

Project Tailor-made Written Report

Group ID: 10-29

Step 1: Identify Challenges

Challenge 1: Covid-19 Restrictions

Due to the coronavirus, some of the tailoring employees are forced to work from home. This is extremely inconvenient as people cannot go to their workplace to tailor the clothes, thus this will lower the rate of productivity. According to (<https://cleanclothes.org/news/2021/april-2021-covid-blog>), in Cambodia, where media reports that 14 COVID-19 positive patients have been found at the Star Master & Frank garment factory. A total of 232 Covid-19 positive patients have thus far been found at Star Master & Frank factory as of 26 April. Kong Sophoan, the governor, has closed the Star Master & Frank factory temporarily and has decided any factory with at least 5% of its workforce testing positive

Challenge 2: Commuting

Some employees' homes could be located very far away from their workplace, as such they find it very inconvenient to commute to work as there also might be traffic congestion. Therefore, they might be late for work and feel stressed.

According to (<https://www.stratodesk.com/five-benefits-of-not-commuting-to-work/>), Those who commute are much more likely to report being stressed. This is especially true for those who commute via car. Oddly enough, the unpredictability of traffic can be tied to massive spikes in stress levels when compared to the relative predictability of commuting by public transit.

Challenge 3: Trials and errors

When people tailor clothes, they might make errors that are irreversible such as needle thread breakage, Thread fusing when the machine stops and bobbin or looper thread breakage. This will ruin the clothing and material and may even need to restart the tailoring process.

According to (<https://www.sewsonatural.com/blog/2018/07/08/common-mistakes-in-sewing>) tailoring comes with a lot of mistakes that even the most experienced seamstress or tailor can't avoid once in their sewing lifetime.

Challenge 4: Most people do not understand how tailoring works

Most people feel that tailoring can fix any problem that they have with their clothes. However, tailoring cannot fix everything. A quote taken by (<https://www.simplyseptember.com/2017/04/12/how-i-taught-myself-to-sew-and-you-can-too/>) says that “ I have failed to start with the basics in sewing. I have been sewing for so long that I forget that sewing can be quite a foreign concept to many crafters”

Challenge 5: Job Strain

The tailoring industry is very stressful as the tailor when receiving an order would have to finish the project within a certain time frame. Hence, the tailor may feel stressed to meet the time frame and lose customers due to their lack of efficiency. That job stress can also lead to poor health conditions and even injury. According to

(<https://www.ijsr.net/archive/v4i8/SUB157254.pdf#:~:text=Tailors%20face%20many%20health%20related%20problems%20like%20Headache%2C,work%20continuously%20and%20take%20minimum%20breaks%20during%20work.>)

Tailoring is a kind of occupation which comes under the unorganized sector. A variety of factors contribute to workplace stress such as negative workload, isolation, extensive hours worked, toxic work environments, lack of autonomy, difficult relationships among co-workers and harassment and lack of opportunities or motivation to advancement in one's skill level.

Step 2: Craft the underlying problem

Underlying problem:

Given that the efficiency of the tailoring industry has decreased due to Covid-19(Condition Phrase), how might we increase their efficiency(Key-verb Phrase) so that they can leverage the full potential of technology during the pandemic and the future(FSP).

STEP 3. Produce Solution Ideas**Solution 1: Making sure that even when they work at home, they feel like they are at their workplace.**

People will have the “working mentality” when they work at their workplace. As some people are not able to go to their workplace to work, they feel distracted when they are working at home. Therefore, our prototype will allow tailors to feel like they are working at their workplace by making it look like their office, this will make them feel productive to be able to complete their work. This solves

Solution 2: Making sure the productivity rate of working from home is as productive as working at the workplace

If the productivity rate of working from home is the same as working at the workplace, they should be allowed to work from home more often and thus can skip out on the inconvenience of commuting to work, which will greatly reduce stress. In order to achieve this, our prototype has most of the equipment a tailor

needs to tailor their clothes. This will be no different than working at their workplace, as they are using roughly the same equipment to tailor the clothes.

Solution 3: Our prototype

Our prototype will help people (who are not able to go to their workplaces due to personal reasons/during the pandemic when people are unable to leave their homes) to work from home, It will be fast and efficient to tailor clothes, If the user make errors in the tailoring process he/she can always redo the project that they are working on. Even when the pandemic is over, people do not need to spend time

Solution 4: Making a timetable

Tailors spend a large amount of time in their shops working on a current project or even waiting for a new project to do. Hence, most tailors spend a large amount of their time in their shop which leads to high levels of stress . To prevent this, we could encourage tailors to make a timetable and have reasonable amounts of break times. The tailor would also be able to limit his workload and only limit his clients to a certain number of customers so as to not overload himself.

STEP 4a. Select Criteria

Criteria #1: Easy-to-use

The prototype must be easy to use for the tailors

Criteria #2: Sustainability

The prototype must be able to be maintained easily and benefit future tailors

Criteria #3: Cost

The prototype must be cost-efficient and affordable to tailoring companies

Criteria #4 Productivity

The prototype must increase the rate of productivity

Criteria #5 Quickly implemented

The prototype must be implemented fast

*The weighting for one important criterion may be doubled if necessary. 5 - best 0 - worst

Step 3 Sol'n #	Solution Idea	Criteria*					Total
		C1	C2	C3	C4	C5	
#1	Making sure that even when they work at home, they feel like they are at their workplace	4	1	3	4	2	14
#2	Our prototype	4	4	3	5	2	18
#3	Making sure the productivity rate of working from home is as productive as working at the workplace	4	1	4	5	2	16
#4	Making a timetable	5	3	4	1	4	17

STEP 5. Develop an Action Plan and Evaluate its Feasibility

We will advertise our prototype which is an inspiration on what the end product will look like and would give a brief idea of what the user expects to see when using the prototype. The user will be able to feel like he is at his own workplace So, it would be as if he is right there working. There would be his machinery such as a robotic arm that can be controlled by the controller. Next, there would also be another arm that can be used to cut fabric to make clothes. This arm is controlled by the second controller. The user will see a cloth hanger to hang clothes that have been done. Firstly, the client orders online by entering his measurements (eg. shoulder width). Next, the manufacturer will use the measurements and make the product After the product is complete, the manufacturer will send it to a delivery company which will deliver the product to the client. This would allow least contact within people and help during the COVID-19 period.

Sources/refs

- <https://www.ijsr.net/archive/v4i8/SUB157254.pdf#:~:text=Tailors%20face%20many%20health%20related%20problems%20like%20Headache%2C,work%20continuously%20and%20take%20minimum%20breaks%20during%20work>
- (<https://www.simplyseptember.com/2017/04/12/how-i-taught-myself-to-sew-and-you-can-too/>)

- <https://www.sewsonatural.com/blog/2018/07/08/common-mistakes-in-sewing>
- <https://www.stratodesk.com/five-benefits-of-not-commuting-to-work/>
- <https://cleanclothes.org/news/2021/april-2021-covid-blog>