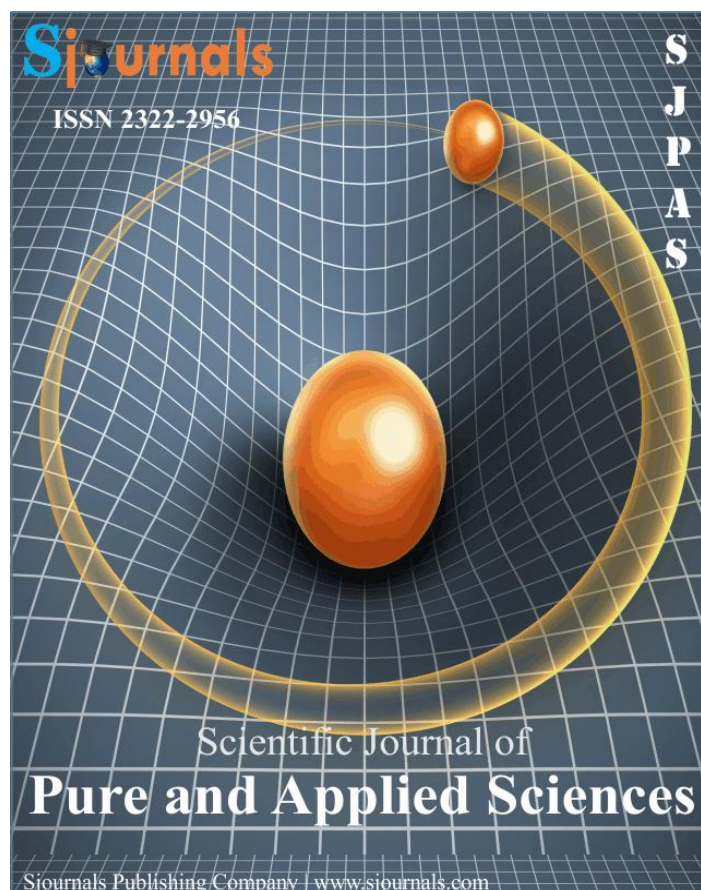


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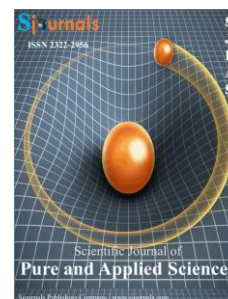
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Review article

Project based learning and assessment of ordinary level Fashion and Fabrics in Zimbabwe

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ABSTRACT

Ordinary level assessment for Fashion and Fabrics exposes learners to a practical paper (Paper 3) which is weighted at 20%. This entails that 20% of the final assessment of a learner is coursework while 80% is the examination. Learners do not have full autonomy over the sample garment for coursework as there are specifications provided by the examining board. This research sought to explore how the assessment criterion could be improved to empower learners for further education and entrepreneurial skills. The revisit of the assessment criterion was in response to the contemporary issue of the advancement of STEM subjects under the slogan for, 'Stematisation of the curriculum'. This research was informed by the constructivist philosophical view, hence predominantly qualitative. The major question that guided the study was: 'How could 'O' level Paper 3 Fashion and Fabrics assessment be improved to establish a relationship between opportunities for further education and entrepreneurial skills?' Focus group interviews and unstructured questionnaires were used to collect data from a sample comprised of thirty 'O' level students and twenty teachers selected from high schools drawn across one district in the Bulawayo Metropolitan Province. The purposive sampling technique was applied in order to obtain rich information from respondents in their natural setting. Results revealed that the assessment criterion did not expose learners to sufficient problem

solving skills. The major conclusion drawn was that there was a misalignment between the assessment criterion and the global need to prepare students for the demand for entrepreneurial skills in the 21st century. Recommendations put forth in this paper appraised the need for a project based assessment as it would enable students think creatively to boost their entrepreneurial skills and to facilitate their smooth transition into further education or productive work. The study also recommended an urgent curriculum review which will be sensitive to a balanced assessment criterion which recognizes both theory and practice in Fashion and Fabrics and which recognizes the ethos of interpreneurship.

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1. Introduction

Fashion and Fabrics is one of the three domains in Home Economics offered at secondary level in Zimbabwe. Home Economics programmes at secondary and tertiary level as observed by Pendergast (2005) provide comprehensive and multi-disciplinary training skills. To elaborate on this, Pendergast (2005) says, 'Although it is multi-disciplinary, it (Home Economics) does not teach a skill for the sake of that skill, it teaches it for application, it teaches for informed decision making in endless scenarios, it teaches evaluative and critical thinking skills, it empowers individuals no matter what context' It is therefore anticipated that by the end of a Home Economics course, learners should be able to respond to the technological, social and economic changes in the global village and look beyond the classroom setting.

Ordinary level Fashion and Fabrics candidates are assessed for knowledge acquisition as well as practical skills. Paper 1 tests knowledge acquisition in form of a written paper and constitutes 40%. The assessment of application skill is achieved through Paper 2. Paper 2 constitutes 40% and is a theory based practical test which is done under controlled conditions and is marked externally. Paper 3 is purely practical coursework with a weighting of 20%. It is done within a certain period, under close supervision of the teacher. Some schools begin working on the garment during the third term of Form 3 while others start working on it during the first term of Form 4. Assessment of the garment is done at school level and moderation is done at national level by the examination board as a quality assurance measure.

Assessment as seen by Leepile (2009) is concerned with collecting and making decisions about student achievement and can come in many forms. Basically, teaching and learning is informed by the assessment criterion. This study is focused on coursework assessment which can be either formative or summative (Greatorex et al., 2002). Hopkins (2004) defines formative assessment as a process in learning that seeks and interprets evidence for use by students and teachers to decide where the students are in their learning, where they need to go and how best to get there. From this definition, it could be deduced that formative assessment is critical as it improves teaching and learning. Teaching and learning can be adjusted to suit the way learners are progressing and in the process, performance standards are raised. It is not clear whether formative assessment is adequately conducted for ordinary level Fashion and fabrics in Zimbabwe. Summative assessment seemingly dominates decisions about the final grades. Summative assessment sometimes referred to as assessment of learning is described by Harlan (2004) as a measure for providing a record of a pupil's achievement in a specific area of learning at a certain period. Therefore, coursework is formative in the sense that the information gathered about the student's achievement is intended to promote teaching by helping students to acquire skills and knowledge. Meanwhile, national "O" examinations are summative in nature. The examinations are summative in that they are used to grade students for the final grade. This study presupposes that formative assessment is critical in preparing learners for quality performance and for future entrepreneurial engagements. Poliah (2006) identifies several merits in coursework assessment. The author views it as a better tool for lifelong learning and an integral part of the teaching and learning process where equal importance is attached to diagnostic, formative as well as summative assessment. However, in a study carried out by Kennedy et al. (2006) it was concluded that formative assessment of learner coursework may present challenges for both learners and teachers. Teachers are given an

additional workload while students' creativity maybe stifled when little or no autonomy is afforded in the choice of coursework.

According to the Government of Zimbabwe Ministry of Education Fashion and Fabrics 'O' Level Syllabus (2012-2017), assessment objectives for Paper 3 require candidates to develop analytic and evaluative skills in selecting fabrics suitable for constructing garments for different human needs as well as demonstrate the correct handling and care of these fabrics. Further, candidates are expected to design and draft patterns for use in constructing garments, accessories and craft using various pieces of equipment including modern technology while observing safety precautions in the Fashion and Fabrics laboratory. Furthermore, candidates are expected to apply managerial and organizational skills in the efficient use of materials, time, money, labour and equipment. Consumer rights and responsibilities are also expected to be covered at this level. Basing on these assessment objectives, it would appear that the content is broad and diverse and allow for inclusion of entrepreneurship skills.

The syllabus also stipulates that coursework should consist of one machine-made garment that fits the candidate. A garment with a waistline finish, and no armholes, should include inside pockets. Processes incorporated should cover the syllabus as much as possible (Government of Zimbabwe Ministry of Education Fashion and Fabrics 'O' Level Syllabus, 2012-2017). In addition, the learners are expected to come up with their own proposals to this effect. As they propose their own topic, plan their timelines, interact with their classmates of different abilities, gather and evaluate research material learners acquire self-directed inquiry skills which would prepare them for the workplace of the future (Harris and Katz, 2001).

Project based learning is influenced by the constructivist learning theory. Some of the tenets of this theory are Dewey, Piaget, Perkins and Vygotsky. These psychologists unanimously agree that learners construct knowledge through active thought, interest, and further make meaning from their interactions. According to these theorists, meaningful learning occurs when learners act as planners and primary drivers of the learning process while the teacher facilitates and guides in the acquisition of knowledge (Grant, 2002). Project based learning vary in both context and implementation. Project work could be in the form of a question or learners could perform a similar task, collect, analyse data and present results. This study, therefore explores the views of the participants with regards to how project based assessment at 'O' Level Fashion and Fabrics could effectively promote entrepreneurial skills and prepare learners for future and lifelong education. Entrepreneurship education attempts to stimulate curiosity and creativity in learners so that they become confident in what they are engaged in. Adebayo and Kolawole (2013) view entrepreneurship education as a specialized form of training given to the students or trainees to acquire skills, ideas, managerial abilities and capabilities for self-employment than being employed for pay. A curriculum that embraces entrepreneurship should enable its products to be self-employable and self-reliant. If ordinary level learners leave school having acquired basic designing skills, they could be able to identify novel business opportunities. However, this study is yet to uncover the extent to which these objectives are pursued and achievable under the current arrangement.

2. Statement of the problem

There tends to be a misalignment between the pronouncements of the Zimbabwe 'O' Level Fashion and Fabrics syllabus and the actual day to day teaching, learning and assessment of the subject. There is no readily available evidence that the learners are exposed to entrepreneurial skills required for survival in the 21st century. The study, therefore sought to explore and identify an effective learner-centered approach that could trigger entrepreneurial skills and smooth transition into tertiary education and/or productive work.

3. Major research question

How could 'O' level Fashion and Fabrics assessment in Zimbabwe be improved to establish a relationship with opportunities for further education and entrepreneurial development?

3.1. Sub-research questions

- What are the views of teachers and learners about the current assessment criterion for Fashion and Fabrics Paper 3?
- How does the current assessment criterion prepare learners for entrepreneurial skills development?
- What could be done to improve the practical assessment of Fashion and Fabrics in Zimbabwe?

4. Materials and methods

This research was guided by the philosophy of Interpretivism and therefore followed the qualitative research paradigm. Chiromo (2006) observes that in qualitative research, the researcher develops interest in collecting data from his or her participants in an interactive manner in their natural settings. The qualitative approach was found to be quite ideal as it would enable the researchers to interact with the participants through the use of interviews. The study utilised a qualitative case-study design. Denscombe (2007) expounds that a case study enhances the reader’s understanding of the phenomenon bringing the discovery of new information, extending the reader’s experiences or confirming what is already known. This research also preferred the qualitative case-study because it enabled the researchers to study participants in their natural settings through the use of interviews, semi-structured questions and focus group discussions. The target population for this study was fashion and fabrics teachers and ‘O’ level students doing this practical subject in secondary schools found in Mzilikazi District of Bulawayo Metropolitan Province. The total population studied was fifty participants comprising thirty (30) ‘O’ level students and twenty (20) teachers who were all purposively sampled. Fashion and Fabrics teachers responded to the questionnaire which aimed at gathering their views regarding the contributions of the practical Fashion and Fabrics paper 3 in preparing students for entrepreneurial skills and further education. Focus group discussions were conducted with the ‘O’ level students who were put into three (3) equal groups to maximise participation. Both the questionnaires and the focus group discussions were physically administered by the researchers to facilitate a high turnover rate.

5. Results and discussion

The following is a presentation of the individual characteristics of teachers who participated in the study (Table 1).

Table 1
Demographic data for teachers (n=20).

Characteristic	Category	Frequency
Gender	Male	2
	Female	18
	Total	20
Highest professional qualification	Bed in Clothing and Textiles	18
	Masters in Clothing and Textiles	2
	Total	20
Teaching experience	1-5 years	0
	6-10 years	8
	11 years and above	12
	Total	20

Table 2
Demographic data for learners (n=30).

Characteristic	Category	Frequency
Gender	Males	0
	Females	30
	Total	30
Age range	15 years	0
	16 years	25
	17 years	5
	Total	30
Specialisation in Fashion and Fabrics	By choice	19
	By placement	11
	Total	30

From the Table 1, it could be seen that only two participants were male while eighteen were female. This reveals that the teaching of Fashion and Fabrics is still dominated by female teachers. All participants were qualified Fashion and Fabrics teachers who had been involved in coursework assessment for quite a number of years. Eighteen participants had earned a first degree in Clothing and Textiles while two participants had acquired a master's degree in the area. Twelve teachers had more than eleven years' experience in teaching Fashion and Fabrics at ordinary level. This reflects that the majority of the teachers sampled for this study were adequately qualified to teach the subject at 'O' Level.

Regarding gender all learners were female confirming that the earlier assertion that Fashion and Fabrics is regarded as a female domain. Further, 25 learners were at the age of 16 while 5 were at the age of 17. In addition, 19 learners chose to specialise in Fashion and Fabrics while 11 of them did the subject by default. Results of this study may then reflect mixed experiences of individuals who applied themselves fully to the subject and others who did not (Table 2).

6. What are the views of teachers and learners about the current assessment criterion of Fashion and Fabrics Paper 3?

When participants were asked whether Paper 3 should be eliminated from the assessment criterion or not, 62% were opposed to its removal while 38% opted for its elimination. One of the participants who were opposed to its removal had this to say: It is guaranteed that learners already have more than 15% before they sit for Paper 1 and Paper 2. The paper contributes a lot towards a passing mark. In the process, learners develop good workmanship. If a process is not worked properly, learners re-do until they get it right.

The above excerpt confirms that the paper is valid and it contributes a lot towards the final grade as well as development of good workmanship and hence has a potential to help in the development of entrepreneurial skills. One of the participants who had ill feelings towards the paper commented: The paper tests same skills that are tested in Paper 2. All the skills that were tested in Paper 2 in the year 2015 were exactly the same skills that my girls covered in coursework. There is repetition of processes. The other participant quipped: It is as if Paper 3 tests the teacher's knowledge and teaching prowess while Paper 2 tests the learners. Why should the teacher be tested after all? One other teacher queried: The teacher has to closely monitor the making up of the article, mark the article before it is sent for moderation. This is an extra load to the already burdened teacher who is not going to get an allowance for that. Paper 3 mostly tests the teacher rather than the student, much supervision is required.

The foregoing excerpts reveal that learners are not benefitting much from the Paper 3 since somehow it is teacher dominated and almost a repetition of skills tested in Paper 2. Further, participants were asked to indicate the paper which they thought benefited their students most between the three papers. Ninety percent were of the opinion that learners benefitted most from Paper 3 while ten percent were of the view that learner excelled in Paper 1 instead. Paper 3 was reported to be having particular strengths by both teachers and learners. The following excerpts from students confirm some of the benefits attached to the paper:

- In paper 3 we learnt almost everything from cutting out to construction of a garment.
- With the skills that we have learnt, we can now make our own clothing items and given some capital, we can start a small enterprise.

Meanwhile, one teacher argued: Paper 3 processes are supervised by the teacher and in the process, perfect their skills. It helps students in later years than do the other papers since most of the students do not do well in school. They will have the skills to survive in life after school. From the above excerpts it could be seen that teachers and learners are fairly positive about Paper 3. Consequently, issues of concern seemed not to outweigh possible merits attached to coursework.

7. How does the current assessment criterion for Fashion and Fabrics Paper 3 prepare learners for entrepreneurial skills development?

To begin with, learner participants were asked to indicate the entrepreneurial skills that they thought they had gained during the course of their study and which would enable them become self-reliant. The following is a summary of how the identified skills were rated (Table 3).

Table 3
Rating of entrepreneurial skills gained.

Skill	Rating	
	Low	High
Designing skills	96%	4%
Construction skills	0%	100%
Marketing skills	87%	13%
Managerial skills	92%	8%
Organizational skills	56%	44%
Technological skills	75%	25%

Learners signified having significant entrepreneurial skills in garment construction. The proportion of learners' indication in other skills was rather low. When learners were probed during focus group discussions why they thought they had not gained high skills in the other areas, they had this to say; We are provided with commercial patterns to use. We never designed any garment during our course of study. Designing is not in our syllabus. We use commercial patterns. It is difficult to maintain evenness when neatening a seam using an over lock, so it is better to use blanket stitch as the marks awarded are the same. I have failed to control the speed of an electric sewing machine. If I use an electric sewing machine I will spend the whole lesson unpicking stitches I will have stitched in the wrong position. From the above excerpts it would appear that there is no uniformity in the construction of garments. Whatever, candidates will have done is awarded same marks. In such a scenario, it is not mandatory to introduce the use of new technology to learners. However, teachers were of the opinion that learners gain the following skills by assessment through coursework.

- Accuracy as there is so much measuring in each and every step that is done during garment construction.
- Neatness as it is mandatory. There is no way one could send a garment that is not neat for marking.
- Garment construction skills.

When participants were asked whether their learners could pursue further studies after having gained these skills at ordinary level, they had this to say, Learners could pursue further studies as the basis for further studies is knowing how to join two pieces of material together. They could do so with ease as they would have acquired basic skills in the subject. What is important for them is to gain basic skills in garment construction and then they will take it from there. From these excerpts, it would appear that at ordinary level, the most important entrepreneurial skill which is emphasised most is the garment construction skill. It is not mandatory to apply technological skills and design patterns for use in coursework garments.

8. What could be done to improve the practical assessment of Fashion and Fabrics in Zimbabwe?

Some of the suggestions on improving practical assessment of Fashion and Fabrics were recorded as follows:

- Zimbabwe School Examinations Council (Zimsec) should insist on uniformity. It is not fair that blanket stitch and over locking be awarded the same marks. Use of modern machinery should be mandatory.
- The weighting of the paper should be increased because there is so much labour imputed into it by both the teacher and learners. Doing one thing is monotonous. It has been the same requirement ever since I started teaching. There should be different requirements for each year.

From the above views, it could be concluded that Paper 3 needs review in some way as the assessment criterion tended to have unfair practices. When participants were further asked to suggest an assessment criterion that could be ideal for Fashion and Fabrics Paper 3, 89% advocated for the project based approach. On the other hand, 11% of the participants felt that the current assessment criterion was handy and economical. One of the participants justified the project based approach on the following bases: I think project work would encourage creativity amongst learners. They would come up with interesting designs. Project work would be a great idea; students would really be responsible for their learning. I foresee learners coming up with different ideas in project work and they will inspire one another as they work on the projects. The project approach will ensure that

students have ample time for hands on practice on the articles under construction. They will also experience total ownership over it. From the above excerpts it could be seen that project work could be a welcome development. If teachers have a positive attitude towards an idea, they tend to support it. However, one of the few teachers who objected to the idea of the project based approach had this to say: I doubt very much if at their level our students can handle projects. Maybe, simple projects supported by a design brief. Not exactly the way Agriculture learners do it. Project work could be disastrous as learners might be tempted to hire expertise to assist them construct the garments at home. Time would not allow such an approach. At the present moment we are struggling to complete the coursework garments on time. What more if we are to include write-ups and other things that go along with projects?

The first research question sought to understand the participants' views about the assessment criterion for Fashion and Fabrics Paper 3. It is interesting to note that participants strongly felt that the paper should not be eliminated as learners benefitted a lot from it. Rather the assessment criterion itself needed review. This resonates well with literature by authorities such as Poliah (2006) who attach coursework to a number of benefits. A glance at the assessment criterion of students even at tertiary level reveals that, coursework is of paramount importance since it contributes significantly towards the final grade. In spite of a weak examination mark, students can still sail through if their coursework is good.

The second research question enquired on practical entrepreneurial skills development attainable through the existing assessment processes of Fashion and Fabrics which could create self-employment and self-reliance among the learners after leaving school. Results derived from the focus group discussion revealed that learners did not acquire sufficient practical skills to allow for self-employment as a function of the course work approach used for Fashion and Fabrics Paper 3. The results clearly indicate that while the Fashion and Fabrics syllabus in Zimbabwe is replete with inherent advantages the assessment criterion that was in place did not seem to achieve its purpose as it did not provide adequate opportunity for entrepreneurial skills development and practical experience needed for self-employment and self-reliance. This is in contrary with Adebayo and Kolawole (2013) who advocate for entrepreneurial education that capacitates learners for self-reliance.

The issues surrounding Paper 3 and the current unfolding educational policy changes provide a case study within which to consider the use and validity of project work as an assessment form. It would appear that Paper 3 has not allowed a broader and more relevant set of skills to be tested. Hand neatening is still accepted while there are other faster means of doing it. A candidate who has used technologically advanced equipment to construct a garment would score a similar mark to someone who has just used their hands. Use of modern technology is not insisted on. In such a scenario learners leave school without having acquired skills that are relevant for both further education and employment. This is not congruent with what has been observed by Pendergast (2005) who says that skills should not be taught for the sake of teaching them but for application beyond the classroom setting.

9. Conclusion

From the findings of the study, it is evident that learners need to become more empowered at ordinary level in order to develop skills and competence in Fashion and Fabrics. This could be effectively done and achieved through the use of a user friendly assessment criterion such as the project based approach. The study concluded that there is an existing gap between curriculum thought and practice which could be easily closed by acknowledging the central role played by the learner and further ensuring the use of technology which in this study was found to be inadequate. And at the end with a few recommendations:

- There should be clear criteria established and adhered to by the user system to ensure assessment which is valid and reliable.
- The examining body and in this case ZIMSEC, needs to strengthen the system by setting up effective procedures for monitoring and improving the quality of assessment which should be both formative and summative in nature.
- Assessment criteria should be reviewed as it has been running now for many years and during the review process, it would be pivotal to strike a balance between theory and practice.
- The examining body should also consider introducing project work which could include the following outlines: Investigation of the task given, development of the design, plan of practical work to be done

and completed textile item evaluation which should be based on set standards which hitherto respect student input.

- Ultimately, project based learning should be given primacy in the practical assessment of Fashion and Fabrics in Zimbabwe.
- More research work is to be conducted elsewhere with regards to Fashion and Fabrics Paper 3 assessment criteria.

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