

# REDESIGN OF GARMENTS IN GENERAL EDUCATION: A PATH TO REDUCED CONSUMPTION

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## ABSTRACT

Mass consumption in Western societies poses a great threat to the global climate. How do we change attitudes towards mass consumption so that the next generation does not inherit an unfortunate consumer pattern? How do we make reuse, redesign and mending 'cool'? If young people are to choose redesign or mending as opposed to buying new clothes, they have to acquire a proper set of skills for making simple alterations to garments. A central question is whether sewing skills can promote a sustainable consumer culture. If so, what kinds of skills should be focused on in general design education at the lower secondary level? Youngsters' motivation to learn sewing skills is essential. Young people tend to be interested in learning how to sew and are eager to use the sewing machine, but they find themselves restricted by their inability to take these basic skills to the next level. A possible strategy is to introduce them to a small variety of textile manipulations, in addition to basic training in sewing [1]. In such a strategy, simplicity is the key. By mastering small textile manipulations on garments, it is possible to make youngsters adopt a sustainable way of thinking. Such small textile manipulations promote mending and redesign and encourage decorative, functional and environmentally friendly values. In this paper, we give examples of such simple textile manipulations and discuss these in relation to the redesign of garments in general education.

*Keywords: General education, redesign, honeycomb smocking, reduced consumption.*

## 1 INTRODUCTION

To redesign a garment can be a simple act of renewing the appearance of an item, but it can also be a way of making a statement in order to give the garment further value and an expanded lifespan. The general part of the Norwegian National Curriculum (K06) for general education (ages 6–16), which includes all subjects, emphasises in the *Environmentally aware human being* section that students should acquire knowledge of changes in society and their consequences. They should gain a global perspective and acknowledge the consequences of an exaggerated use of resources [2].

The Norwegian core subject Art and Crafts (A&C) has an emphasis on designing artefacts and is a natural arena for the development of young people's environmental awareness. From early levels of education in A&C, students are supposed to make their own objects and see coherence between materials, craft and sustainability. Teachers in A&C therefore have a huge opportunity to bring sustainable perspectives to their students. In every aspect of life, we surround ourselves with things from the day we are born, and it is important to question how things work and why we have them. Some of the artefacts we possess are things we simply *want*, based on appearance and trends, whereas other products are practical and necessary for us to get on with our lives. It is interesting to discuss these slightly grey areas between practical function and aesthetic function with respect to our ways of justifying ownership of the latest iPhone or a wardrobe with sixteen different coats. In 2016 the Norwegian newspaper *Aftenposten* launched a competition to crown the best Norwegian design from different periods. Not surprisingly, the Norwegian cheese grater was on the list. Its function and design have been approximately the same since its release in 1925 [3]. We do not need seven varieties of cheese grater; this does the job. Nevertheless, even the cheese grater has been redesigned through the years to satisfy consumers, including the feel of the shaft, the size of the slit and preferences in colour. In *The Anxiety of Nurturing (Angsten for oppdragelse)* [4], Foros and Vetlesen discuss how society has taken a turn from being focused on cooperation and community building towards a more individualistic, self-centred mentality. It is implied that in a more self-centered mentality lies

autonomy that claims the right to choose your own course and lifestyle. Of course, this is a person's privilege, but is it always wise from an environmental perspective? The conscious consumer needs to be trained; it is not given that all choices benefit the environment or other people. Therefore, teachers in general education have a responsibility to incorporate sustainable perspectives from early age so that students can grow into reflective citizens. The Norwegian National Curriculum (K06) emphasises such values [2]. The challenge is how to bring these ideas into educational practice in a way that connects to student's choices in their everyday lives. The practical design and redesign of garments can offer such a path towards an environmental consciousness.

## 2 CONSUMPTION AND DISPOSAL OF GARMENTS

With today's technology and our access to ICT and media, commercial agents have an easy job of targeting their audience. Commercials on social media can tailor their messages based on our Google searches, age and gender. It seems as if everywhere we look we are exposed to some kind of visual stimuli whose purpose is to make us want something more. 'Three for the price of two' is an effective trick to get consumers to buy more, perhaps without needing it. Consequently, we end up with more clothes than necessary. In 2011, approximately 113,000 tons of textile waste were registered in Norway alone, which is equivalent to 23 kilograms per inhabitant [4]. Even though much of the used textile is returned to recycling stations, a large amount of textile waste is sent to landfill to be burnt or stored. Fretex, which is one of the Norwegian organisations where you can dispose of your used clothes, states that every piece of garment can be returned as long as it has been cleaned. Some of the clothes then get sent to people in need, while much of it is recycled.

Some shops offer a discount on garments if you return a used one from home. Mobile phone operators have the same strategy. This can be a good initiative as the shop wants to reuse old objects. However, this still encourages the consumer to buy something else. This commercial strategy is often called greenwashing, pretending to be green while selling even more clothes or other items.

### 2.1 Waste hierarchy

The European Waste Hierarchy [6] aims to inform about and encourage more considerate ways of handling waste. The most desirable option is stated at the top of the reversed pyramid, and the options become less desirable as you reach the bottom. The most preferable option is, therefore, to prevent further unnecessary production and less shopping. The challenge here is that the impact of commercials and good offers does not correspond with the suggested hierarchy. In other words, there seems to be a conflict of interests.

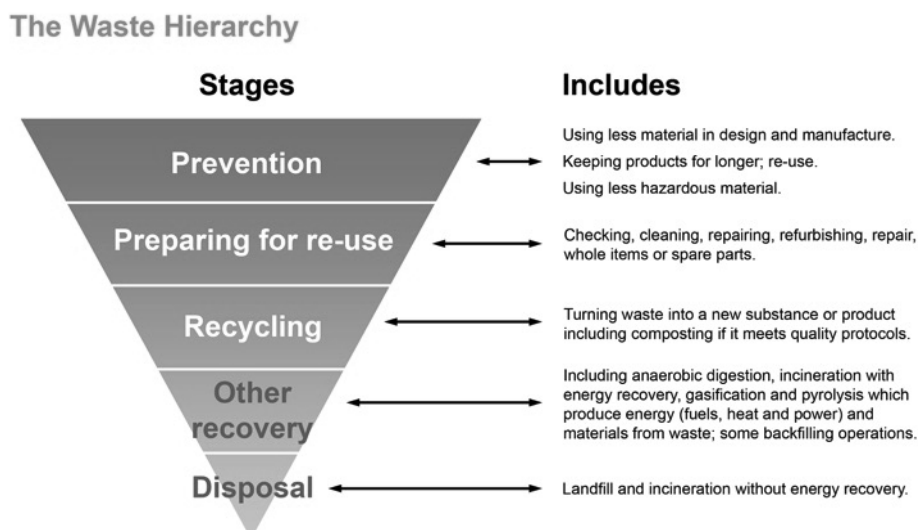


Figure 1. The Waste Hierarchy [6]

The next step in the waste hierarchy is to reuse and recycle. Waste is not a resource until you see its potential functions, together with examples that show you *how* to exploit this potential. If youngsters were to be offered tools and competences in mending and repairing, would they not use them? Working with the redesign of clothes is rewarding because of the possible roads you can see for new

designs and garments. It is possible to get more people/students motivated and interested in this way of thinking. The question is *how*? In the following some examples from Orheim's experimentation [1] will be presented.

### **3 REDESIGN OF GARMENTS IN GENERAL EDUCATION**

In lower secondary education in Norway, youngsters tend to like sewing and creating while using a sewing machine and they are eager to get started. What they are getting started on is not necessarily as important; as long as they have some fabric and a machine, things seem to come easy. Manuals and instructions for the basic use of the machine have been of great use. At a lower secondary school in Oslo, students make a pencil case with a zipper as their first assignment with sewing machine. Further work is more individual, with the students formulating their own ideas of what they can redesign and how.

Textile manipulations have been used to decorate fabrics throughout fashion history. We can see that textile manipulations are once again making a comeback. Both shirts and sweaters have smocked details, folds and other textures. This can be a possible gateway into redesigning in school. The teacher can show examples from fashion industry, explaining and demonstrating how these designs can be recreated by using different fabrics and a sewing machine. Students can bring a plain sweater from home and add new textures or manipulate the fabric with help from the teacher, thus exploring the many opportunities for redesigning clothes.

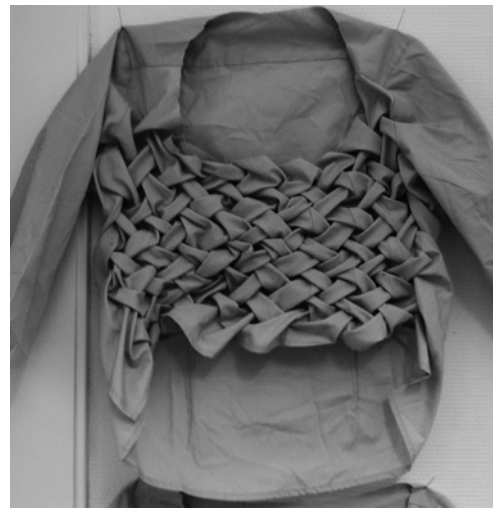
Teachers in A&C need to perform good and exciting examples of design in order to motivate youngsters to carry out redesign. Students might study inspirations from Pinterest or the concrete guidance and videos from the Norwegian style icon/blogger/redesigner Jenny Skavlan, as well as using their own designs and textile samples. In my experience, the students are immediately interested and engaged and eager to use the sewing machine. The main goal is that all the students should make alterations to the garment they brought from home in order to wear it themselves or give it to someone special. With this notion, the students take a more serious approach to the task and make something they really want, not just something they *have* to make. A challenge with redesign is motivating the students to produce a quality design. There is a slight chance that the garments may be *deconstructed* rather than *constructed*. In this case, when the fun ends, the results go into the trash, creating a conflict with the environmental purpose of reusing old clothes. To prevent this from happening, training the students in basic skills and how to apply these in context can prove to be important.

Honeycomb smocking is an example of a textile manipulation based on basic sewing skills. This technique has the ability to shrink fabric by sewing and gathering folds in a certain pattern. The honeycomb technique can be used as a way of fitting clothes that are too big. In Figure 2, the technique is used on a large men's shirt. The waist is made smaller by using honeycomb smocking. The folds are sewn and gathered with a sewing machine, which is a more convenient and quicker process for beginners than doing the smocking by hand. It is also possible to use the honeycomb technique as a purely decorative function, where it is applied as a detail to a boring garment to make it more exciting to wear, thus giving it further value and maybe an expanded life.



*Figure 2. Redesigned shirt with honeycomb smocking. [photo: Orheim]*

Students could be urged to explore and be creative when working with the sketches for what they will make in the sewing room. It is important to plan and visualise different outcomes for the garments. In addition to drawing, sketching using fabric and testing different techniques can help the visualising process. One of the methods is to create different shapes and expressions from the same base—in this case, a light blue shirt with a simple silhouette. This is to show the diversity and possibilities in just one garment and to pinpoint which qualities you wish to achieve. In Figure 2, the shrink effect gives the shirt an hourglass shape, while the honeycomb smocking makes the waist smaller. The quality is aesthetic and functional. Figure 3 shows an example of a cut-out technique where shapes are cut from the fabric and an open hole is sewn back together to create ridges and three-dimensional shapes. This piece is a lot more structural and perhaps more *avant-garde*, but it is exciting to see that a plain shirt can become exclusive.



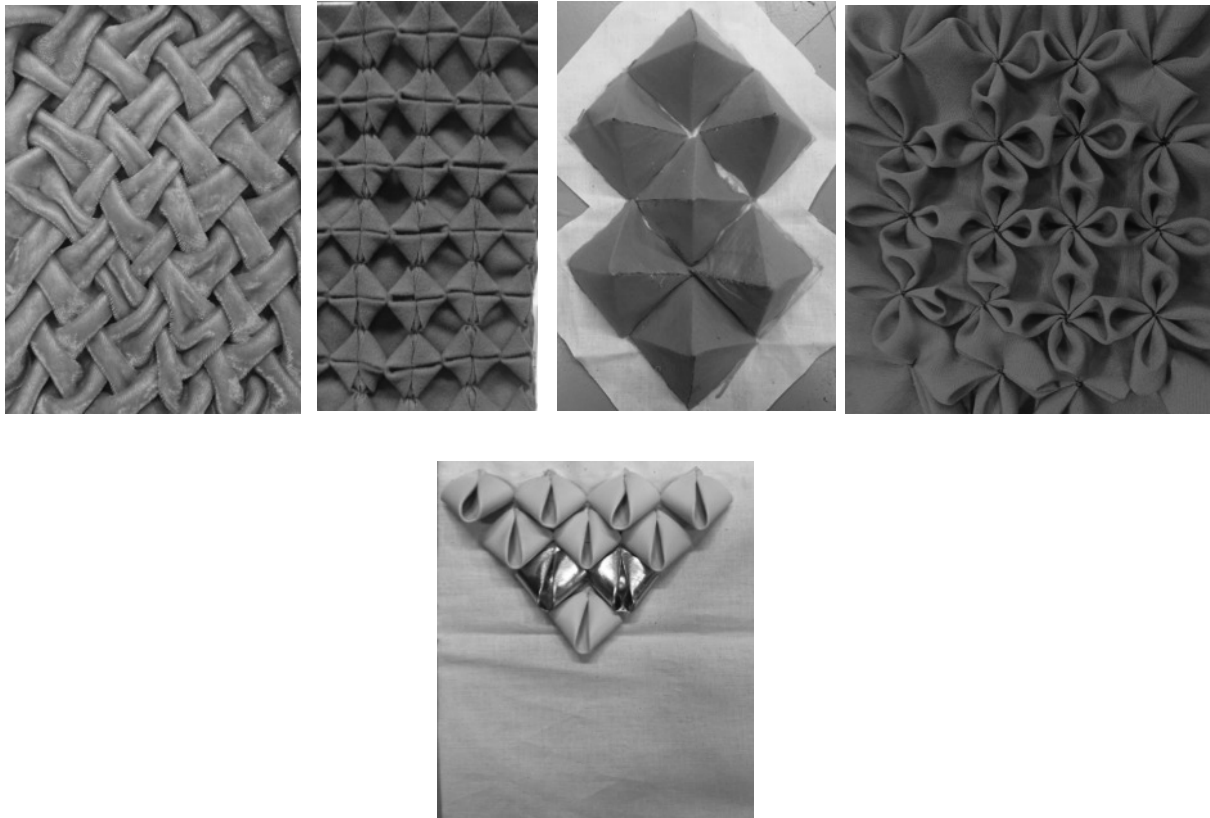
*Figure 3. Shirt with cut outs. [photo: Orheim]. Figure 4: Shirt with hand-sewn smocking. [photo: Orheim]*

Figure 4 shows an example of hand-sewn smocking that also causes a shrink effect and that changes the fabric's surface completely. This method requires an inserted fabric for attaining the original size and a fair amount of preparation in advance. The result looks complicated and advanced and could be a bit ambitious for a young student, but it is shown as an example of what is possible.



Figure 5. Redesigned shirt with origami-inspired décor. [photo: Orheim]

Figure 5 is an example of a paper technique, *origami*, adapted to a soft material, which conveys a new quality. It is the decorative, aesthetic quality of the technique, in addition to the geometric, systematic structure, that makes the surface dynamic and different. In the classroom, the shirts are a way to start idea development and give the students an idea of what is possible and how the base can be transformed through the application of various techniques. The students can see how these techniques change the fabric's shape and surface and how they affect the way the material behaves. By having the physical product in hand rather than just seeing pictures, the students can form an opinion on how the materials look and feel up-close. Getting this first-hand knowledge and experience of the different qualities can have a positive effect on the students' wanting to create something of their own.



Figures 6,7,8,9,10. Samples of different textile manipulations. [photo: Orheim]

Another way of introducing new techniques and experiences is to make textile samples available for the students to study. The samples form a register of different techniques, and this approach takes less time than applying the techniques to an entire garment. Figures 6 and 9 show variations of hand-sewn smocking and give different expressions depending on the materials. Figure 7 is a geometric structure based on pleats sewn by machine. Figures 8 and 10 show examples of textile manipulations that have been added to reconstruct the surface of the fabric. This could be an idea for garments that still fit but do not get used because they are too plain or have a stain that will not come off.

#### 4 THE VALUE OF REDESIGN FOR A SUSTAINABLE FUTURE

The various textile manipulations shown in the garments and textile samples can inspire youngsters to carry out redesign. We do not know whether the youngsters will *use* their redesigned garments. If they do use them, then the intention of using redesign as a tool for sustainable consumption has been achieved. However, if a garment is not used but is rather stored away and thrown out after some years, the expected educational outcome has not been achieved. This will be tested in a later project.

In order to make redesign an actual first choice, it has to be able to compete with commercial produced products in terms of appearance, quality and taste. To make redesign attractive and an option that youngsters will choose, it is crucial that the garment appears to be of *good quality*. Materials are important for determining an item's quality, and skills and knowledge are crucial for both the making and judgement of quality [8]. Hence, teachers will have to convey a knowledge of the materials by demonstrating and testing the different characteristics of and uses for the different materials. For this purpose, scheduled time is needed in education. Learning different approaches to sewing and altering garments is a possible way of encouraging the use of redesign as a preferred method opposed to buying new clothes all the time.

#### 5 SUMMING UP

With basic sewing skills using the sewing machine and plain needle and thread as a starting point, there are many different possibilities for transforming garments. In this paper we have suggested different sewing techniques to motivate further experimentation and creativity concerning materials. Textile waste poses a serious threat, but redesign could help to minimise the problem. To get there, general education will have to contribute to making reuse and redesign a desirable option for young people. They have to be shown the possibilities, and they have to acquire the necessary skills and knowledge.

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