A desirable desk for subdivided flats' children

Group 12 (We Love STEM!)

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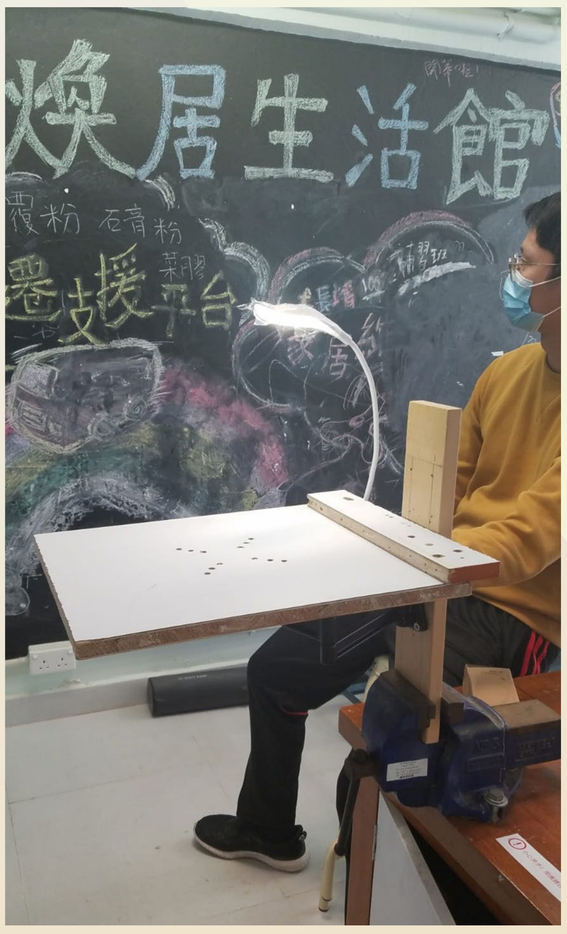
Project introduction

Since the children living in the subdivided flats need to revise on the bed or even on the floor, they may have problems with their spines and eyes. In this project, we mainly work with HKSKH Lady MacLehose Centre (Group & Community Work Unit) to improve the studying condition of the children living in the subdivided flats in Kwai Chung district. So, we have designed a foldable and adjustable desk with a foldable light for them.

Design rationale



Conclusion

As discussed previously, our group have been working to make some desks assembled on the beds, targeting at children who live in tiny living condition. We concern about the effect on the spine development of those kids who lack a table to do homework or revision at home. We understand that due to the limitation of the size of the housing unit, it would be convenient if we can add a table that can be folded and hidden when they are not required. Moreover, considering that the table may grow with the student, we specially make it as a height-adjustable table so that it fits the height of the user no matter how fast he/she may grow. Throughout our design process, thanks to the feedback given by the judges, we also take the weight, fire performance, other additional function, etc. into our consideration, enhancing the quality of our ultimate product.

Further suggestions

1. Take more time to undergo the field visit and discussion with the user before we start making the product
2. Use computer-aided design software and fast prototyping techniques before we finalize our design
3. Try to look at more other designs from books or online resources to see if there are more suitable design
4. Try to promote our project and negotiate with companies to get some more scholarship and professional advice

Limitation and difficulties

1. Great discrepancy in living environment of subdivided flats
   We originally planned to design a desk that suitable for most of the subdivided flats children. After visiting several subdivided flats, we discovered that there are great difference in the living environment. Most of the beds are wooden beds and bunk beds, our designed desk is more suitable to be installed in the wooden beds. Also, some residents are not willing to drill holes in their wooden beds.

2. Balance between the safety and the size of the desks
   Some residents express that they wish to have a bigger desks so their children can place their textbooks and homework and stationeries properly during revision. To ensure the safety of the desk, we tried to modify the design by adding tripods and wooden board. It would be better if more trials and tests can be performed to guarantee the safety issue of the desk.

3. Dangerous for children to construct their own desks
   We originally planned to organize a series of workshops and visit children to construct their own desks with us in the carpentry yard of community partner. As most subdivided flats children are primary school students, the construction process involve wood cutting and hole drilling with electric drill. Our team think that it is dangerous for children to get involve to the desk construction process, therefore, children will only be invited to participate in the desk design section.

Individual reflections

Connie :
Subdivided flats become more common in Hong Kong, children's health should be thrust into the limelight. I am glad that our team are trying to solve this problem by designing a foldable desk collaboratively. I deeply wish that children can learn healthily even in their tiny places.

Rita :
Thanks for the U-STEMist Scheme, I got a really good opportunity to perform my knowledge and training in the field of STEM. It was a super chance for sharpening my problem-solving skill and creativity. Also, the most important part of this project was to design a desk for children living in sub-divided house. I hope our design can really help the children and raise the public concern about their poor studying environment.

Manma :
Rising the social awareness of the social community is the key point of STEAM, I am so proud and glad that our programme product can satisfy this criteria of STEAM. I hope the community will concern the needs of those families living in the subdivided flats, and try our best to improve their living condition. Let's "Step out for the STEM"!

Harvey:
I think this program is meaningful to all of us, including we, the university students, the concerned families, as well as the audience who share and follow our progress and outcome. I do hope that we can continue with this project, and meanwhile promote this to more other community sectors to gather a bigger momentum. This experience is truly unforgettable to me as I think we really make use of what we have acquired and work as a team to make all this come true.

Log:
This is a very good chance for me to know more about STEAM. During the event, I learn more about subdivided flats and needs of them. The opportunity to experience is precious. The Stem-related skills I learnt from U-Stemist workshops is useful for the entire event. I feel so lucky to have myself joined the program.

Johnny:
I am grateful that I have a chance to participate in this STEM program. And it teaches me one thing. Many people are living in a tiny place and they have a urgent need to upgrade their living qualities. That's why we need to lend them a helping hand. And I hope we can raise people awareness to deal with this problem.