Chapter in Book

Patchy Matchy Bag: Eco-Fashion For a Sustainable World

Zatul Himmah Abdul Karim[1,*], Zuhairah Hasan[2], Nurul Ain Mustakim[3], Muna Kameelah Sauid[4], Noorzalyla Mokhtar[5], Zarina Begum Ebrahim[6], and Nur Hazwani Mohamad Roseli[7].

1 UiTM Cawangan Melaka, Kampus Bandaraya Melaka
2 UiTM Cawangan Melaka, Kampus Bandaraya Melaka
3 UiTM Cawangan Melaka, Kampus Bandaraya Melaka
4 UiTM Cawangan Melaka, Kampus Bandaraya Melaka
5 UiTM Cawangan Melaka, Kampus Bandaraya Melaka
6 UiTM Cawangan Melaka, Kampus Bandaraya Melaka
7 UiTM Cawangan Melaka, Kampus Bandaraya Melaka
* Correspondence; zatul446@uitm.edu.my

Abstract: *Recycling has many benefits, which can be characterized by the three pillars of sustainability, namely the environment, the social, and the economic. Reusing materials instead of extracting and creating new ones not only saves energy but also prevents the production of toxic chemicals and greenhouse gases. Recycling encourages the development of eco-friendly practices and boosts its commitment. Our award-winning product called "Re-bag" is a product created from broken hardcover files which are then transformed into an attractive and functional tote bag, weaving creativity into the creation. The desire to progressively be innovative has also led us to expand our ideas in designing bags using old scarf and shawls. We up-cycle the old scarves and shawls to be transformed into functional women's bags. In the meantime, with the aim of recycling global resources and reducing waste, our group is gradually reviewing used materials to be transformed into useful products. The new version of our creation is called Patchy Matchy Bag, a limited-edition women's bag with its great details to embody the wearer's character. Although our effort might be considered as little steps, it is nonetheless navigating towards the bright side as it reconstructs our recycling behavior and attitudes. We very much hope that our actions will raise awareness in our communities, in which they can see us materialize the benefits of recycling the environment as well as the economy at different scales, both locally and globally.*

Keywors:

1. INTRODUCTION

Educating people on recycling will encourage people to act towards improving life and protecting the environment by using materials that would otherwise be considered as waste as raw materials. Essential benefits of recycling education to society and the environment will increase public awareness on how to collect, sort and process substances that can be used as raw materials ensures that the materials do not become waste and ultimately destroy the environment.

Universities may serve as a testing ground for formulating new ways to address those problems. Universities possess certain characteristics that are similar to those of the public Kelly et al., (2006). Kaplowitz et al., (2009) highlighted that universities often involve diverse populations engaging in activities with a considerable consumption of materials and energy in a large area; they argued, therefore, that universities could be considered as communities that significantly influence wider society. Noeke (2000) suggested that the environmental friendliness of a university leads to a positive societal image.

Reducing solid waste is one of the key strategies to develop a "green" and sustainable university campus (Smyth et al., 2010). Kelly et al. (2006) debated that successful recycling programmes demand both technology and the involvement of people; it is important to develop and maintain pro-environmental behaviour.

2. METHOD & MATERIAL

The purpose of this article is to raise awareness among all educators, students, and office workers about the necessity of recycling to reduce waste creation. This initiative resulted in the creation of our product, the 'Patchy Matchy' bag, which was created by transforming an old scarf and shawl into a fashionable designed bag.

In this study, the design-based research model proposed by Ma and Harmon (2009) was adopted as the framework and methodology because it gave a clear description of the processes of developing the product (Figure 1).

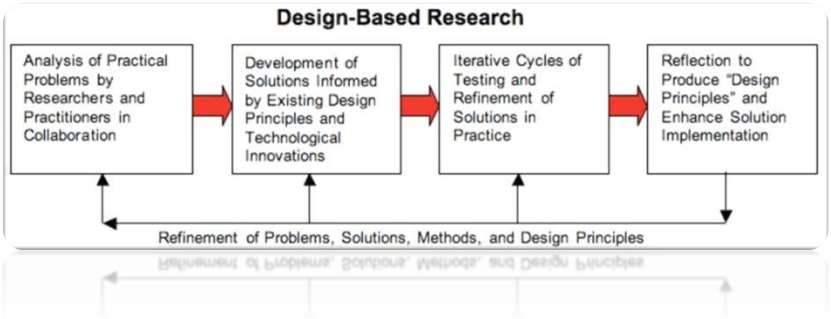

Figure 1: Reeves's Model

In accordance with Reeves's model, the first phase consisted of the "analysis of practical difficulties" during this phase, a procedure for the practical recycling of an old scarf was determined, and the relevant literature regarding the practical concepts of recycling and do-it-yourself was reviewed. A survey was conducted in order to obtain response from the intended audience.

In this study, a set of questionnaires was developed using Google Forms and distributed to students from UiTM Cawangan Melaka through WhatsApp groups. This instrument was employed because it was simple to reach the respondents and the application performed the analysis automatically. The questionnaires included questions about how they perceived recycling the old scarf.

The second phase was "solution development" for the practical problem identified in the first phase, which included envisioning a solution within a theoretical framework, determining the research aim and development process, and constructing a prototype to meet the research challenge. In the second phase, an interesting design of a bag made from an old scarf and shawl was created and designed specifically to meet the theoretical framework's main research problems.

The third phase involved evaluating and testing solutions on the job. Since the solution in this study was to create feminine bags from unneeded old scarves or shawls, conducting research was a vital element of the process. Therefore, appropriate research studies with respect to the needs and requirements of the stakeholders were conducted (all individuals with old or unused scarves). Furthermore, in order to create a prototype that meets the study objective, the researchers created a few Patchy Matchy bags from their own old and unused scarves and shawl.

This study was also influenced by the design-based action research methodology proposed by Keskin and Kuzu (2015), in which phase 3 is an iterative cycle as opposed to a linear procedure. During this phase, issues with the prototype are identified and action plans are devised. During the time of execution, these plans are implemented, and the action's repercussions are evaluated and represented by requesting that other parties utilize the bags in their daily routine operations. In this instance a woman seems attending a wedding showing her glamourous clutch bag, while a midwife uses another bag to carry her equipment when she visits customers' homes for routine checks.

The final phase was "documentation and reflection," in which design concepts were established and published to provide assistance for any individuals interested in making their own bag from scarves and shawls.

3. FINDINGS

3.1 Results Phase 1

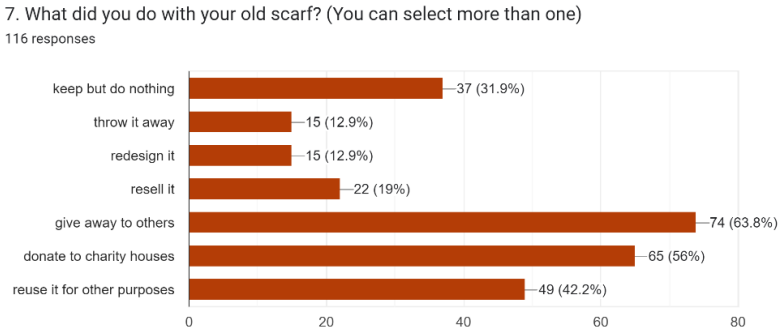

Figure 2: What did they do with old scarf.

Figure 2 shows the percentage of what the respondent did with their old scarf. This graph shows majority of the respondents (63.8%) give away their old scarf, followed by donating their old scarf (56%), and 37% keep them without doing anything.

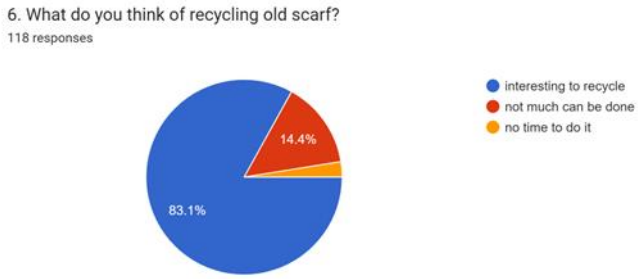

Figure 3: What they think of recycling old scarf

Figure 3 shows the percentage of respondents' opinions on recycling old scarf. This chart depicts that majority of them is interested to recycle them (83.1%). While 14.4% believe that there's not much that they can do with the old scarf and the remaining claimed they do not have time to recycle them.

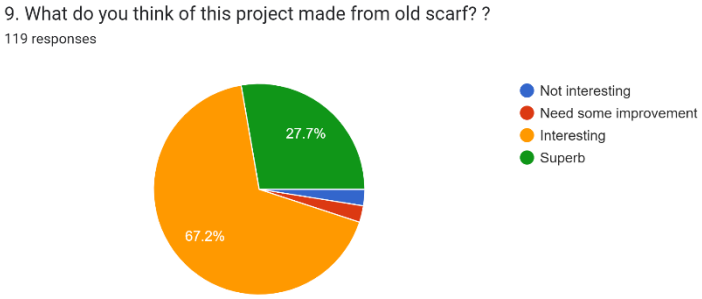

Figure 4: What they think of the product

This pie chart (Figure 4) shows the percentage of respondents' opinions on Patchy Matchy project. Majority of the students (67.2%) find it an interesting project. 27.7% of them think that the project is 'Superb'. Only 2.5% of them find the project is not interesting and needs some improvement.

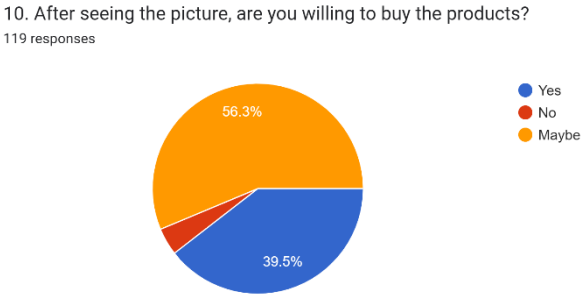

Figure 5: Interest to purchase the product

Figure 5 shows the percentage of respondents' willingness to purchase the product. Majority of the respondent claimed that they probably might be interested to buy the bag and 39.5% of them are willing to buy the bag. Only 4.2% have no intention to buy the bag.

3.2 Results Phase 2

Figure 6: Product development process

The product design process begins by collecting of old or unused scarves and shawls from personal storage. Any design, colour or width of the scarves is acceptable. Next, the design of the bag is sketched on paper, paying attention both to its value and texture and how the bag can be used to the fullest. The design is an important aspect as it can enhance the looked and usability of the bag. Any design of bag can be applied such as a purse, shoulder bag, backpack, satchel, clutch etc.

The third step involves the processing of the raw materials (scarves or shawls) by cutting and stitching them according to the design. Here, the bag is neatly sewn, to produce the finest quality of bag. The process involves pulling the tread through that stitch and moving the needle across to the other side of the fabric repeatedly to the end. Once the stitching process is completed, a decorative or magnetic button for safety is installed as finishing.

3.3 Results Phase 3

Figure 7: Several design of patchy matchy bags

After the second phase was complete, the researchers made a few Patchy Matchy bags out of their own worn scarves and shawls and used the bags to store their findings. In this phase, it was necessary to evaluate and test potential solutions to guarantee that the final product will be of a high enough standard. The process of analysing and testing this product has been carried out on two separate occasions. As a preliminary test, we will attempt to match the colours of the scarves.

3.4 Results Phase 4

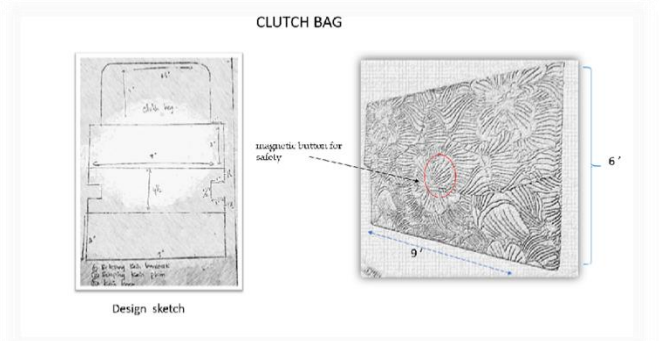

Figure 8: Documentation

Finally, the design concepts were created and published in a term of a sketch document as to help anyone interested in making their own bag out of scarves and shawls.

4. DISCUSSION

The findings of the survey indicated that the majority of respondents which consists of university students tend to give away their old scarf assuming that most of them are not aware that they can be used to produce other useful products such as daily usable bags. They have no idea how to reuse the old scarf. Surprisingly, the survey participants agree that they are interested in the idea of recycling the old scarf and also agree that the sample bag depicted in the survey form is very interesting. It can be assumed that the respondents might be blown away by the idea of turning the unused items in their closets into something that was unimaginable to them previously. Surprisingly, most of the respondents showed interest to purchase the bag if it is made for the commercial. They were mesmerized by the design and unbelievable that an old scarf can be recycled into a wonderful women's bag.

Moreover, the findings of this survey showed that the majority of university students basically have the intention to do recycling activities. However, they need more exposure and encouragement for them to be more creative. As noted by Kochan et al. (2015) in their findings that awareness of consequences is significant to affect students' intention to perform e-waste recycling on campus. Further, most of the students usually are not aware of the campus's recycling infrastructure, which may have contributed to their view that it wasn't convenient. So, there is a need to make recycling easier by giving students more ways to recycle on campus and, as the current study suggested, by making people more aware of the opportunities to recycle.

5. CONCLUSION

The aim of the study is to reuse old scarf into meaningful products and create awareness among students regarding the benefits of recycling. The main findings of the study represent that most of the respondents have no idea of what to do with unwanted materials, especially old scarf. Therefore, the researcher identified the problem and came up with innovative solutions which are supporting the government agenda which is focusing on SDG 12 (responsible consumption and production) including targets focused on environmentally sound management of all waste through prevention, reduction, recycling and reuse. The researcher reused the old scarf and transform it into a fashionable women's bag known as the Patchy Matchy bag. Surprisingly the idea was well supported by the respondents of the study and it was eye-opening for them to be involved in recycling activities. They were very much interested in the product and show their support in buying the product. Thus, the researcher suggests improving recycling activities by providing more waste recycling training to reuse the used product sachets into wallets and bags, and mentoring the community is necessary, especially among students. Later, these products can be promoted through various social media channels for commercialization purposes which in turn can provide additional income to the students and other communities. This initiative will support SDGs goal 8 which is to promote inclusive and sustainable economic growth, employment and decent work for all.

Besides, the findings also clearly show that most university students have the intention to recycle and it will increase if they are provided with exposure and encouragement from respected parties. It is because most students point out, they are unaware of the campus recycling program and campus recycling infrastructure. This contributes to a less innovative culture, especially in recycling among university students. Thus, the findings of the present study have several implications for the development of recycling activities among students. Therefore, universities may provide more facilities and space for students in involving in recycling activities. Additionally, the university in Malaysia should emphasize how recyclables should be handled, where students can find recycling facilities, and

what can be recycled. Moreover, creating a recycling education program could result in a positive change in university students' conceptual comprehension of ecological concepts related to the matter of recycling. Furthermore, the government, especially the Department of Environment, should organize more campaigns to promote 3R activities to create awareness of recycling. It can become an endeavour to change people's unfavourable views against recycling while also fostering the community's positive attitude toward recycling and promoting a sustainable world.

References

Kochan, C.G., Pourreza, S., Tran, H. and Prvbutok, V.R. (2015), "Determinants and logistics of e-waste

recycling", The International Journal of LogisticsManagement, Vol. 27No. 1, pp. 52-70.

Reeves, T., & McKenney, S. (2015). Design-based research. In the Sage encyclopedia of educational technology (pp. 189-191). SAGE Publications Inc.

Rosman, M. R. M., Arshad, I. H., Md Saleh, M. S., Abdullah, N., Fadzil, F. H., & Zawawi, M. Z. M. (2021). User Behavioral Intention to Use Online Distance Learning (ODL): The Role of Self-Efficacy and Domain Knowledge. International Journal of Interactive Mobile Technologies, 15(18), 4-15.

Rosman, M. R. M., Ismail, M. N., & Masrek, M. N. (2021). Investigating the predictors of digital library engagement: a structured literature analysis. Pakistan Journal of Information Management and Libraries, 22, 60-82.

Rosman, M. R. M., Rosli, N. N. I. N., Razlan, N. M., Shukry, A. I. M., Alimin, N. A., & Baharuddin, N. S. (2022). Modelling Referencing Competency and Individual Performance. International Journal of Information Science and Management (IJISM), 20(1), 407-426.

Saleh, M. S., Rosman, M. R. M., & Nani, N. K. (2013). Bank selection criteria in a customers' perspective. Journal of Business and Management, 7(6), 15-20.