Green technology practices of small scale garments business in Metro Cebu

Accepted 20th June, 2017

ABSTRACT

The study aimed to assess the green technology practices of the small scale garment businesses in Metro Cebu. It focused mainly on the aspects of management and conservation of waste, water and energy as well as, its purchasing policy. The study utilized descriptive method to determine the existing practices of the garment businesses. Evaluation sheet was researcher made questionnaire that looked into the profile of the garment industry and the green technology practices of waste, water, energy and purchasing policy. The profile of the garment industry was made to distinguish the capital, production of clothes, years of operation and number of workers. Data were analyzed to formulate interpretations and conclusions. The findings of the study showed that 90% of the needed capital ranged from 50 to 250,000 and it did not have a big amount of capital because this business is a small one. It also produces garments for both men and women with 5 to 15 years of operation. Areas of green technology practices that were practiced for waste showed a verbal description of practice and water management has a verbal description of not practiced; this is alarming since water is one of the most important elements in our life. In the area of energy and purchasing policy the verbal description was slightly practiced. It can be concluded that the average of the four significant areas being practiced in the garment industry got a verbal description of slightly practiced, with a not practiced scheme of water, which is one of the most important element in the ecosystem.

Keywords: Cebu, green technology, garment industry.

INTRODUCTION

Clothing is one of the primary needs of man; it is used to make life comfortable and convenient at the same time and also to show our individuality through fashion. Aside from fashion, clothes are used as statuesque through its tag brand and the quality it is made of. This is the reason that fashion and garment industry is one of the fastest and booming businesses in the world and one of the primary industry sector that targeted to apply green technology through energy, water, waste management and other resources. It is essential that this sector of business adapt to green technology as their way of conserving resources.

The main objective of the study is to assess the green technology practices of the small-scale garment businesses in Metro Cebu focusing mainly on water, energy, waste, and purchasing policy, it greatly emphasized small-scale because majority of this type of business is located in residential areas, mostly home-based and there is no strict compliance for any environmental certification or business permit. Thus, this study.

Objectives

SESEC is a European clothing industry that identifies, organizes and measures energy saving method in clothing manufacturing. Its aim is to search for areas in clothing
production where the biggest potentials in savings can be found. Lower investment target and high sales and revenues were their primary goal. This company practices conservation of energy in productive and non-productive areas. Determining the amount of water used in soaking and washing to the delivery of product and finding ways to minimize waste through lean manufacturing and proper segregation method in order to identify the recyclables is of paramount importance to the company.

The study sought to assess the green technology practices in the small-scale garment businesses in Cebu. This gives importance and look into the practices of management and conservation for water, energy, waste and purchasing policy. Specifically, the study answers to the following questions: What is the profile of the garment industry in Cebu in terms of production of garments, capital, number of years in operation and number of personnel/sewers? What are the green technology practices in the areas of water, energy, waste and purchasing policy? Based on the findings what green technology practices can be proposed for the small-scale garment businesses in Cebu in order to conserve their resources?

METHODOLOGY

Method used

The study utilizes descriptive method with likert point-scale for gathering the data. The practices were analyzed and interpreted using a verbal description of not-practiced and practiced to well-practiced. The study was conducted in Metro Cebu and focused on the profile of the garment business such as capital, number of years in operation and number of personnel. Assessment of practices centered on energy, water, waste and purchasing policy for conservation and sustainability is the basis of green technology.

Sources of data

A researcher-made questionnaire was given to the owner, sewers and workers respondent’s of tailoring and dress shop. The responses of the respondents were tabulated, analyzed and statistical tool of weighted mean percentage used. The output of the study was used as proposed green technology practices for garments business.

Data gathering procedure

Green technology is knowledge for sustainable practices that will add up to longevity in business through method, standards and practices to guide apparel and clothing manufacturers, merchandisers and workers in adapting to environmental issues and practices in their work.

Conservation of natural resources is vital in the impact of globalization. Climate change is damaging the environment through the emission of factories and businesses that uses different kinds of natural and man-made resources. Customer product and its waste have an impact on the ecosystem. The garment industry is the second of the most polluted industry after oil. The process of cutting, layout, sewing of garments and packaging involves resources such as water and energy. Fibers, threads and papers that are excess in the production are considered as wastes and if not properly managed will add up to the landfill sites, which is filling up rapidly every day.

The world of fashion is glamorous and stylish but its impact on the environment is alarming. A study conducted on the impact of textiles and clothing industry on environment found out that the chemicals used for bleach and color textiles can damage the environment and people’s health due to toxicity in the ingredients both for color and bleach. The old clothes that are thrown away and waste of garments factory also add to the bulk of wastes (Challa, 2014).

In addition, suppliers and owners were challenged to minimize energy consumption for better production and sales. This study is to assess the practices of the small-scale and home-based garment business to help them sustain and minimize the labor and material cost and increase sales and production.

The method involves gathering, recording, analysis and interpretation of practices. The findings of the study will be used as a guide in the small-scale garment businesses for their green technology practices. Additional input of green technology practices will also be applied in the extension program of CTU College of Technology dressmaking and tailoring short courses.

Questionnaires were given and retrieved from the identified respondents, data were tallied and statistically treated using simple percentage computation to determine the profile of the small-scale garment business and weighted mean to determine the degree of technology practices carried out.

RESULTS AND DISCUSSION

The study made use of descriptive survey method of research. The instrument in data gathering was research-made-questionnaire that assessed the conservation practices of water, energy, waste and purchasing policy. The profile of the small-scale garment industry in terms of production of garments, capital, number of years in operation and number of personnel include the sewers and other important workers. Garments produced were for men and women offering services for custom-made garments. In capital cost 50,000 to 250,000 were used mainly for the tools and equipment for it offers custom-made service for
garments and costing of material is not involved in the capital. The years of operation showed length of 10 to 15 years; this indicate that the fact that garment business can withstand time for clothing is more than just basic needs but a way of life through fashion and self-expression.

Green technology refers to the application of advanced systems and services to a wide variety of industry sectors in order to improve sustainability and efficiency. Its goal is to conserve natural resources, eliminate waste but not undermining the quality through services or production of any kind. Garment production is one of the large population of long and tedious production starting from the growing of plants for fiber making down to the assembling of clothes. Through this reason garment factories should practice resources conservation for a more business sustainability.

Energy consumption in the production was marked as slightly practiced using CFL bulbs, checking of electric wirings, utilization and arrangement of furniture to get the maximum light utilization, regular maintenance of wirings and sewing equipment marked as not practiced. Resulting into slightly practiced, it shows that garment shop businesses did not have a proper conservation on energy utilization. It is also evident that wirings were not regularly checked, monitoring of meters is not also checked and proper use of lights is not practiced. This states that energy utilization in the small-scale garment business needs to change the practices so that energy can be saved and correct utilization achieved.

As the saying goes water is life and like life wasted fresh water cannot be replaced. Though fresh water is a limited resource everyone should know how to save or minimize the consumption of fresh water. Indeed, our planet is covered with water but most of it is salty and cannot be consumed unless it will undergo desalination. This study considers the water consumption of the workers and production of small-scale garment business in Metro Cebu. As to the extent of water conservation practices, findings showed that green technology was not practiced, the use of water saving devices, labels of direction for turning off and on the faucets was not practiced. Also, water plumbing and piping maintenance and replacing of defective faucets etc was not practiced. The practice of saving anything is through proper maintenance and awareness but in this area of water conservation small-scale garment business in Metro Cebu evidently was not practiced and green technology practices never met.

Waste disposal is the prevailing problem of our society and to the whole world. Clothing industry is marked as one of the most wastage of material during production. Proper management of waste can totally add to sustainability and maximum profit. In the production of garments extra and remnants of cloth during cutting are considered waste, excess threads, pattern papers, printed documents, tableware’s and other form of wastage which can add up to the pollution in general. Reducing waste can improve efficiency and reduce production cost. It can make the operation of the garments industry more competitive and help in protecting the environment.

Proper segregation, repairing of tools and equipment instead replacing, refillable and rechargeable not disposable, selling or remnants, paperless billing and reused paper were practiced. The green practices of waste was followed and practiced by the garment industry. Majority of the businesses practiced the technology and 75% of it was achieved. This method of technology revealed practiced scheme. This means that waste management was practiced evidently in the small-scale garment business in Metro Cebu.

Another important aspect in garment production is purchasing. It is the department in clothing production that overspending happened, deciding on when and what to buy plays a great role in the business. Buying of unnecessary materials and supplies and procuring equipment without considering the energy consumption is one of the mistakes the business can make.

In the garment business in Metro Cebu, purchasing policy had a weighted mean of 2.15 with a verbal description of slightly practiced, this means that purchasing policy is not well established in terms of buying materials and supplies. Buying of eco-friendly made materials should be incorporate in every aspect. Through this way business sustainability can develop and conservation of energy can be achieved, thus, green technology practices can be applied through services and production of every sector in the industry.

Green technology practices if applied properly in the policy of purchasing can attribute to business sustainability. Noise of the sewing equipment will decrease and lower energy consumption through the use of low-cost sewing machine and equipment is achieved, while excess material and reject will be regulated through regular inventory. Disposables materials, toxic cleaning agents will stop. Purchasing policy is slightly practiced in the small scale garment business in Metro Cebu. No method was used for inventory of stacks system for achieving zero rejects, but the practice on using recycled materials, environmental agents and giving consideration on energy consumption for newly purchased equipment was slightly practiced.

As a result the study of green technology practices has an over-all verbal description of slightly practiced. Energy and water wasted in the production are considered gone and can never be replaced. The trash left out during production will remain waste and can add up to the minefield of trash.

Conclusion

Based on the findings, green technology practices were not properly observed in the small scale garment industries and water conservation is not practiced. The performance of small scale industry in Cebu is not green technology practices of small-scale garment businesses in Metro Cebu
and this may be improved through proper awareness of the advantages of practicing green technology methods and technology skills on green practices scheme. Therefore, green technology practices ought to be promoted in the Barangays and be included in extension programs of CTU.

REFERENCES


Cite this article as:
Submit your manuscript at http://www.academiapublishing.org/ajer