

**FUTURE TRENDS 2021 PROJECT WORK**

**GROUP 10-15**

**WRITTEN REPORT**

**EFFECTS OF TECHNOLOGY ON  
POST-PANDEMIC EDUCATION**

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## Cat 10 Future Trends Group 10-15 Written Report

### **1. The Post - Pandemic world**

The current pandemic has greatly changed and affected what we do on a daily basis. Many things, especially in the major industries, namely the workforce, retailers, manufacturers, transactions, healthcare, tourism and education, have changed drastically.

### **2. Our Main Audience**

We have decided to focus on education, as it is currently one of the hottest topics around, and we are the ones that have firsthand experience and knowledge in this field; we would easily be able to gather information and research. With technology ever-changing and playing an increasingly important role in our education, we made our choice to further our exploration in this strato.

### **3. Potential Problems**

We did research on 2 case studies in Singapore and the US, evaluating the pros, cons and implications of technology in education for each country. We also teamed up with Ms Cherry Chen, who is the founder of Future Envision, a learning consultancy agency, to find out about the effect of technology on education.

Survey respondents: 83

Our survey results and conclusions: Out of most of the survey respondents, most were students and most were also lower secondary students. Most of them felt that there will be blended learning, with slightly more leaning towards having more classroom learning than online learning. These figures shows that there is a trend leaning towards the incorporation of online learning in everyday learning, which justifies our point of using technology on education

The survey also showed that most of the respondents found issues in class as class is boring and not always suitable for most of the respondents, as well as learning something that they already learnt and not being able to ask questions, as well as in online lessons, most were distracted and restless, while some of them found that they were unable to ask their teachers for help when they faced difficulties. In conclusion, most students enjoyed the current regime of having blended learning with more classroom learning with a class ratio of 1:20.

Here is a list of some potential problems which we have discovered:

1. Educators are distanced from the child and their parents due to the reduction in physical interaction, hence the student may struggle to understand what is being taught with the lack of explanation and clarification.
2. Students could easily be distracted; this could hinder the learning of students, as they are not putting in their full effort.
3. Some students' homes may not have the right environment (could be extremely noisy) and services (such as internet connection or enough devices to be shared amongst multiple children) required for full online learning experiences; this ultimately leads to technical difficulties, unwanted distractions and other implications.

4. Students may unintentionally stumble upon online dangers such as pornography or other graphic material which may not only hinder the student's learning but also distort them mentally.
5. Students spending large amounts of time sitting in front of their computers would mean less time available for physical activities; prolonged periods spent this way is extremely unhealthy.
6. Students may also become addicted to certain online games or websites, resulting in unhealthy extended periods of time spent in front of the screen, which can be harmful to the student.

#### **4. Underlying Problem**

Given that the pandemic has accelerated the implementation of blended learning (a combination of classroom learning and online learning), some students might be distracted from online learning and feel disconnected from their classmates. How might we enhance blended learning for students so that they can adapt and learn better?

#### **5. Potential Solutions**

- 1.) According to the survey, most people prefer this option as the challenges faced during online learning outweigh the existing problems of classroom learning. However, there could also be a right mix of classroom and online learning. One solution would be that students are allowed to have online learning every two days. We could classify these days as a "Growth Day", and a "Consolidation Day". These two days would follow directly after one another. Teachers would teach the students what they need to learn on "Growth Day", and on the following day, which would be "Consolidation Day", teachers would post learning materials online for students to practice what they have learnt previously at home. With the introduction of Personal Learning Devices (PLDs), students should be able to complete their work without much difficulties or distractions. This allows students to first get an understanding of the topic clearly on "Growth Day", in school, and further clear their doubts and deepen their understanding on the next day, which would be "Consolidation Day". Following this "Consolidation Day" would be another "Growth Day", where students would return to school and their teachers could use this opportunity to help clarify misconceptions and give feedback to students on how they have performed previously on "Consolidation Day".
- 2.) Getting students to exercise at home is definitely feasible. Schools could require students to record and submit videos of themselves doing workouts at home on a weekly or even daily basis. There are also many free online applications which track one's fitness level. Schools could also opt to use these applications to help in monitoring the activity levels of their students. Schools could choose to punish students who fail to meet these requirements without valid reason, perhaps even get them to stay back in school during non-HBL days to catch up on their missing quota
- 3.) We can organise an event that only involves the High School Section. The event will last a whole year long. Students from each consortium will be running for territory (empty rooms or spaces) and the more territory a consortium gains the more they can gain.

Competitions can be held when competing for another consortium’s territory when a “judge” is present. Consortiums can only conquer territories which are next to one that is theirs, with the exception of other consortiums allowing them to pass through their territory and “occupy” territory there. Prizes will be awarded to the consortiums depending on how much territory they occupy at the end of the year, and the top consortium gets to keep 1 piece of territory, enabling them to get a head start the following year. This will increase bonding between consortium members.

## 6. Selection of Best Solution

	Easiest To Implement	Solves Most Problems	Most Realistic	Least Side-effects	Most In-Line With Current Directions	Total
Solution 1	3	4	4	3	5	19 (Highest Score)
Solution 2	4	1	4	5	4	18
Solution 3	2	2	2	2	2	10

Easiest To Implement : How feasible implementing such a plan would be (cost, speed, etc.).

Solves Most Problems : How well it can solve the problems we want to solve.

Most Realistic : Whether current technology/tools/funds makes this plan possible.

Least Side-effects : Whether this plan would cause any unwanted side-effects which could hinder students’ learning.

Most In-Line With Current Directions : Whether this plan can be added on to what schools are doing now without too much trouble or drastic changes which may result in unwanted turbulence which could hinder students’ learning.

## 7. Our Action Plan

Our action plan is to use solution 1, the solution with the highest score. We plan to implement this regime. We think that this is the best solution as for Solution 1, students and teachers are able to utilise the advantageous features of both physical learning and online learning. Students would be attending physical lessons on Day 1, which would be the "Growth Day". On this day, teachers would focus on getting the main ideas of the topic they're teaching across to the students and making sure that the students understand to a degree where they would be able to continue on the second day.

On Day 2, which would be the "Consolidation Day", students would be learning by themselves at home at their own pace. This day would be focused around consolidating and further cementing the topics learnt on Day 1. Teachers may post assignments and learning materials on platforms such as SLS. SLS has released a package which would teach students how to most effectively use it, and students also have PLDs, which would ensure their learning is safe and undistracted.

On Day 3, it would essentially be back to Day 1, which would again be "Growth Day". On this day, the teacher would give feedback and clarify doubts regarding the topic previously taught. The teacher would then move on to teaching a new topic and the cycle continues. This solution utilises the advantageous features of both physical learning and online learning. Teachers are able to get the important points across clearly without much issue (main feature of physical learning) during physical lessons on Day 1, and students are able to learn at their own pace (main feature of online learning) by accessing the online materials and assignments posted by teachers on Day 2.

## 8. Evaluate the Action Plan

Proposing our solutions to Ms Cherry Chen (feedback and conclusions): Ms Cherry Chen feels that solutions 1 and 2 can be achieved while 3 may not be that feasible. However, she also expresses concern that solution 1, while seemingly promising, may not work out well in the long run as it depends on the student's self control even with PLDs and that two days are too much time that is taken up for one day of lesson. Consolidation of content learnt should not take up one whole day as that will waste too much time. A way to solve this problem would be to allow the teacher to choose when it is suitable for the students to take the "consolidation day" or the "growth day" for themselves. For example, when the teacher has finished the topic or the things that she has planned. Another solution that could be possible is to put both these days into 1 day in order to make things more efficient and time to be spent more wisely. Or another alternative way is to make the "growth day" a personal day for the student to be documented and sent to the form teacher to check on the student and appropriately help the student in any way the student needs.

- ❑ <https://news.harvard.edu/gazette/story/2020/11/our-post-pandemic-world-and-whats-like-y-to-hang-round/>  
Alvin Powell, Harvard Staff Writer, November 24, 2020
- ❑ <https://www.weforum.org/agenda/2020/04/10-technology-trends-coronavirus-covid19-pa>

ndemic-robotics-telehealth/

Yan Xiao, Digital Trade, World Economic Forum, Ziyang Fan Head of Digital Trade,  
World Economic Forum LLC, 27 April 2020

- ❑ <https://www.nationalgeographic.com/magazine/article/how-our-post-pandemic-world-will-be-different-feature>

Daniel Stone, 13 October 2020

- ❑ <https://www.nature.com/articles/d41586-020-03649-8>

Josie Glausiusz, 5 January 2021

- ❑ <https://e27.co/the-changing-face-of-healthcare-in-a-post-pandemic-world-20200824/>

Qing Ping Lee Lim, 25 August 2020

- ❑ <https://www.aon.com/unitedkingdom/insights/retail-reshapes-for-the-post-pandemic-shopper.jsp>

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<https://www.youtube.com/watch?v=7jQiPD9VX08>