challenge is generally little resource allocation to IPS subject. Improvisation in finding materials, tools and equipment to use, is left on the shoulders of the tutors. Many times personal equipment such as cookers are used to facilitate learning. However, this positively teaches tutors to be creative in finding alternative resources. In this case, it was a motivation to innovatively think about using an earthen oven for baking.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter presents information on the Summary of findings of the implemented strategies, conclusions, and recommendations of the study. Summary on the findings of the study is presented according to the last two objectives for implementation of the identified strategies and evaluation of the implemented strategies.

Use of different strategies to enhance learners' practical experiences in the acquisition of integrated production skills (IPS), in Primary Teachers' Colleges, is ideal. However, converting strategies into practical experiences poses a far more complex challenge than anticipated. This is mainly supported by the research findings and the related literature. It is, however, quite interesting to see how enthusiastic learners become when introduced to turning abstract and complex ideas into simple and practical solutions. This is emphasized by Kolb's theory of experiential learning (Kolb, 1984) which learning to learn borrows from. Based on the findings, on one hand, a number of positive outcomes emerged as a result of learning by doing and group learning strategies of teaching. Complexities and contradictions also emerged. This chapter therefore presents discussion themes focusing on practical learning with emphasis on learning by doing, group learning, complexities and contradictions.

5.1 Summary

Discussions during the future workshop helped both the implementers and the students to come on board by reflecting on the status of HE and trying to figure out what was not going well and also finding what was still missing. In this way, the stakeholders planned together on how to

make things occur sustainably. In the Future workshop, we were able to tell what was absent and needed to be improved for the continuity of the programme. For instance, the students had concerns of integrating theory and practice. This was noted and the College Administration offered to fund the subject with resources to purchase instructional materials. The Principal bought one sewing machine which was used for demonstrations.

5.1.1 Practical learning within the classroom.

This new strategy gave students an insight that skills are acquired through practice and currently, the students demand to practice on their own without the tutor. They are able to do this by cross examining with the course outline and what they have covered in a way of matching theory and practice. Whenever students are in a foremost role for their learning, it means that they are interested in what they are learning and ought to pay attention to what they are being taught. This means that for learners to master practical concepts, they should ideally do practical experiments on a regular basis. Practical work in the IPS subject helps learners to, engage in accurate observation; make the phenomenon more real to the learner, maintain interest in the subject; and to develop logical thinking and problem-solving skills (Wrenn, 2009).

In the process of baking, students mastered use of the earthen oven hole was preheated using firewood to the required temperature and baked cakes efficiently. Students learnt how to make both temporal and permanent stitches, cookery, preparing local dishes, steaming green bananas, which involved use of steam to cook, something most of them had not practically done before.

5.1.2 Formation of IPS Club.

Club members also portrayed a good image to other students that IPS was and continues to be a valuable subject which can help one to make his/her own business as they make sales to generate income. Collaboration played a role of enabling the exposure of students to various vocational activities and solving problems that manifested in the course of training while, active learner engagement acted as a supporter for students' participation, retention and building confidence for self-reliance among students (International Labour Office) (ILO, 20 I 0). This involved students doing IPS related projects as a way of applying what they had learnt in the subject. Club members also portrayed a good image to other students that IPS is a beneficial subject which can help one to make his/her own business.

5.1.3 Creating extra-time

Use of extra-time for more practical learning Increased time for studying, the practical lessons of sewing, cookery and weaving. This was done to help the tutor and students have more time for practical lessons. Allocating extra time to practice was also intended to create more time for the learners to get involved in various activities that enabled them perfect their skills over time. For example, teaching cookery, sewing and weaving on Saturdays allowed learners enough time to have a session with the tutor, then make their own products following how the tutor guided them. Middleton, (2007) affirms that conceptual understanding of practical concepts is strengthened by continuous studies and practical investigations. Having extra time also helped the students to learn from one another during interaction as they worked independently. students, assess their own work and forge a way forward together during the learning process.

5.2 Conclusion

In reference to the following study objectives regarding the implementation of teaching and learning of HE in IPS. The following objectives were selected basing on the strategies that where identified by participants in the future work; implementation of the identified strategies as a way for bridging the existing gaps in the teaching of Integrated Production Skills and evaluating the effects of implemented strategies

The research's findings revealed that at Shimoni CPTC the teaching learning process of HE in IPS was more theoretical than practical in a sense that practical lessons were not implemented due to lack of resources. Study sought to enhance learners' hands-on experiences in teaching and learning processes in Home Economics (HE) discipline at Shimoni Core PTC. To achieve this, collective efforts from various stakeholders such as students, tutors, and college administration, were critical. A number of interventions aimed at enhancing learners' experiences recorded tremendous success. For example, not only did the implemented activities enhanced learners' hands-on experiences, they also improved their attitude towards the subject. However, a lot still needs to be done to further improve and consolidate what has been achieved.

Evaluation of the implementation of the strategies revealed that these interventions enhanced students' acquisition of HE skills in; Practical learning within the classroom, Formation of IPS club, use of extra-time for more practical learning and Selling of products that have been made from the HE.

5.3 Recommendations

Recommendations were made based on the findings of the study. The tuition fees levied on students for the running of college activities should be beefed up with additional funding from the national budget. This will enable them to acquire the necessary facilities for smooth and effective operation.

Primary Teachers Colleges (PTCs) need to start income generating projects to run side by side with the existing training facilities. Those without such projects and facilities need to stock the necessary materials, tools, and equipment and make a start to improve their financial sources.

The researcher recommends the government to institute a department in charge of importation of equipment for Vocational Education and Training (VET), Integrated Production Skills (IPS) inclusive, to eliminate the experience of high prices in the open market where at present the equipment is procured from. This will attract tax waiver from the Uganda Revenue Authority and reduce the cost of equipment; leading to an increase of supplies to schools thus improving on hands-on teaching and learning which is fundamental in IPS.

The government of Uganda, through the National Curriculum Development Centre (NCDC), needs to review IPS curriculum so that it matches the societal needs and technological advancements. The review process will provide a chance for Ministry of Education to incorporate the newly acquired experiences in the various PTE curriculum and MVP research that are relevant to the country's needs.

There is a need for continued creating of awareness in the public of the significance of IPS in the prosperity of the country and eliminate the negative perception. Many people in

society do not understand the importance of vocational subjects and look at them as less important subjects compared to others.

More IPS Tutors to teach Technical Education, Art, and Technology. Entrepreneurship and Home economics training should be enhanced to reinforce teaching and training in institutions in the country. It is desirable that student teachers in Primary Teachers Colleges of all categories, have practical experience in production processes of various items if they are to properly train and educate learners in similar fields, for a productive workforce.

Due to inadequate resources, tutors graduate with inappropriate training and skills, which are transferred to their respective learners. Therefore, there is a need for training facilities for vocational teachers in Teacher Training Colleges to enhance acquiring the desired experiences for lifelong learning. In many cases Primary Teacher Education development has not reached the stage where future technical teachers will benefit from their teaching experience. Thus, students are placed in training for brief periods and do not participate in the production process as required. This has often resulted in less practical experiences and inadequately prepared graduates for the world of work.

5.4 Areas for further research

This study covered the inadequacy of hands-on experiences in IPS with a focus on home economics. Other components such as art and technology, entrepreneurship and technical education should emulate home economics so that IPS becomes holistic.

Special initiatives should be under taken to enhance access to vocational education especially in PTCs in the subject area, so that students at the end of the course will be all

round teachers who will be able to sustain their families financially instead of depending only on their monthly salaries.

Reforms in Vocational Studies should be under taken to align it with the sustainable Development Goals (SDGs) with the aim of improving the students' marketing skills for the products made in IPS.

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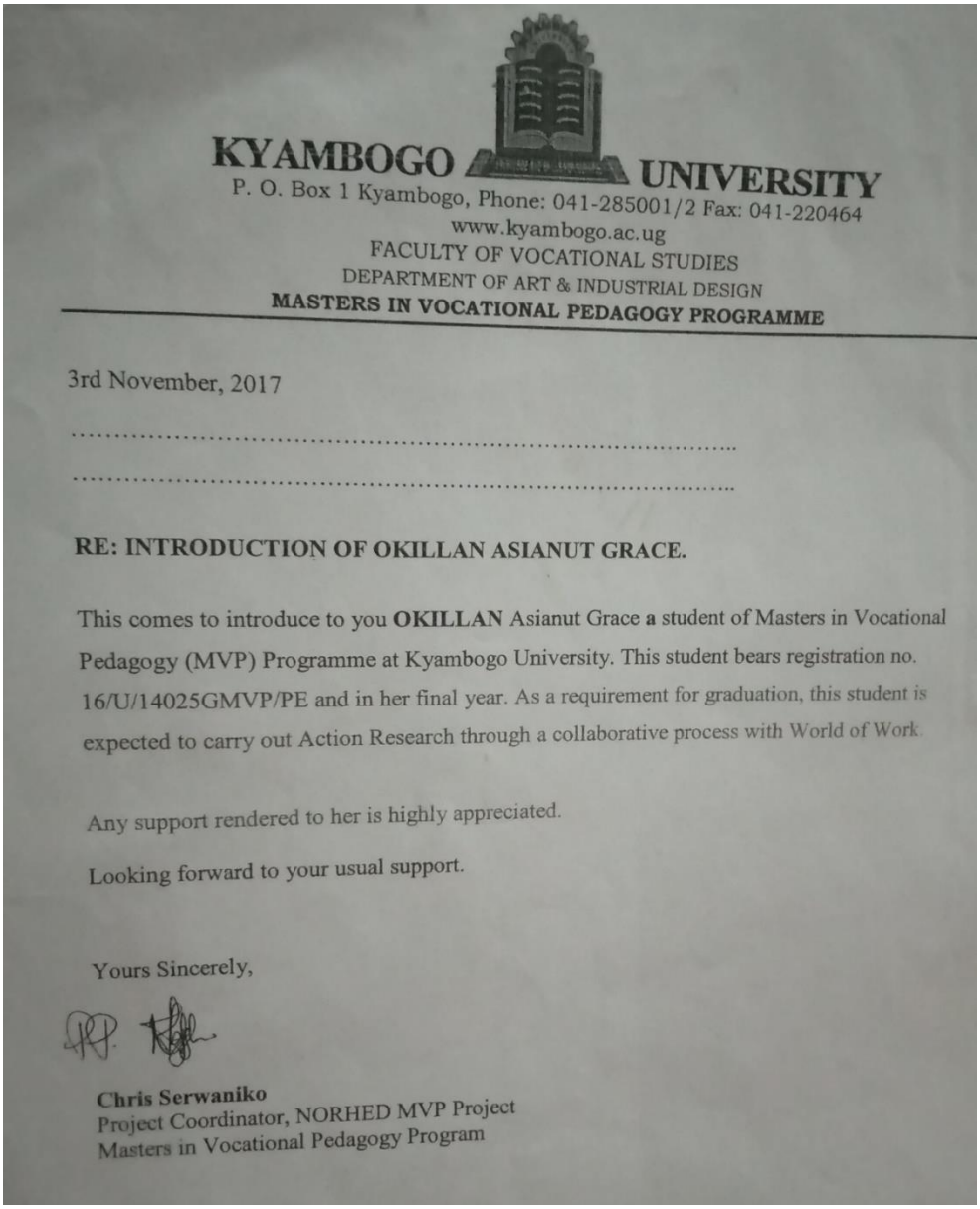
APPENDICES

Appendix 0: Introduction Letter



KYAMBOGO UNIVERSITY

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FACULTY OF VOCATIONAL STUDIES
DEPARTMENT OF ART & INDUSTRIAL DESIGN
MASTERS IN VOCATIONAL PEDAGOGY PROGRAMME

3rd November, 2017

.....

.....

RE: INTRODUCTION OF OKILLAN ASIANUT GRACE.

This comes to introduce to you **OKILLAN** Asianut Grace **a** student of Masters in Vocational Pedagogy (MVP) Programme at Kyambogo University. This student bears registration no. 16/U/14025GMVP/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.

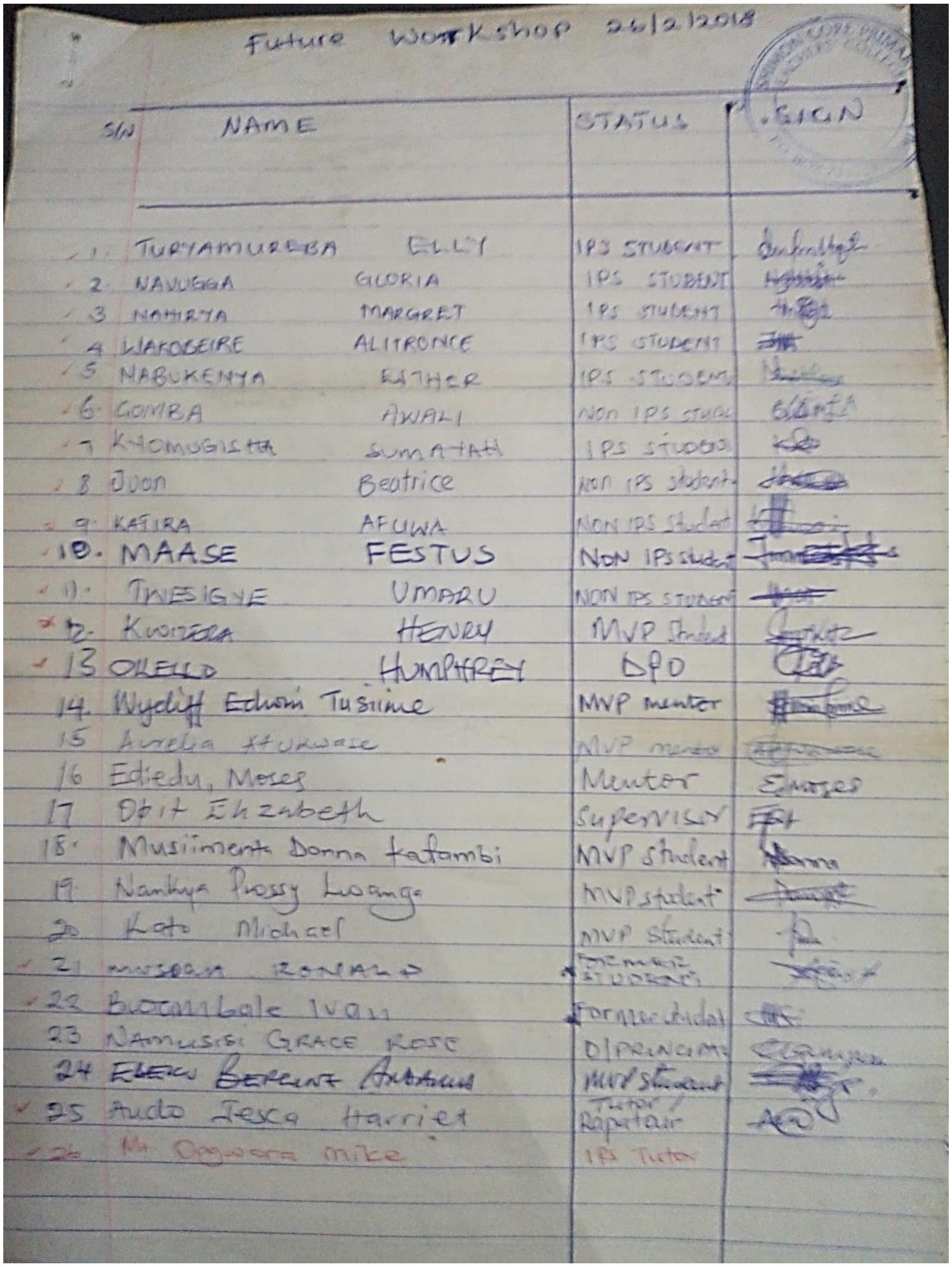
Yours Sincerely,

Chris Serwaniko
Project Coordinator, NORHED MVP Project
Masters in Vocational Pedagogy Program

Apendix1: Future Workshop guide

Phase
Preparation • Prepare the room for discussion • Prepare materials and tools to use
Critiques • Discussion on the status quo • Develop points of concern
Fantasy • Develop general ideas on ideal situation • Synthesize ideas developed
Reality • Turning ideal situation into reality • Develop and thematise ideas for implementation • Develop implementation plan

Appendix 2: The Future's Workshop Attendance List



Future workshop 26/2/2018

S/N	NAME		STATUS	SIGN
1.	TURYAMUREEBA	ELLY	IPS STUDENT	[illegible]
2.	NAVUGGA	GLORIA	IPS STUDENT	[illegible]
3	NAHIRYA	MARGRET	IPS STUDENT	[illegible]
4	WAKOBEIRE	ALITRONCE	IPS STUDENT	[illegible]
5	NABUKENYA	ESTHER	IPS STUDENT	[illegible]
6.	GOMBA	AWALI	Non IPS STUDENT	[illegible]
7	KYOMUGISHA	SUMAYIAH	IPS STUDENT	[illegible]
8	Jjoon	Beatrice	Non IPS student	[illegible]
9.	KATIRA	AFUWA	Non IPS Student	[illegible]
10.	MAASE	FESTUS	NON IPS student	[illegible]
11.	TWESIGYE	UMARU	NON IPS STUDENT	[illegible]
12.	KWIZERA	HENRY	MVP Student	[illegible]
13	OKELLO	HUMPHREY	DPO	[illegible]
14.	Wycliff Edwin Tusiime		MVP mentor	[illegible]
15	Aurelia Atukwase		MVP mentor	[illegible]
16	Ediedu, Moses		Mentor	E.Moses
17	Opit Elizabeth		Supervisor	[illegible]
18.	Musiimenta Donna Katambi		MVP student	Donna
19.	Nankya Prossy Lwanga		MVP student	[illegible]
20	Kato Michael		MVP Student	[illegible]
21	MUSOBYA RONALD		FORMER STUDENT	[illegible]
22	Bukambale Ivan		Former student	[illegible]
23	NAMUSISI GRACE ROSE		D/PRINCIPAL	[illegible]
24	EBEKU BERRENT ANTHONY		MVP Student	[illegible]
25	Audo Jesca Harriet		Tutor / Rapertair	[illegible]
26	Mr. Ogwora Mike		IPS Tutor	

Appendix3: The problems that were identified by the participants

Challenges identified by participants	
• Limited time (time table). • Lack of financial support. • Limited time for practical. • There are a few IPS tutors at College. • Negative attitude by students. • Not knowing the value of IPS. • IPS Tutors specialize in some aspects teaching theory and tasking student to research • Practical's are not time tabled.	• Practicals are not time tabled. • Requisitions are not presented or if presented they are not honoured. • Materials for IPS are expensive • Negative attitude towards IPS. • IPS is a waste of time. • It is offered by lazy students. • Material for instruction imposes negativity e.g. use of clay. • Not knowing the value of IPS.

Solutions generated from the critical phase	
• should provide IMS for practical work • College to procure materials required. • Sensitization of students required. • Practically done items should be sold to add more materials for self-sustenance. • Practical lessons should begin from year one. • There should be an IPS club where Practical work can be done. • Extra time for IPS club should be created. • IPS Tutors should give Students attention and enough time for demonstration lessons • Administration should provide workplace for IPS (resource room) • IPS tutors should be taken for refresher courses	• Administration should provide work place for IPS (Resource room). • Encourage Students to do practical lessons outside the time table. • Tutors should be available outside the time tabled time to guide students. • Orienting Students Teachers on reception at the college. • Tutors to task Administration for subject requirements. • Make use of resource persons especially in Tech. educ. (Metalwork and woodwork). • Work within available space. • IPS should be given sufficient time for practical • General exhibition for the college in a specific term.

Appendix 4: **Solutions that can be handled in short period of time**

• College to procure materials required. • Sensitization of students required. • Orienting Students Teachers on reception at the college • Make use of resource persons especially in Tech. educ. (Metalwork and woodwork). • IPS tutors should be taken for refresher courses • Tutors to task Administration for subject requirements. • Timely budgets at the departmental levels • Tutors should be available outside the time tabled time to guide students • Tutors to be available outside the time table to guide students	• Work within available space. • General exhibition for the college in a specific term. • Practically done items should be sold to add more materials for self-sustenance. • Practical lessons should begin from year one. • There should be an IPS club where Practical work can be done. • Extra time for IPS club should be created. • IPS Tutors should give Students attention and enough time for demonstration lessons • Encourage Students to do practical lessons outside the time table.

Appendix 6: Pairwise Matrix

	A	**B**	**C**	**D**	**E**	**TOTAL**
A		0	0	5	8	13
B	16		10	16	11	53
C	16	6		15	15	52
D	11	0	1		8	19
E	8	5	1	9		23

Appendix 6: Interview guide

I. In your opinion what are some of the problems affecting the teaching and learning of practical in Home Economics a component in IPS

II. What are some of the possible strategies that can be used for increasing hands on experiences in teaching and learning of home economics in IPS?

III. In your view in which way can the implementation of identified strategies be improved?

IV. What is the effect of implemented strategies on students' increased access to hands-on experiences in Home economics?

Appendix 7: Observation checklist

No	Observed aspect	Available	Not available	Comment
1	Hands-on experiences in teaching IPS subject			
2	Availability of instructional materials			
3	Students' attitude towards IPS			
4	Number of teaching hours for IPS in a week			

Appendix 8: Intervention plan from the future workshop

WORK PLAN FOR TUTORS			
ITEM	**RESPONSIBLE PERSONS**	**INDICATORS**	**TIME FRAME**
Selling of IPS products	• Head of department. • Student	• Sales Records. • Bank Statement. • Receipt for buyers	• March to May (Year I students). • May to 8th Aug (Year
Practicals should begin in year 1	• Tutors • Students • Administrators	• Finished Products. • Exhibitions. • Reports from Students. • Assessment records.	• March to May (Year 1) • May to August (year II)
Form IPS clubs	• Students • Tutors • Administrators	• Club membership. • Club constitution. • Minutes of meetings. • Work plan of the club. • Committee of the club	• March to Aug. (year II)
Adequate attention and	• Tutors • Students	• As Assessment record books.	• Feb to ongoing (Year 1)

time given to Students in demonstrations	• Administration	• Time allocation for practical. • Testimonies from students. • Utilization of IMS for practical by Tutors • Material requisition.	
Students doing practical outside the time table.	• Students • Tutors	• Finished products from Students • Record of completion of Students practical work by Tutors / students leaders.	• March on going (year 1) • Feb. ongoing Year II)
Tutors available outside time for guidance.	• Students • Tutors	• Tutors record book • Students attendance • Finished products	• Feb ongoing (year 1) • Feb ongoing (Year II)

Mobilization of resource Persons especially resource persons	• Administration • Tutors	• Testimonies from students. Visitors book. • Resource persons' record book.	• Feb ongoing (year 1) • Feb ongoing (year II)
WORK PLAN FOR STUDENTS			
ITEM	**RESPONSIBLE PERSONS**	**INDICATORS**	**TIME FRAME**
Students doing practicals outside the time table	• Students	• Finished products from Students • Record of completion of	• March on going (year 1) • Feb. ongoing Year II
Form IPS club	• Students • Tutors • Administrators	• Finished Products. • Exhibitions. • Reports from Students.	• March to Aug. (year II
Selling of IPS products	• Students. • Head of Department	• Sales Records. • Bank Statement. • Receipt for buyers	• March to May (Year 1 students). • May to 8th

Adequate attention and time given to Students in demonstrations	• Tutors • Students	• Assessment record books. • Time allocation for practical. • Testimonies from students. • Utilization of IMS	• February ongoing (Year I)

Appendix 9: Shimoni CPTC Time table as drawn from the curriculum

DAY	**TIME**		**CLASS**			
	FROM	**TO**	**1A**	**1B**	**1C**	**1D**
MON	8.00	9.00	LAG	P.E	MTC	LL
MON	9.00	10.00	SCI	MTC	KIS	MTC
MON	10.00	11.00	SNE	LL	SCI	P.E
MON	11.00	11.30	**BREAK**	**BREAK**	**BREAK**	**BREAK**
MON	11.30	12.30	LL	SNE	SST	KIS

MON	12.30	1.30	MTC	LAG	LL	SNE
MON	1.30	2.30	**LUNCH**	**LUNCH**	**LUNCH**	**LUNCH**
MON	2.30	3.20	PES	AGRIC	SNE	LAG
MON	3.20	4.10	ECD	KIS	LAG	ECD
MON	4.10	5.00	ICT	AGRIC	ECD	PE
MON	5.00	6.00	GAMES & SPORTS	GAMES & SPORTS	GAMES & SPORTS	GAMES & SPORTS
TUE	8.00	9.00	SCI	MTC	LAG	ECD
TUE	9.00	10.00	MTC	KIS	SST	LAG
TUE	10.00	11.00	PE	MUS	ECD	MTC
TUE	11.00	11.30	**BREAK**	**BREAK**	**BREAK**	**BREAK**
TUE	11.30	12.30	PES (PP)	ECD	SCI	SST
TUE	12.30	1.30	KIS	SCI	PES (PP)	IPS

TUE	1.30	2.30	**LUNCH**	**LUNCH**	**LUNCH**	**LUNCH**
TUE	2.30	3.20	SST	PE	IPS	PES
TUE	3.20	4.10	MUS	SST	MTC	KIS
TUE	4.10	5.00	ECD	PES	ICT	SCI
TUE	5.00	6.00	**ASSEMBLY**	**ASSEMBLY**	**ASSEMBLY**	**ASSEMBLY**
WED	8.00	9.00	RE	SCI	LAG	PES
WED	9.00	10.00	KIS	PES	MUS	MTC
WED	10.00	11.00	ECD	LAG	RE	SCI
WED	11.00	11.30	**BREAK**	**BREAK**	**BREAK**	**BREAK**
WED	11.30	12.30	LAG	MTC	PE	MUS
WED	12.30	1.30	MTC	RE	ECD	SST
WED	1.30	2.30	**LUNCH**	**LUNCH**	**LUNCH**	**LUNCH**
WED	2.30	3.20	MUS	ICT	AGRIC	LAG
DAY	**TIME**		**CLASS**			
	FROM	**TO**	**1A**	**1B**	**1C**	**1D**
WED	3.20	4.10	ECD	LAG	ECD	RE

WED	4.10	5.00	PE	ECD	AGRIC	ECD
WED	5.00	6.00	**COMM WORK**	**COMM WORK**	**COMM WORK**	**COMM WORK**
THU	8.00	9.00	MTC	PES	LL	PE
THU	9.00	10.00	IPS	SCI	PE	MUS
THU	10.00	11.00	SCI	LL	PES	MTC
THU	11.00	11.30	**BREAK**	**BREAK**	**BREAK**	**BREAK**
THU	11.30	12.30	P.E	SST	IPS	LAG
THU	12.30	1.30	SST	MUS	MTC	IPS
THU	1.30	2.30	**LUNCH**	**LUNCH**	**LUNCH**	**LUNCH**
THU	2.30	3.20	LAG	IPS	SST	LL
THU	3.20	4.10	PES	ECD	MUS	AGRIC
THU	4.10	5.00	TUTORIAL	TUTORIAL	TUTORIAL	TUTORIAL
THU	5.00	6.00	**CO CURRICUL AR**	PE	**CO CURRICULA R**	AGRIC
FRI	8.00	9.00	LL	RE	MTC	SCI
FRI	9.00	10.00	IPS	ECD	KIS	LL

FRI	10.00	11.00	SST	SCI	LAG	PES
FRI	11.00	11.30	**BREAK**	**BREAK**	**BREAK**	**BREAK**
FRI	11.30	12.30	SCI	LAG	SST	RE
FRI	12.30	1.30	RE	MTC	LL	SCI
FRI	1.30	2.30	**LUNCH**	**LUNCH**	**LUNCH**	**LUNCH**
FRI	2.30	3.20	AGRIC	SST	RE	SST
FRI	3.20	4.10	LAG	LL	SCI	ECD
FRI	4.10	5.00	AGRIC	IPS	PES	ICT
FRI	5.00	6.00	**CO CURRICULAR**	**CO CURRICULAR**	**PE**	**CO CURRICULAR**

Appendix 10: Distribution of the IPS course content and time for terms one, two and three

TERM	UNIT	TITLE	TOPICS	TIME
	1 (5hrs.)	Introduction to production skills	1.Concepts and importance of IPS 2. Teaching IPS in the Primary School	2 hours

				3 hours
1(30 hrs)	2 (20hrs)	Exploration and use of our environment	1. Entrepreneurship and personal awareness 2. water and sanitation 3. Art history and appreciation 4. Drawing (Nature) 5. Pottery 6. Fibre and fabrics	2 hours 3 hours 3 hours 3 hours 5 hours 4 hours
	3A(5 hrs)	Providing for our needs	1.Food and Nutrition	5 hours
	3B(11 hrs)	Providing for our needs	2. Methods of food preparation and cooking 3. Drawing (still life: - Kitchen utensils, dining room set) 4. Graphic Design (Lettering, creative writing, cards)	6 hours 2 hours 3 hours

2 (36 hrs)	4 (16 hrs)	Construction and assembly	1. Wood work (brick mould, rolling pin, chopping board, rolling board) 2. Metal work (wire toys, cake tins) 3. Puppetry (gloves) 4. Brick work (brick making, brick laying)	4 hours 4 hours 4 hours 4 hours
	5A (9 hrs)	Family and personal development	1. Making simple garments	9 hours
3 (33 hrs)	5B (15 hrs)	Family and personal development	1.Personal hygiene 2.Safety at home and at school 3.Planning and care of a home 4.Organising an enterprise	2 hours 3 hours 5 hours 5 hours
	6 (16 hours)	Basic Production skills	1. Painting 2. Sculpture/ modelling 3. Weaving and plaiting (mats, fabric/clothes ropes, macramé)	2 hours 2 hours 3 hours

			4. Knitting 5. Crocheting 6. Fabric decorations tie and dye, batik	2 hours 2 hours 5 hours
	7 (2hrs)	Display and assessment	Display of products made through the year	2 hours

Source: Retrieved from PTE Curriculum (2002)

Appendix 10: Work plan for club committee

ITEMS USED TO MAKE PAPER ITEMS.

- Papers → magazines, calendars, scissors
- glue
- Needle
- Scissors.

- The Patron promised to provide white papers for the beginning, through the administration.

Rules and Regulations.

1. Each member should respond positively in case of a meeting.
2. In case of contribution, each member has to contribute.
3. Respect for every member.
4. Every member has to participate in every activities
5. Roll-calling has to be done. Absenteism of 4 times is punishable.
6. A fine for absenteism incase of a minor mistake
7. Keeping the secretes of the club it's upon every member in the Club.

- The Patron thanked the members for attending and requested them to abind with the laws incase the Club starts. The members agreed to meet again on Saturday.

YIOLA

THE IPS CLUB LEADERS 2016-2017.

1. EJOKU SIMON → President.
2. NAKIRYA MARIA SHIYAN → Vice President.
3. NANSAMBA VIOLA → Secretary.
4. TURINAWE ONESMUS → Treasury.
5. MUKIDE JOAN → Speaker.
6. OSAKAN JOHN JUSTINE → Adviser.
7. - NAMYALO RITAH
   - NGOBI ZAIDI
   } → MOBILIZERS.
8. - KABASWEKA PROSCOVIA
   - DAVIS
   } → CO-ORDINATOR.
9. - KIGOZI RASHID
   - AMUPAIRE SARAH
   } → WELFARE.

THE I.P.S meeting shared on 12/04/2018 in the Dining hall

AGENDA.

1. An opening prayer.
2. Reading of the previous minutes.
3. Introduction.
4. A speech from the Patron.
5. Election of the committee.
6. Speeches from the elected members of the committee
7. Closure.

Members of the club present.

1. NAMSAMBA VIOLA.
2. EJORU SIMON.
3. NAKATO EDITH
4. KASULE JOHAN
5. KAGOYA FAITH
6. BATENGA BAPIENCE
7. NAKANJAKKO JANAT
8. NAKYEJWE RIZAH
9. TWANZA JOYCE
10. NALUBEGA JUSTINE
11. NGOBI ZAID
12. NATURINDA CHRISTINE
13. KAGOYA MARIAM
14. NAGEGERU MILLY
15. NAKIRYA MARIA SHIVAN
16. NDAGIRE HELLEN
17. NAMULEME JANET
18. NAGAWA JANET
19. NAKAZIBWE BRENDA
20. TURINAWE ONESTUS
21. MUTAYISA DAVID
22. NACHWA CATHY.

Min:001. An opening prayer.

The meeting commenced with an opening prayer which was said by Akurut Deborah.

Min:002. Reading of the previous minutes.

The secretary read the previous minutes to the members of the club since some few had not attended that meeting.

Min:003. Reading of the previous minutes Introduction.

When the secretary had read out the previous minutes, every member introduced himlherself for recognition.

Min:004 Speech from the Patron.

Our patron madam Asiamut Grace thanked the members who had managed to attend the meeting. On addition to that she requested members for the club to be very focused and determined so as to gain from the club. She also said that every member in the club will be able to benefit from the club since alot of things will be made and after sold whereby the profits made will be for the benefit of everyone in the club. Lastly, she encouraged the members to participate in the leadership of the club so that we have an organised club.

Min:005. Election of the committee under the club.

- Members in the club elected people who had an interest for the club as follows:

1 President EJOKU SIMON - IA
2 Vice president NAMIRTA MARIA SHIVAN IC
3 Secretary NANSAMBA NICLA IA
4 mobilizer NAMYALO RITAH - IB
5 Speaker MURIDE JOAN IC
6 Welfare - RASHID SS SARAH IB
7 Treasurer - TURINAWE ONESMUS - IA
8 Cordinator - DAVIS AND PROSCOVIA IC
9 Adviser - OSAKAN JOHN JUSTINE IB

The elections went on very well whereby we never had any problems.

Min:006 Speeches.

After the elections, every elected member on the committee spoke to the club members. They thanked members for the club for having made a right decision of putting them into power. They promised to work hand-in-hand with them so as to make the club achieve in all corners.

Min: 007, Reaction.

One member requested the committee to know and perform their expected work well.

Min: 008: Reaction.

The partner thanked members who had engaged in elections and advised them to work hard for the goodness of our Club. She again added that the members should be active and do work expected even in her absence. She also gave out some of the sample boards to the members, and other materials to use for the stand.

Min: 009, Reaction.

One member requested the people who know something to help those who don't know so that they also get to learn such skills.

Min: 010, Closure.

In conclusion, the meeting ended with a closing prayer which was said by one member of a Club.

[signature]

EJOKU SIMON
(chairperson) 1A.

[signature]

NANSAMBA VIOLA
(SECRETARY).

THE IPS CLUB MEETING ORGANISED ON 21ST APRIL 2
HELD IN STREAM 1A.

AGENDA.

1. An opening prayer.
2. Speeches from; i) Adviser.
   ii) Vice president.
   iii) President.
3. Reactions and wayforward.
4. Closure.

Min:001 An opening prayer.

The meeting started with an opening prayer which was led by Joomi Jackson.

Min:002, Speech from Adviser.

He thanked members for having attended in big number and requested them to maintain them. He then advised the club members to be hardworking so as to make the club active.

In addition to that, he requested everyone to participate in the club not to leave the work to the leaders. He concluded by requesting the to endever attend meetings incase they are held.

Min:003 Speech from the Vice President.

She requested members to have co-operation among themselves so as to develop the skills.

Min:004. Speech from the President.

In his words, he thanked members for having attended the meeting in person. He then encouraged the club members to avoid talking evil things against the club. Secondly, he informed the club members to be active in all club activities where by he told them to take papers so as to make beads after having demonstrated for them. He concluded by giving all the members papers to do as they are free.

Min: 005 Reactions.

One member thanked the committee for the good ideas made and she requested those who had taken the papers to make these beads when they are strong and nice since they had learnt how to do it.

Min: 006, Remarks.

One member also encouraged the people who had taken papers to be serious when making the beads so as to reduce work from the club leaders.

Min: 007 closure.

The meeting ended with a closing prayer which was said by Kigozi Rashid.

EJOKU SIMON.
(Chairperson) (LA).

NANSAMBA NICLA.
(Secretary) (LA)

ATTENDANCE FOR IRS CLUB MEETING

No.	NAME	SIGNATURE
1	NANSAMBA VIOLA	
2	Batenga Patience	
3	KABASWEKA PROSCOVIA	
4	OJAKAN JOHN JUSTINE	
5	ALWENYI PRISCILLA	
6	IPALI MIRIAM	
7	KYEKYEBE SAIDH	
8	[illegible]	
9	[illegible]	
10	NAKAWUNDA ROSEMARY	
11	AMPUMUZA REBECCA	
12	NAMAGEMBE Joyce Grace	
13	Mwendeirwki Doreen	
14	Nawano Rebecca	
15	Acheo JOSEPHINE	
16	Tukei EVELYN	
17	AKURUT DEBORAH	
18	AMANYIO BETTY	
19	KAGoya MARIAM	
20	MALEJJE DEOGRATIOUS	
21	MWEBAZE NAOME	
22	NABADDA RITAH	
23	NAGALI JANE	
24	NAKAZIBWE BRENDA	
25	AKATUHURA ANNIE	
26	GUMISIRIABE DAPHINE	
27	ANYIMBABAZI SUSAN	
28	NAMGOBI AGNES	
29	KAGOYA FAITH	
30	NAMAGANDA JUNAYA	
31	Aujo Mary Immaculate	
32	Nadhuna Cathy	
33	Namale Esther Kayiwa	

NO of pupils			
36		Amaculany	Hellen
36		[illegible]	[illegible]
37		OLUPAI	JUSTINE
38		NABAYIE	SPECIOZA
39		KYOMUHENDO	RICHARD
40		JURINAWE	ONESIMUS
41		KIGOZI	RASHID
42	21	SEBIRYO	[illegible]
43		NAMWALE	ASIA
44		[illegible]	[illegible]
45		MWANGO	[illegible]
46			
47		KAIKE	JONAD
48	15	NGOBI	ZAID
49	3	BATENGA	ESTHER
50		Mugide	Joan
51		Mawuwa	Catherine
52		NANKUNDA	ROSEMARY
53	12	KEMBABAZI	SOFAIA
54	[illegible]	SSETTIMBA	GODFREY
55	10	NAMBOZIA	[illegible]
56	10	NAGEMU	[illegible]
57	16	Jbonie	Jackson
58	35	NABAMUA	ARTHUR
59	10	AKULUS	DEBORA

NAME	ITEM TO MAKE	SKILL
① SSEMANDA LAWRENCE	NECKLESS	
② SSEBIRYO IVAN	Rope Sisal thread (rope)	
③ OKIRING [illegible]	- [illegible] - [illegible] - Bangles [illegible] - [illegible] (necklaces) [illegible] without [illegible])	
- OLUPOT JUSTINE	- Ropes Mats	
5 KYOMUHENDO RICHARD	Drawings on paper.	
6 Gumathala Daphine	Bangles.	
7 NANTEZA MARY	Bags, Bangles, Neckles.	
8 NABUNGA AMINA	Rope, mats, Bangles, Neckless.	✓
9.		
9. [illegible] CATHERINE.	Knitting	
10. BALWOLE YONASI	Making earrings	
11 AKURUT DEBORAH	Bangles	
12 AMPUMUZA [illegible]	Bands, baskets, mats, Ropes,	
12 Kembabazi Sophia	Baskets, ropes	
13 Ejoku Simon	Beads	
14 Enlanga Esther	rope, ball.	