

Empowering Fashion and Textiles in Madagascar through Distance Learning

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Abstract

The authors are currently involved in the setting up of a full-fledged Textiles and Fashion department at a tertiary institution in Madagascar. This development-led and industry-driven project, spanning over three years, is funded by the World Bank.

In the short term, the project carries the challenge of training a critical mass of tutors and learners to sustain the training and research activities of the new Textiles and Fashion department and to support the growing textiles industry, respectively. The rationale behind providing support to this labour-intensive industry is that the textiles and apparel sector contributes greatly to the economic and social stability of Madagascar.

Owing to the size of the country, the dispersion of human resources and the relatively low level of road infrastructure and transportation systems, the institution finds it very difficult to connect to a sizeable mass of learners on the sole basis of classrooms or other face-to-face teaching. Following recent personal communications, the industry would require over 200 trained technical and managerial personnel every year for the next five years. Therefore, as a possible solution to the problem, the stakeholders involved in the project have recognised the need to introduce distance-learning techniques in order to reach out more learners. It is hoped that, through cost-effective knowledge creation, the learners would add substantial value to the industry and the economy at large.

Textiles and Fashion have a high component of hands-on practical work and the authors are working on a comprehensive strategy to provide e-learning experiences/support to the textile teaching curriculum of a private institution in Madagascar. They are also currently discussing with the tertiary partner institution as well as a regional funding agency to mount a cost-effective 'knowledge' platform dedicated to Textiles and Fashion that would be user-friendly, secure and easy to maintain.

Our paper will focus on a case-study that will be launched early 2008.

1.0 Introduction

This paper deals with the foundational structures necessary for offering a module on 'Garment Manufacture' on distance learning mode in a newly set up Fashion and Textiles department in Athenee St Joseph Antsirabe (ASJA), a private university in Antsirabe, Madagascar. By distance learning, the authors refer to "the process in which the learner is not physically present in the same location as the instructor" (Distance Learning Resource Network 2003; Steiner 1995). This work does not deal with distance learning modes and practices or its pervasiveness in this region of the world and there is no attempt here to scan the literature. To put the project into perspective, the town of Antsirabe is situated in the central plateau region, about 260 km from the capital,

Antananarivo. Antsirabe is the second-largest town and fast growing into a major textile and apparel hub. The module 'Garment Manufacture' is a core module of a postgraduate degree program being taught traditionally. This distance learning project takes into account the requirements of the stakeholders while maximizing delivery with the current level of information technology (IT) infrastructure. One of the objectives of the project is to provide easy and flexible access to training, at different levels of expertise, to support a dynamic and growing industry.

Textiles and apparel is usually the seed industry that drives industrialisation and economic growth, bringing in its wake other business skills such as entrepreneurship, marketing, transfer of technologies and other activities in the services sector, such as banking, transportation, logistics, insurance, etc. The social and economical weight of this industry in Madagascar is significant and must be seen in the right perspective. The industry employs about 25,000 people and indirect employment is deemed to be twice as much. About 75% of textile and apparel workers are women, who are sometimes responsible for feeding the family and bring up children. As a matter of fact, most stallholders in areas of heavy economic activity are women. Textile and apparel products from Madagascar are set to remain competitive for quite some time owing to relatively low labour costs, promising gains in productivity and a resurging level of infrastructure.

Starting in late 2001 up to mid 2002, Madagascar went through an unprecedented political crisis, commonly called 'La Crise' by the locals. There were widespread disturbances across the island, in both urban and rural areas, resulting in a serious breakdown of law and order. As a result there was a serious loss of confidence in the viability of the country as a place to do business and many foreign investors left the country for safer shores. Mauritian textile and apparel manufacturers who had invested heavily in Madagascar prior to 2000 left never to come back again. In addition, the education process was disrupted and this project may help to catch up on lost time and training opportunities.

Madagascar currently supplies high-end American- and European Union-based retailers and working with them requires a significant level of 'savoir-faire' in terms of supply-chain management and quality requirements. Delivering to such a high quality standard requires knowledge for the setting up of structures that would allow frictionless and timely supply to retailers.

2.0 Justifications for launching Garment Production Module

- The apparel sub-sector in Madagascar is much more dynamic and bigger than the textile sector, and more job opportunities are likely to be availed in this sub-sector;
- There is a lack of 'accessible' technical expertise in Madagascar and this project may help to build capacity;
- The module has a high component of practical sessions requiring a sizeable number of contact hours. This may be reduced through e-learning;
- It can potentially promote the setting up of small enterprises for servicing larger ones that are willing to outsource/sub-contract part of their orders. The value of this major step should not be under-estimated. If the case of Mauritius is taken as an example, many entrepreneurs who started as sub-contractors are now entrepreneurs in their own right;
- It may entrench a culture of entrepreneurship by technically enabling stand-alone small and medium enterprises;
- It may empower a large section of the population, especially women, since the industry is highly labour-intensive.

2.1 Entrepreneurship and SMEs

The postgraduate program is designed towards promoting the concept of entrepreneurship. There is a new mindset/drive among young Malagasy to start micro-enterprises. They want to have a greater control over their destiny. Malagasy students interviewed recognize the potential of entrepreneurship to create jobs and wealth. Most of young people interviewed wish to become entrepreneurs after a few years of industrial experience.

2.2 Support from Industry

Industrial training is a major component of the programme. Students will have to spend 8-10 weeks in industry whereby they would get acquainted with industrial practices. Industrial units participating in the training have kindly agreed to logistically and psychologically support the students, so that their experience is enriching and may become a platform for further specialisation. The industry has shown interest to reward highly motivated students willing to join garment production units, which is currently facing scarcity in manpower.

2.3 Capacity Building

The class of 2007-2008 consists of 27 students, all of them possessing an undergraduate degree, a '*licence*' which is equivalent to a UK BSc degree, obtained after 3-year post-secondary studies. The post-secondary educational background of the students vary; ranging from agricultural science through industrial engineering to mechatronics; most of them former graduates of ASJA while the remaining are graduands of the University of Antananarivo. However, recent personal communications with industry recruiters (March 2008) have confirmed the figure of about 600 potential short-term recruits at both technical and managerial level. Under the current system of teaching, it may take an unacceptably long time to satisfy the short-term demand. It is hoped that distance learning coupled with flexible access may help to increase the throughput of graduates. For sustainability of the project, students' feedback would have to be monitored regularly and appropriate measures taken to improve both the content and the learning-dispensing technology.

2.4 Training of Teachers/Tutors

The training of local tutors is crucial to the sustainability of the project. It is expected that after a three-year period the training programme will become self-sufficient in terms of teaching capacity as well as other resources needed to run a viable teaching and training programme. These trained tutors would be acting as students' advisors, thereby increasing interaction and minimising students' sense of isolation. The availability of student support services to the distance learner is essential and the World Bank may consider releasing more funds after the initial period of three years if the aims and objectives of the project are clearly met.

3.0 The Module: Garment Manufacture (La Confection)

The module comprises of a 60:40 ratio of hands-on practical sessions and theory classes, respectively. The practical sessions are consistently linked to the theory and as such the students acquire practical skills that enable them to better grasp the theory and to develop key motor skills; an essential condition for their future progress in the field of garment manufacture. Eighteen 'learner-centred' practical sessions have been developed that focus mainly on pattern drafting and sewing techniques, underpinned by the use of labeled technical sketches and videos.

The raw material at the initial stage of garment manufacture is fabrics, and the end-product is packed garments ready for transportation and distribution. The raw material and trims have to be assessed for quality before any manufacturing process can start. Prior to that, the customer would have approved samples/prototypes on which cut, make and trim (CMT) operations would be based. The sampling procedures are quite lengthy and depending on the performance of the sampling unit, an order may be secured or lost.

Based on customer-approved patterns, which inter-alia include complex technical know-how such as pattern-making, pattern grading and marker planning, the fabric would be cut and sorted in marked bundles for assembly on sewing lines. Sub-processes such as pattern-making and pattern grading have an important effect on aesthetic properties like fit, comfort and drape whereas marker planning has an important impact on the economics of garment manufacture. Fabric usage can be optimized here, resulting in potential savings of about 10-15%, a sizeable amount given that cost of fabrics make up 60-70% of the total manufacturing cost of the product. Owing to their great importance and hands-on nature, the sub-processes of pattern-making, pattern grading and marker planning are being allocated adequate time for comprehensive learning through the use of sketches and streaming videos. The videos actually show students and technicians performing coherent tasks related to the above sub-processes.

3.1 The Assembly Line

The assembly line (sewing) is where profit margins are either made or lost, where quality is either enhanced or deteriorated and where most trims are integrated to add value. A sound balance of the work in progress is critical to avoid jams along the assembly line that may result in drastic loss of productivity. A video has been produced to illustrate both well and ill-balanced assembly lines in a real-world garment manufacturing environment. CDs demonstrating sewing techniques and procedures are available as support materials.

3.2 Quality Checks

The common quality checks are to ascertain whether the product conforms to customer requirements such as garment measurements, stitches, seams, fabric faults, embroidery positioning, trims and their placements, sleeves and colour nuances. All these checks are necessary to ensure conformance of products. A library of faults in soft copy enables the learner to identify common product faults.

3.3 Pressing

Pressing provides the finishing touches to the product and enhances its presentation. Pressing has to be done under the right conditions to eliminate crease marks or other unsightly marks that may undermine the neat appearance of the garment. The video explains the techniques of pressing and the optimal conditions required for different types of products.

3.4 Machine Setting and Maintenance

The setting and maintenance of sewing machines is a key component of a garment manufacturing set up. The United Nations Development Program (UNDP) has produced a commendable DVD in partnership with a Japanese sewing machine manufacturer focusing on machine setting, accessories and maintenance.

Conclusions

This project will greatly benefit from the laying of the fibre optic cable network by the telecommunications consortium Orange-Telma. In terms of growth and sustainability, the Malagasy textile and apparel industry has a promising future since it has not yet reached its full potential of activity. This level of activity may be achieved with the help of formal training and education. Traditional classroom teaching alone may not be able to cope with the demands of the industry.

References

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