

The Hands-on Approach in Teaching and Learning of Home Economics in the Primary School

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Abstract

The study examined the hands-on approach in the teaching and learning of Home Economics (H.E.) in the primary school in Zimbabwe at junior level. A qualitative approach utilising a multi case study of three schools in Masvingo, Zimbabwe was used. The population comprised of junior teachers and school administration. Convenience and purposive sampling were used to come up with a sample for the study. Data was generated through interviews, observation and document analysis. The findings revealed that teachers were aware that the hands-on approach supported effective teaching and learning of Home Economics. Methods like supervised practice, field trip, problem solving, supported the hands-on approach. The findings indicated that the hands-on approach supported practical engagement of pupils in the learning process thus making learning more realistic. However it was established through the study that the hands-on approach was hampered by inadequate resources. Some of the teachers lacked practical skills in some topics to effectively prepare students for practical engagement. The study recommends that efforts should be made to generate funds to resource the home economics section in the primary school. The other recommendation is that teachers attend in-service programmes to upgrade their Home Economics practical skills.

Key Words: Home Economics, Hands- on, Approach, Hands- on Approach.

1.0 Introduction

The field of Home Economics (H.E.) is technical and vocational oriented where learning takes place by marrying theory and practice. This study examined the use of the hands-on approach in the teaching of H.E. in the primary school. H.E. requires equipment, materials and workshops for effective teaching and learning (Domike & Odey, 2014; Ministry of Education Sports & Culture, 2002; Ogwu & Ogwu, 2012). Implementation of technical and vocational education in some schools in Africa is hampered by lack of appropriate resources.

The H.E. primary school curriculum advocates for active pupil involvement in the teaching learning process (Ministry of Education Sports & Culture, 2002). Therefore methods which support the hands on approach like experimentation, field trips, supervised practice are recommended (Mupfumira, 2011; Shah, 2010).

2.0 Research Questions

The following questions guided the study

- Which methods support the hands on approach in teaching and learning of Home Economics in the Primary school?
- What challenges are encountered when using the hands-on approach in the teaching and learning of Home Economics in the Primary School?
- What are the benefits of the hands on approach?

3.0 Theoretical Framework

The study was framed and guided by the pragmatist's theory. According to pragmatists education should be based on the interests of the learner (Shah, 2010). The philosophy promotes acquisition of real experiences through doing as pupils engage in practical work (Shah, 2010). Through its practicality, pragmatism makes learning purposeful and real.

The pragmatic approach to education is a child centred pedagogy (Czujko, 2013). Czujko (2013) says pragmatism stresses experience gained knowledge through activity hence the need for the hands-on approach to teaching H.E. All pragmatic learning and teaching should provide opportunities for pupil participation and practice as all learning is a product of action and practice (Rawat, 2008).

Appropriate methods for pragmatists utilise hands-on approaches to teaching (Trohler & Oelkers, 2005). Guided by the pragmatist theory the study explored the use of hands-on approaches to teaching and learning of H.E. at primary school level.

4.0 Literature Review

4.1 Teaching Methods Which Support the Hands-On Approach

The Ministry of Education and Culture (2002), advocates for active learning through the use of the hands-on approach in teaching and learning of H.E. The hands-on approach in teaching H.E. promotes teaching methods such as experimentation, field trip, simulation, project, problem solving, discovery.

Demonstration and Supervised Practice

Demonstration and supervised practice are widely used in technical subjects such as H.E, Art and Craft, Agriculture, Music for the acquisition of practical skills and competences (Mupfumira & Mutsambi, 2012). Petty (2009) says this is an obligatory teaching/ learning method because we owe all our skills and abilities to corrected practice. A person learns a practical skill through engaging in the practical work e.g. use a sewing machine.

Discovery Learning

Discovery learning incorporates teaching methods that focus on active hands-on learning opportunities for learners (Dewey, 1916). Through discovery students construct their own learning by experimenting with a domain and inferring rules from the results of these experiments (Joolingen, 2000). Through these constructive activities, learners are likely to understand better as compared to having the information presented to them by the teacher.

Experimentation Method

Experimentation is a hands-on method which fulfils the pragmatic belief that ideas have to be tested and verified through practice (Akimpelu, 1998). According to pragmatists the experimental method in teaching promotes participation (Mahundi, 2015). Moyo (1997) views the experimental methods as useful in finding facts and not to prove facts. Pragmatism considers learning through experimentation valuable (Shawal, nd). Experimentation as an approach involves laboratory work where learners solve their problems with practical apparatus (Mahundi, 2015). Through experimentation students acquire knowledge of H.E. concepts by examining, investigating and observing and drawing up conclusions from the results of the experiments (Mahundi, 2015).

Field Trip

A field trip is a planned visit outside the regular classroom (Moyo, 1997; Malawi Institute of Education, 2004). The field trip provides learners with an interesting and stimulating strategy which gives students the opportunity to study the phenomena in its natural setting. The field trip exposes the child to the world around him and concretises concepts learnt at school (Malawi Institute of education, 2004). Pragmatists argue that effective learning takes place when the learner interacts with his/her environment as much as possible, therefore the need for field trips (Ornstein & Levine, 2003).

Discussion

Thorp and Gillmore (1998), refer to discussions used in the teaching and learning situation as instructional conversations. The discussion method is a hands-on technique which leads learners to identifying problems, and suggesting solutions. Through the discussion method, students develop critical thinking, and learn to evaluate ideas, concepts, principles and procedures (Omatseye, nd). The discussion method, helps students develop interpersonal skills (Johnson, Johnson, & Holuber, 1991). The interactive nature of the discussion method helps to emphasise individual and group accountability in societal issues.

Problem solving

The problem solving approach relates to the pragmatic approach in that students are actively involved in the learning process (Czujko, 2013; Shah, 2010). Problem solving is a means through

which human intellect progresses and develops (Rawat, 2008). Learners develop greater knowledge and understanding as they use Home Economics knowledge to solve health problems. Through the problem solving approach ideas and theory which work are developed and this helps in solving problems (Rawat, 2008).

The use of the problem solving approach in Home Economics facilitates the presentation of knowledge as one unit not fragmented (Shawal, nd). This is by organising knowledge around a particular problem e.g. health. The problem solving approach is beneficial as it helps students develop skills in solving family and societal problems (Shommo, 2006; Maloiff & Schutte, 2008; Trilling & Fodel, 2009).

Group work

Group work usually involves groups of students working together on assigned work in the classroom or outside. The group work method facilitates holistic education (Czujko, 2013). Group work provides for an active and collaborative learning environment which facilitates effective learning in H.E. (Murphy, Mahoney, Chen, Mendez- Diaz & Young, 2005). The group work method helps student's develop interpersonal skills (Payne, Mont-Turner, Smith & Sunter, 2004). Employers prefer workers who possess the ability to work in groups and who possess teamwork skills (Blowers. 2000).

Project method

A project is a whole hearted purposeful activity proceeding in a social environment (Kilpatrick, 1918). In the project method, the child is involved in various creative activities; thus developing the ability to solve problems. The project method provides more meaningful deeper learning for students through constructive activities in natural conditions (Kaw, 2014; Milwaukee Public schools, 1922). The project method provides students with practical experiences which prepare them to tackle problems they will face in the future at work and in society (Szallassy, 2008).

Drama /Role Play

Dramatization and role play are teaching methods which involve learning through acting out a particular situation (Petty, 2009; Gwarinda, 1993; Gwatiringa, 2002). In role play learners spontaneously act out a situation (Chikuni, 2003; Ndamba & Mutsambi, 2014). Role play and dramatization bring life and excitement into the learning teaching situation (Maphosa, 2014; Chikuni, 2003). These may be used to break monotony of passive teaching methods (Chikuni, 2003, Petty 2009; Gwarinda, 1993).

4.2 Challenges in implementation of hands-on Approach

Shadreck (2012) established that teacher quality, lack of adequate laboratory equipment and consumables affect effective implementation of the F/N curriculum in Chivi District in Zimbabwe. Implementation of practical subjects was negatively affected by lack of specialised personnel Matseke (1997). For successful teaching and learning to take place, teachers should be adequately prepared (Gatawa, 1990; Paul, 1985; Peresu & Nhundu, 1999).

H.E. requires equipment, materials and specialist rooms for effective teaching and learning to take place (Domike & Odey, 2014; Ministry of Education Sports & Culture, 2002; Ogwu & Ogwu, 2012). Domike and Odey (2015) express the view that in Nigeria many primary schools were experiencing challenges in terms of infrastructure and instructional material. Effective teaching and learning of practical subjects in some primary schools in Zimbabwe may be hampered by lack of appropriate resources. Resources are essential in the teaching and learning of H.E. using the hands-on approach. Hence the study sought to establish resource challenges in the implementation of H.E. using the hands-on approach.

The literature review has looked at methods of teaching and learning of H.E. which support the hands-on approach. The section also established challenges in the use of the hands-on approach in teaching and learning of H.E.

5.0 Methodology

5.1 Qualitative Paradigm

The qualitative paradigm was viewed as the best to provide insights to the perspectives of participants regarding the use of the hands-on approach in the teaching and learning H.E. in the primary school (Gray, 2011;). The qualitative research paradigm was adopted because it facilitated exploration of respondents experiences, attitudes, views, opinions, beliefs and values on the matter under investigation (Cohen et al, 2011).

Understanding human behaviour and experiences in certain circumstances requires direct interaction with the participants (McMillan & Schumacher, 2010). Understanding the participants views and experiences helped the researcher to give the voice of the implementers in the teaching and learning of H.E. using the hands-on approach (Merriam, 2009). In the process the researcher gained an understanding of the challenges being faced in the use of the hands-on approach in the teaching and learning of H. E. in the primary school.

5.2 Case Study

The study made use of a qualitative case study in order to obtain an in depth understanding of the phenomenon under study within a real life context (Borg & Gall, 1989; Cohen, Manion &

Morrison 2007). The case study was selected to facilitate direct contact between the researcher and subjects so as to collect data relevant on the use of the hands-on approach in teaching H.E. in the primary school.

The focus of this study was on the hands-on approach in the teaching of H. E. in the primary school curriculum and multiple case studies were thus implemented. Punch (2009) says a multiple case study or collective case study covers several cases in order to learn more about the population, phenomenon or general condition. Multi case studies provide room for replication and rules out rival explanation.

5.3 Study Population and Sampling

Study Population

The study population comprised of primary schools in Masvingo District both urban and rural. The major participants of the study were teachers. The teachers were chosen in order to solicit their understanding and their level of preparedness in the use of the hands-on approach in the teaching of H.E.

School heads were also chosen as part of the population. Fullan (1991:143) stresses that “The most powerful potential source of help or hindrance to the teacher is the head teacher.” Their contribution was greatly valued in the study as they are managers of the schools and are responsible for supervising teachers as they implement curriculum.

Sampling

Purposive and convenience sampling were used to select both the participants and the schools to be studied. As Maree (2008) argues purposive sampling is not only restricted to the selection of participants but also settings or events. Fraenkel & Wallen (2003) consider convenience and cost effectiveness as important factors to consider when choosing research sites. Bless, Higson-Smith and Sithole (2013) say convenience sampling is based on availability of the units of the target population.

5.4 Data collection instruments and procedures

Lincoln & Guba (1985), Mutch (2005) & Punch (2009) say typical methods of data generation in the qualitative case study approach include interviews, observation and document analysis. Qualitative research uses a variety of data generation tools to achieve trustworthiness (Maree, 2008; McMillan & Schumacher, 2010; Mutch, 2005)). The interview, observation of lessons and document analysis were employed to generate data in this study.

Interview

The semi structured interview was used to provide the interviewee with a chance to express his/her thoughts, feelings, experiences, views, opinions about issue being studied (Cohen et al, 2011; Mutch, 2005; Wallen & Frankel, 2001).

Observation

The other data generation tool which was used in the research was observation. Observations are considered an important tool for gathering data for descriptive studies (Best & Khan, 2006; Marshall & Rossman, 2008). The observation method was used to take note of how the hands-on approach was used in the teaching and learning of H.E. in the primary school. The observation technique was also used to study whether the lesson procedures used facilitated effective implementation of the hands-on approach.

Document analysis

Document analysis involves scrutinising relevant documents (Neuman, 2000). Punch (2009) says documents provide evidence of real activities undertaken in an organisation. Marshall & Rossman (2008) & Punch (2009) view document analysis as a method of gathering rich data which portrays a setting. Bryman (2012) recommends using document analysis with other data generation methods. In this study the scheme cum plan document and syllabus were analysed.

5.5 Trustworthiness

Trustworthiness was ensured through triangulation using multiple sources of data and data generation instruments (Creswell, 2007; Marshall & Rossman 2008; McMillan & Schumacher, 2010). Triangulation is a powerful way of demonstrating concurrent validity in qualitative research (Cohen et al, 2011; Leedy & Ormrod, 2010; Marshal & Rossman, 2008). In the study, data collected through the interview was triangulated through observation and document analysis for credibility.

6.0 Findings and Discussion

The data presentation, analysis and discussion was organised by themes.

- Benefits of the hands on approach.
- Methods that support the hands on approach.
- Challenges when using the hands-on approach.

This helped the researcher to establish patterns, relationships, comparisons and qualifications across data (Cohen et al., 2011; Walliman, 2011).

6.1 Benefits of the Hands on Approach

The study established that the hands-on approach develops in students motor skills and facilitates active involvement of pupils in the learning process (Ministry of Education and Culture, 2002).

The approach was found to help develop understanding and retention of what was learnt as was indicated by one interviewee “Learners do not easily forget what was learnt through the hands on approach as they will be participating actively in the learning process”. Another respondent said, “The hands-on approach facilitates effective learning as pupils will be practically involved for example in laundry work. Learners will be actually, involved in sorting, washing rinsing, drying and ironing clothes”.

The study indicated that the hands on approach was beneficial as it furnished students with life-long skills for them to function in the real world. One respondent had this to say on the benefits of the hands on approach, “Learners are self-equipped with the skills such that they can apply them in their day to day family life activities like planning and preparation of meals”. In support another respondent expressed that, Through the hands-on approach learners will be equipped with manipulative skills which help them in carrying out practical tasks in day to day family life”.

Various advantages of the hands on approach were revealed through the study such as active involvement of students, easy grasping of concepts learning by doing, promotion of motor and intellectual skill development (Mupfumira & Mutsambi, 2012; Petty, 2009). The following sentiments were expressed by the respondents to show the advantages of the hands-on approach “It is a practical approach. Hence learners apply what they learn theoretically and also practically” the other response was “The approach allows pupils to explore with different equipment thereby gaining knowledge and skills of how to do different things” the findings showed that the hands-on approach has the advantage of helping children grasp concepts better through practical engagement in the learning process.

The findings established that the hands-on approach motivated pupils to learn. This was supported by one interviewer who said “Learners really like to be involved in the learning process they are eager to manipulate explore and experiment hence the approach renders the chance to be involved”. The hands-on approach facilitates active pupil involvement in the learning process (Czujko, 2013). The above sentiments were echoed by most respondents. What is evident from the above remarks is that the hands-on approach is beneficial in the teaching and learning of H.E.

6.2 Methods which support the hands on approach

The findings indicated that teachers used methods which support the hands-on approach. Some of the methods which came up from the study were experimentation, group work, demonstration, fieldtrips, supervised practice, project method. The following expression from one of the teachers is a representation of many other statements from the other respondents “The hands-on approach makes use of teaching methods which allow pupils to be actively involved in the

learning process. Methods like experimentation, group work, demonstration, fieldtrips, project”. During lesson observation it was noted that teachers frequently used supervised practice, discussion and group work. These methods are also supported in literature for use in the technical subjects like H.E. (Mupfumira & Mutsambi, 2012). The methods which support the hands-on approach allowed for pupil active engagement in the teaching learning process. During supervised practice pupils applied theory learnt and acquired psychomotor skills as they engaged in practical activities.

6.3 Challenges in implementation of hands on approach

In this study it was established that the implementation of the hands on approach faced some challenges. One of the major challenges noted was funding of the Home Economics subject (Domike & Odey, 2014; Ministry of Education Sports & Culture, 2002; Ogwu & Ogwu, 2012). The respondents pointed that Home Economics as a technical subject requires workshops, technical subject requires workshops, equipment and consumables for effective implementation of the hands on approach. Topics like food require a kitchen with sink and stoves for food preparation to take place. As one respondent pointed “Home Economics requires special facilities for effective teaching and learning. Stoves, sewing machines, specialist rooms are required”.

The general feeling expressed by respondents was that effective implementation of the hands-on approach required adequate resources in terms equipment and consumables. Schools were generally not well resourced to meet this requirement (Domike and Odey, 2015; Shadreck, 2012). One respondent said “Schools do not have adequate resources for teaching Home Economics effectively due to lack of funds to purchase what is needed”. This was especially the case for the rural area as was pointed out by one interviewee, “Rural schools especially face problems of getting what is needed for teaching Home Economics. Rural schools do not have workshops, equipment and materials to implement the hands-on approach”. One teacher said she brings equipment from home to use in practical lessons. All the school heads, cited of resources as the major reason why the schools fail to effectively implement practical subjects like H.E..

The other challenge noted was that of inadequate time. Home Economics as a practical subject requires time for students to engage in practical work. Practical work requires adequate time for pupils to master the skills being learnt. With reference to time allocated for Home Economics one interviewer said “The time is not adequate. Thirty minutes lessons are not enough for practical work e.g. food preparation and sewing. The timetable does not give enough time for practice in Home Economics lessons”. Time becomes even more problematic because of limited resources as one teacher said “The 30 minutes lessons are inadequate since the resources are inadequate. More time is needed for pupils to share the limited resources e.g. sharing few sewing

machines in a sewing lesson”. It was noted in literature that technical subjects like H.E. require workshops, equipment and consumables for effective teaching and learning (Domike & Odey, 2014; Ogwu & Ogwu, 2012; Ministry of Education nd Culture, 2002).

From the findings it emerged that teachers were quite conversant on the various methods which support the hands on approach how they are executed such as experimentation, field trip, simulation, project, problem solving, discovery. However the major challenge noted was lack of practical skills to effectively prepare students for supervised practice. Some of the teachers were not skilled in practical work as a result they were not confident in demonstrating practical skills. Effective teaching may be hampered by teacher quality (Gatawa, 1990; Paul, 1985; Peresu & Nhundu, 1999; Shadreck, 2012).

7.0 Conclusions

It may be concluded from the study that the hands on approach is beneficial to students as it supports active involvement in the teaching learning process. The approach facilitates learning by doing. With reference to methods supportive of the hands-on approach it was concluded that participatory methods like group work, field trip, project, problem solving, supervised practice supported the hands on approach. From the findings it was also concluded that the implementation of the hands on approach faced a number of challenges namely resources, time. The funds and time were limited for financing practical activities. Some teachers were not skilled enough to prepare students for practice.

8.0 Recommendations

The study recommends that:

- Schools should engage in fund generating programs to finance Home Economics practical lessons.
- Schools should allocate more time for HE to accommodate practical work.
- Teachers should attend in-service program to upgrade their practical skills.

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