



การสื่อสารที่ชาญฉลาด : การส่งเสริมความรู้ด้านสุขภาพจิต
Smart Communications: Boosting Mental Health Literacy

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บทคัดย่อ

แนวทางการเว้นระยะห่างทางสังคมเป็นมาตรการป้องกันการแพร่ระบาดของโรคโควิด 19 ที่จำเป็น ในขณะเดียวกัน ทำให้ผู้คนเหงาและโดดเดี่ยว โดยเฉพาะอย่างยิ่งวัยหนุ่มสาวที่มีความเปราะบาง จิตแพทย์ระบุภาวะเครียดของนักศึกษาที่มาพร้อมกับโควิด 19 อย่างไรก็ตาม การพูดคุยถึงปัญหาสุขภาพจิตยังเป็นเรื่องต้องห้ามในหมู่นักศึกษา และยังไม่เป็นที่ยอมรับ การวิจัยนี้มีจุดประสงค์เพื่อศึกษาความคิดและมุมมองของนักศึกษาต่อแอปพลิเคชันบนโทรศัพท์มือถือ (StudyBird) ในการขยายประสบการณ์การเรียนรู้ภายใต้มาตรการการเว้นระยะห่างทางสังคม แนวคิดของ StudyBird มีความคล้ายคลึงกับแอปพลิเคชันบริการเรียกรถโดยสาร โดยแอปพลิเคชันนี้จะสุ่มนักเรียน (รวมถึงนักเรียนต่างชาติ) ที่ว่างให้มาพบกัน เพื่อทำกิจกรรมทางสังคม เล่นกีฬา ทำกิจกรรมการเรียนรู้ร่วมกัน หลังจากที่นักเรียนแชร์ตำแหน่งที่ตั้งและกิจกรรมที่ตนเลือกแล้ว ระบบจะจับคู่คนที่อยู่ใกล้กันที่สุด และมีกิจกรรมที่คล้ายกันให้อัดโดยอัตโนมัติ แอปพลิเคชันนี้สนับสนุนและเปิดโอกาสให้นักเรียนที่มีความหลากหลายทางวัฒนธรรมได้พบปะและมีปฏิสัมพันธ์กัน ผลสรุปเบื้องต้นจาก 3 กลุ่มทดลอง (n=29) แสดงผลตอบรับเชิงบวกของผู้ใช้ โดยเฉพาะเรื่องการขยายเครือข่ายสังคมในสภาพแวดล้อมที่ไว้วางใจ คือ ในบริเวณมหาวิทยาลัย ในส่วนของการจับคู่กิจกรรมของผู้ใช้แอปพลิเคชันและเสถียรภาพของตัวแอปพลิเคชันยังต้องมีการปรับปรุงแก้ไข

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Abstract

The prevalent public health measures against the spread of the COVID-19 disease like social distancing guidelines are necessary but they can make us feel isolated and lonely. Young people are even more vulnerable. Medical professionals have acknowledged the existence of COVID-induced stress and its insidious creep into the fabric of student life. Sadly, open discussions on mental health issues are often viewed as a form of weakness, if not a taboo, among students. This project aims to describe university students' thoughts and perceptions of the mobile app (StudyBird) to enhance their learning experience under the social-distancing mandates and beyond. The concept of StudyBird is similar to a taxi-hiring app that connects randomly available students (both local and international students) to perform their shared social/sports/learning activities together. Once students shared their locations and activities, the system will automatically match the closest students with similar shared activities together. Our app promotes and allows students from diverse cultural backgrounds to meet and mingle with one another. The preliminary results from the three test groups (n=29) indicated positive user feedback, especially about enlarging their social networks in their trusted environment, i.e. our campus. Activity matching in the app and the stability of our app are yet to improve.

Keywords: smart communications, mental health literacy, boosting

Introduction

A recent survey led by Lingnan University (2020) shows that nearly 60% of our local university students have found online learning not so effective as face-to-face learning during the COVID-19 pandemic and about 45% said they were affected by the lack of “after-class communication and engagement with instructors and students.” In Lai-Reeve’s (2021) mini-survey, conducted at HKUST in the Spring term of 2021, the results (n=46) also indicated similar sentiments as shown in Lingnan University's study. According to Lai-Reeve (2021), over 50% of her students found themselves “limping a little” when being asked about their communications with their classmates outside the classroom or in the Zoom room. Given the current socio-economic conditions, we have strong reasons to believe this current batch of university students in Hong Kong needs more guidance and support than ever before. We can never underestimate the trauma our students have experienced in the past two years.

In such a time like this, when one city after the other is hard-hit by yet again another new (currently known as the fifth) wave of the COVID-19 variants, we all should and could do a little more to be supportive of the people, especially to our students around us. The World Health Organization (Brunier, 2020; Bu et al., 2020; O’Connor et al., 2021) have repeatedly issued warnings against the COVID-induced mental health crisis, with the youth and the elderly being identified as some of the most vulnerable groups (Daoust, 2020; Heidinger & Richter, 2020; World Health Statistics, 2021). Recent research investigates supportive interventions to reduce loneliness during the COVID lockdowns and concludes that increasing social support may be the optimal initial target to reduce the impact of COVID-19 regulations on mental health outcomes (Groarke et al., 2020). In close combat with the COVID pandemic, physical resilience alone is not enough. Fighting against COVID is an all-hands-on-deck venture. We need advice and support from both health scientists and social scientists. We need all the help we can get to fight this invisible war against the virus both physically and mentally. No community can afford to stay divided in times of a global crisis like this persistent pandemic. Mental resilience is just as important if not more important than our physical resilience to be our first line of defense against the virus as “there is no health without mental health” (World Health

Organization, 2018). Mental health literacy equips our community to be supportive of those who suffer from various degrees of mental disorders/stress. Supportive social connections/ communications can boost mental resilience. We can never underestimate the ripple effects of such prosocial behavior (Aknin et al., 2018; Alvis et al., 2020; Nelson et al., 2016) in rebuilding our community after the traumatic experience of the pandemic.

The objective of this project is to re-socialize students through a collaborative mobile app (StudyBird) to boost mental health literacy and to enhance peer support networks on campus using a social and learning mobile app to facilitate and regain the learning momentum during the pandemic and also to mitigate the mental stress generated during the COVID-19 pandemic. From Lai-Reeve's (2021) observations, one of the most common mental blocks among her students was recognizing and confronting a kind of insidious creeping malaise or the general lack of motivation during the full lockdowns.

Methodology

A small-scale descriptive study was carried out on July 2 and July 5 respectively in 2021. The feasibility trial used mixed methods to evaluate the stress awareness, acceptability of our social cum learning mobile app, and perceived effectiveness of the mobile app. Data included participant survey (n = 29) and focused group interviews (n = 8) from 3 test groups in all four schools (Humanities, Business, Engineering, and Science) at our university. All the participants were asked to download the app and used the app to fulfill different learning tasks during the 3 trials. The different lines of evidence converged to highlight mixed reactions to the awareness of stress with online learning, the high level of acceptability of our mobile app, and gains in participants' perceived effectiveness of our mobile app.

From the survey results, 41% of the participants considered it easy to download the app but 45% of them found it difficult to navigate through the app to achieve their learning tasks. Besides the survey, there were also two focus group interviews. Four male and four female students were recruited from different majors at our university with an emphasis on Year 1 and Year 2 (particularly affected by the class suspension and the pandemic). The profiles of the interviewees are as follows:

The following seven questions were asked to understand their experience in learning and socializing during the pandemic as well as their perception of the prospect of having our app to help cope with the demands of their social and academic life:

1. How has online learning affected your campus life, both socially and academically (positively or negatively)?
2. Do you know how many different learning facilities are on campus? How many learning facilities have you visited in the past?
3. Would you like to make new friends (e.g. same Year of study or same disciplines) while visiting all these learning facilities together? Why?
4. Would you feel comfortable broadcasting your learning tasks of a language course (e.g. library workshops, group discussions/presentations) to gather new or old friends to visit and learn at different learning sites together?
5. What could be the possible benefits of using such a mobile app?
6. What could be your major concerns in using such a mobile app?

If there is a social + learning mobile app (StudyBird) which connects you with other students (your known & unknown UST fellow students) to complete different location-specific learning tasks

(like Pokemon Go), would you be interested? How interested would you be in participating, on a scale of 5, (1: lowest and 5: the highest)? Any additional thoughts or elaborations?

Prototype of the social and learning platform (StudyBird)

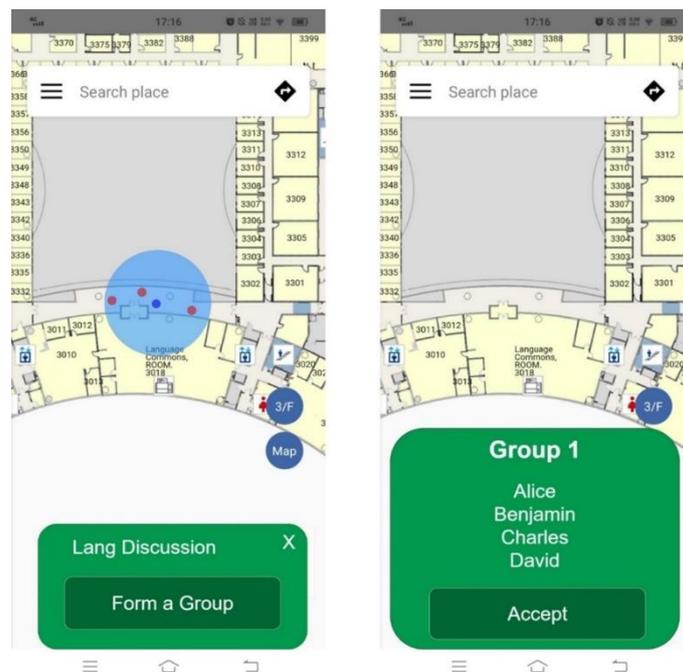
This collaborative project (Center for Language Education and Department of Computer Science and Engineering) provides a social plus language learning mobile platform with Location Sensing Technologies supported by the Department of Computer Science and Engineering at HKUST. The prototype contains 4 key modules:

Location sensing

StudyBird, with a user-friendly user interface, is similar to a typical outdoor map app consisting of HKUST campus maps. With our state-of-the-art indoor localization technology by utilizing different kinds of signals such as WiFi, iBeacon, and geomagnetic, an accurate indoor and outdoor real-time position of the app user can be shown on the maps. By enabling the locations of app users, the StudyBird platform is geared to help connect nearby students to perform different kinds of tasks together. The core technology of StudyBird could also be embedded into any other apps, such as the HKUST student app, in the form of a Software Development Kit (SDK). Figure 1 depicts the main screen of the StudyBird app.

Figure 1

A main screen of the StudyBird app – forming a group with nearby students.



In addition to the mobile app, a Content Management System (CMS), as shown in Figure 2, manages the progress of the HKUST students on the StudyBird platform. Lecturers/Teaching staff can establish different tasks for students through the CMS control interfaces. A dashboard of the CMS shows credits or bonus points earned by students, as illustrated in Figure 3. The bonus points can be calculated in terms of feedback from groupmates, as indicated in Figure 4, and usage time in-app. We may also synchronize information through Application Programming Interface (API) to the central students' record system of HKUST.

Figure 2

CMS of StudyBird platform – establish tasks at specific locations

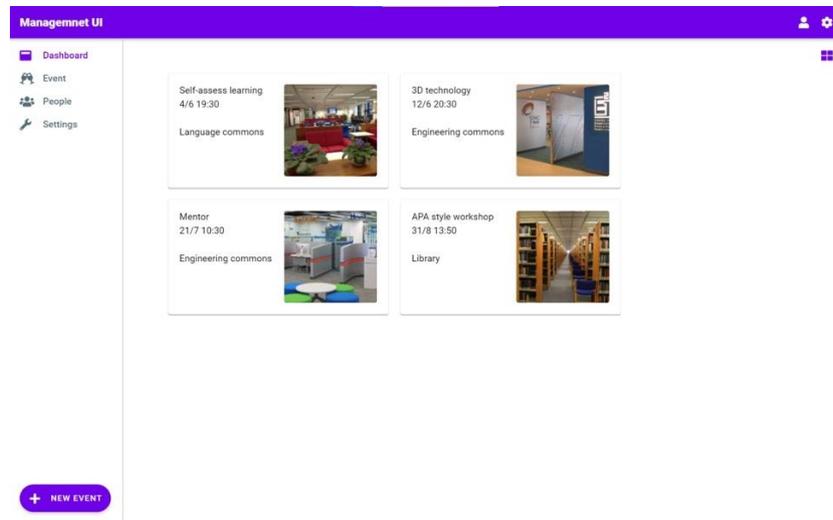


Figure 3

A dashboard shows scores of students

The screenshot shows the Management UI dashboard with a purple header and a sidebar menu containing Dashboard, Event, People, and Settings. The main area displays a table of student scores:

Group ID	Student Name	Duration	Score
57816	Chan Tai Man	1 h	2014
57816	So Ka Wei	1 h 49 min	2019
57816	Tom	4 h 43 min	2020
57816	Wong Ka Chun	5 h 32 min	555
66798	Poon Zi Fung	3 h 20 min	201
66798	Tsui Wing Ho	3 h 45 min	11
66798	Leung Tin Kei	...	...
66798	Cheung La Ching	...	...
87941	Wong Chi Fung	...	...
87941	David Yau	...	...
87941	Tom	...	...
87941	Suci	...	...

A '+ NEW EVENT' button is located at the bottom left of the dashboard.

Figure 4

User feedback from other groupmates

The screenshot shows a mobile application interface for a peer evaluation form. At the top, there is a purple header with the text 'Peer Evaluation'. Below the header is a dropdown menu currently showing 'Student A'. The form contains three numbered questions, each followed by a star-rating system (five stars, with the first four filled and the fifth empty):

1. My partner made a lot of good suggestions.
2. My partner was on task for the majority of time we worked together.
3. My partner was open to my suggestions.

Below the questions is a text input field labeled '4. Comment:' with the placeholder text 'Input here.'. At the bottom right of the form is a blue 'Submit' button. The mobile status bar at the top shows the time as 14:02 and various icons for signal, Wi-Fi, and battery.

Enabling social interactions

StudyBird platform is to gather and connect nearby students to perform tasks together. When there are group projects and discussion tasks, the app users can switch on the app and find out potential groupmates within his/her proximity, i.e. 10 to the 50-meter radius of his/her current location. This location-matching function gathers students in a flash and students can make friends easily. Students can also make their location visible to friends so that they can easily find each other around the university campus.

Location engagement

There are many interesting hotspots on campus. Freshmen or even alumni may not know all of them. To increase the sense of belonging, some orientation tasks/grouping can be established (through the app or the CMS) in some specific hotspots. Students can check in or play a simple orientation game at that specific location to earn bonus points.

Data Analytics

Data Analytics is performed continuously by applying machine learning technology to gather data on the backend. With a proper quantity of location data, check-in information, and user feedback, the StudyBird platform can predict their progress in their learning tasks, suggest learning schedules, and provide critical information to align with teaching materials to teachers and university administrators.

Results

At the time of the focus group interviews, a prototype of the app was still in its testing state. As such, the responses collected mainly reflect the students' perceptions of how the app could benefit them based on the conceptual framework of the StudyBird app to its potential to their needs.

The results from interviewees gave us a better understanding of users' perceptions and helped our research team to refine the applications of our app.

(I) General Reflection on the impact of the pandemic:

a) Impact on academic life

Most interviewees had quite a balanced view of the pros and cons of the impact of this unusual context on their academic life. On the one hand, they thought the online mode had facilitated their learning in many ways. Course materials such as files and videos were much more organized, while the lecture recordings accorded them a more flexible and efficient learning environment where they no longer had to commute for the classes and additionally could review or catch up on the lessons as they wished. By doing this, they became more independent learners and less reliant on others.

On the other hand, they had also expressed their frustration in reaching out to class members who were reduced to just a name and a face on camera (sometimes even with the camera off during Zoom lessons). If any members did not participate in the breakout room discussion or did not respond to WhatsApp or other instant messaging tools when proceeding with a group project, there was very little one could do. In cases where the group members were scattered across different time zones, it was particularly difficult for them to call a meeting and follow up on matters arising from it with some members appearing not as involved as they would be expected to be in a face-to-face environment.

In general, the lack of or difficulty in human interaction was a main concern voiced by many interviewees. In their observations, though some seemed less inhibited and more willing to ask questions (not necessarily high-quality ones) with their camera off because of the privacy accorded by Zoom, they found it difficult to ask their professors/teachers questions over Zoom; nor could they resort to other means to communicate with most of their peers apart from the limited Zoom interaction which could be further restricted if the instant chat function was disabled by the professors. They also pointed out the irony of how the online environment had enabled them to meet a greater variety of people including many international students, and yet many did not have the opportunity in real life to make the acquaintance of the groupmates they had worked with.

b) Impact on social life

The interviewees had an almost unanimous perception of the negative impact brought by the pandemic on their social life. They believe online learning had hindered students especially Year-One students from making new friends. To many of them, face-to-face communication was a much better form of communication than online/Zoom interaction in the belief that a strong bond was best built through physical activities such as dining out or having fun with friends. The impact from the pandemic seemed to have affected Year-One students the most as they were unable to get closer to those they only met over Zoom and they found it difficult to build connections with people they had not had the chance to meet face to face. It appeared particularly difficult for students who did not see themselves as outgoing to make new friends unless they put in a lot of extra effort through social media.

At the time of these interviews, quite a few Year-One students did not have much chance to set foot on campus due to the pandemic and did not know many people on campus. One Year-Two student observed while the online environment had provided her with a stronger sense of safety and she felt more comfortable sharing her secrets with her friends over cyberspace, she started to miss the good old times to develop human connections through eating together and going to movies in the pre-pandemic era. It is interesting to note nonetheless that a Year-4 student believed the pandemic impact had been

minimal on his social life as his network of friends had already been formed and thus it made little difference whether meeting them over Zoom or face to face.

(II) Specific support from StudyBird App to enhance campus life

a) Impact on the Use of campus facilities

To understand if the app could potentially help students more fully use the campus' learning and leisure facilities, a few learning sites were randomly brought up in the interviews and it became evident that many students had either not heard of or visited those learning sites given the restricted access to campus during the social movement in 2019 and the subsequent pandemic. This shows there is a pressing need for them to explore these facilities with our support.

Many Year-One students cited not being able to go back to campus for face-to-face lessons as one of the main reasons why they did not know much about learning and leisure facilities. The most mentioned places that they did know were the learning commons for different schools and the library. While the library and the computer barns seemed to be the main common places for many to meet and exchange ideas with others, it also raised the question of how they could fully relax and socialize in places where they had to keep their voice down. Indeed, apart from the atrium and the concourse tables, they did not seem to have known or had been to other leisure places where they could just sit down, study or relax without having to be on the lookout for the time constraint on their reservations.

It is not a surprise to learn that canteens and cafés were preferred by many interviewees to meet their friends before going to classes as they found the library and the learning commons too stressful. Some even preferred to have small picnics outside the canteens while others also liked the idea of socialising in the open areas outside their dormitories.

The interviews show that out of the 30+ learning facilities available on campus, most students could only name 3 or 4 such places, leaving the good potential for other facilities to be explored. This finding also challenges a common assumption that most senior-year students would have known the facilities so they may not need our app as much as the newcomers. In any case, the majority of interviewees believed students would be better able to use the university's facilities effectively with others who share the same interests.

b) Interests in using the app for learning and socializing purposes

All interviewees had expressed their interest in using the app to expand their social circle and to learn from each other by exchanging views on a topic of study. Some thought our app was a timely device to counteract the growing trend of overusing social media and seeking instant gratification, believing that students lack thorough, serious, meaningful discussions about important matters that they were passionate about, fearing that such a trend might turn students into just texting and hiding behind an anonymous identity and living mainly virtually online. Others treasured the special opportunity provided by this app to be able to learn from each other, especially those from other disciplines and particularly in courses where students must do a project together. They thought the app can be very helpful for those with difficulty in finding groupmates or others to work on the same projects with, though they were not sure yet at this stage how the app could be equally effective for practice and regular-meeting purposes as well.

Other than working together, they also liked the flexibility of participating in the activities on their own. With the record-keeping function on the app, the majority of the interviewees liked the idea of keeping a track record of all the activities they had participated in (like the idea of using a Fitbit) to better

understand their own university experience even though some might not necessarily put such a record in their future CVs.

They believed the app could provide an opportunity for students to reconnect with each other, which would be valuable since they had already missed many opportunities to hang out with other students during the pandemic. In addition, the gamified element, if introduced, could make language a more interesting subject by arousing students' interest in taking part in language learning activities. One Year-One student, who was an active player of Pokemon Go mentioned his appreciation of the unique format of such a game that could motivate players to hunt for a specific 'strong' Pokemon and he would be happy to see such an element built into the app.

One Year-Two students observed that a good starting point for every connection or friendship lay in 'collision', a classic way of which would be two students sitting next to each other. Though some might feel awkward if those starting points were made mandatory, it is true that if they were the extension of academic courses, group bonding could be facilitated through a 'forced time together'. She believed the friendship formed at the university level was happening for two reasons: 1) for utilitarian purposes and 2) for sharing similar values. She was interested in using the app to connect people with similar future goals or visions such as creating start-ups or becoming entrepreneurs. She also strongly believed in grouping people based on shared concepts rather than their academic backgrounds and appreciated the idea of having a tool to put together those people for that purpose. In this sense, she found it a good idea to pre-group students, for example, in largely equal ratios for gender and ethnicity (for example, 2 females and 2 males in a group). She thought whether the friendship was sustained or not depended on individuals, but it would ease the "daunting feeling of knowing no one" especially for Year-One students.

Many others had expressed similar beliefs to the above student, thinking that making new friends while visiting all the learning facilities would be a great idea. They thought that sometimes they just found someone to hang out with, but where to go and what to do on campus would be a concern. This way of visiting learning facilities could help them exchange their knowledge and experience on certain subjects, and broaden their horizons while bringing them closer to each other.

Most of the interviewees had also observed how the app could help them finding a 'common language' once they could meet their friends at a location of common interest, for example, the KOL station. They thought the choice of the meeting location should be based on the commonality of interest rather than academic backgrounds. Others had also voiced the need for a central figure – a key opinion leader who was passionate about publicizing his or her interest to form a group and maintaining the activeness of the group.

Many also found their 'relationship' with the app more natural if they could find an acquaintance to try out the app in the first place. They preferred the idea of socializing in small groups or pairs. Many preferred the ideal group size to be around 3~5 so that users were less inhibited to join the activity and that the group leader could bring along some of his or her friends too while still meeting new people. They welcomed the flexibility of deciding on the group size as required by the occasion and stipulated by government regulations during the pandemic.

(III) Concerns and suggestions

a. Sustainability

One of the most pressing concerns for many of the interviewees was the format and content of the gamified element in such a mobile app. With free games available on the app store,

they felt they would only be interested in playing the more engaging and better-designed ones. If the gamified element in the app was not that sophisticated (perhaps just a simple game), they were concerned that it may not sustain students' interest over the long run.

As such, they suggested providing such incentives as coupons or gift points to students whenever they had achieved a higher level in the game. This could pull more students into using the app. In the long run, they thought a reward system should be in place to incentivize and keep the users using the app indefinitely. Other suggestions were similar to adding additional functions such as enabling the app to evaluate their performance in the activities.

Some students were concerned that while most new students might be interested in the app, it might be like a new trend like Pokémon Go which had been already gradually dying out. Some suggested that the app should be best promoted during the add-drop period of each semester, after which time its use might decline as students would increasingly be busy with their coursework. However, they also worried that once the students had become familiar with the facilities and formed their cliques, it might be difficult for the app to be widely used throughout their remaining university years.

At the time of the interviews, most universities still relied on Zoom for their classes. It came as little surprise that another concern raised by the students was that with the convenience of Zoom, they usually arranged their virtual meetings in the evenings when they were free from their other academic obligations or work, and thus the use of such an app for them to gather might seem counterintuitive unless the purpose of using it could be better tied to the facilities at the designated location. One similar concern for the sustainable use of the app was voiced by other students as they had been accustomed to using Zoom for three consecutive semesters, however, they did find the app attractive, especially for students who had not come back to the campus. Seven out of the eight students expressed a personal interest to use the app to explore the facilities, but they were not entirely confident if they could convince their groupmates to join them for such explorations.

b. Security and privacy

There seemed to be a dilemma when it came to using real identities for registration or not. On the one hand, the interviewees like the option of being able to adopt an alias or a username instead of a real name to ensure more privacy, claiming that if users were not allowed to use aliases, they would be too concerned about having to reveal their personal information to use the app. On the other hand, while they found such a university-built platform more trustworthy than other public platforms such as social media, they also believed that the administrators still needed the means to identify the perpetrators should there be any violation of the regulations. They were worried that if users did not have to register with their real names, it would be difficult to hold the perpetrators accountable in the case of misconduct. As a solution, they suggested restricting the information shown on the app to selected groups or authorized individuals only to lower the chance of having their particulars misused.

For this app to be user-friendly, they believed having an instant messaging function or a voice chat function would be helpful for people to get to know each other first before they decided to join or not. They thought it would be slightly awkward if a stranger just greeted and invited others to join a newly formed group. They also foresaw additional benefits in keeping the chat records after the activity ends for future reference.

Most of the interviewees believed in the benefits of providing and enforcing strict guidelines such as requiring users to meet in public places to avoid possible abuses. They had expressed concerns about disclosing personal information including their locations, but they also felt they might have

less of an issue with it once the use of the app was limited to the HKUST campus. While some interviewees mentioned the possibility of the app being abused as a 'dating app', others dismissed this concern by insisting that the app only became a dating app if one treated it so and that the nature of the app eventually depended on how one used it.

c. Target users

The interviewees envisioned most potential users might be non-locals while they perceived many locals as being too shy to be willing to use it. This concern, if further verified, would help the team to create features to reach out to more diverse groups when developing the app.

In response to the need for launching a reward or incentivizing scheme, they thought people living off the campus might not be interested but those on campus who were interested in it could potentially abuse the reward scheme. They also thought the reward scheme might attract extroverted students mainly. On the upside, they thought there was an intrinsic motivation for students studying the same courses or doing the same assignments to meet and exchange ideas to address similar questions or challenges. Many interviewees had reported using "Goop" – a popular local website for that purpose and thought the app could be an additional channel for them to seek advice and to bounce ideas off each other.

One interviewee mentioned the concern of how self-conscious an individual could hinder his/her interest in broadcasting his/her learning goals/tasks. The interviewee felt it would be embarrassing to broadcast an activity to others if he thought he was likely to mess up in the activity, for example, running out of words during a speaking activity. However, he felt if he was likely to perform well in a learning activity, he would not mind sharing the activity with other students.

d. More unique and enhanced features

Some interviewees found the existing social platforms/channels (e.g. through student associations and with their current friends) as ones where they already had most of their socializing and grouping needs fulfilled. This gave the project team new insights into what additional features the app could provide on top of the existing platforms/channels.

It has been suggested that before the app takes off, the project team could borrow ideas from such existing campus-bound apps as "USThing" by enlisting help from student associations or committees to spread the word as well as recruiting students to promote and maintain its use by broadcasting events through this platform. They thought the recruitment of student ambassadors or helpers could make the app more student-oriented, particularly during the 'soft-opening' period.

One Year-One student mentioned how the existing campus apps came with very distinct features and how he tended to use "USThing" to view his grades. As such, other interviewees also suggested our app should include different features and functions from those available on existing apps so that it might attract more students to use it. They asked if the app could be part of an endorsed application package that was approved and regulated by the university. They also suggested using referral codes or other reward schemes as a way to promote the app among the close circles of friends and further expand on the services it provided.

One Year-Two student expressed the idea of how she was very selective about whom she made friends with and that what she learned was more important than where she learned or with whom she learned, and thus she might not be interested in using such an app at this stage. She added that meeting people directly with this app even within the campus premise was not something she would be comfortable doing unless there was a chance to chat and get to know them first. This further underscored

the need to build an instant messaging function to the app to ease strangers into a more socially comfortable situation before all else.

A Year-One student echoed such sentiments by suggesting that while it could be a good idea to learn about the campus facilities, he would prefer to bond with people he already knew in some ways rather than with total strangers and was unsure if a location-sensing feature alone on the app would be as popular. This is a dilemma many interviewees had resonated with where they might find it intimidating to meet someone directly online; however, many also found the app useful in easing such tension by grouping people around facilities of common interests to get started with.

Many students also put forward the possibility of using the app as a ‘one-stop’ device to help the language center to combine the multiple services provided and optimize the registration procedure through multiple websites or webpages (e.g. making group appointments for the advising services) while helping the students locate other students with similar needs. It could be seen that, unlike a traditional website, the app could also be used as a platform to help teachers and students develop a closer relationship if it provided more convenient and instant services to both ends.

Conclusion

According to the World Happiness Report (Helliwell et al., 2012), the keys to happiness and mental wellness could involve: 1) being active, 2) being with others, and 3) being charitable. However, during the pandemic, most students are deprived of the above keys when they are restricted to living in social-distancing mode. With the platform of the StudyBird app and the services it provides, the obstacle to achieving happiness and boosting mental wellness can be removed or minimized by creating safe social bubbles. Based on the feedback from the interview subjects, getting connected with friends or classmates and learning together in a physical setting (e.g. social bubbles) or facility can help to regain a level of normalcy back into our campus life where peer or community support can be galvanized.

In the meantime, it has been consistently confirmed by neuroscientists (Basso & Suzuki, 2017) that acute exercise improves brain activities and can lead to a longer concentration span and a more focused mind. As a platform to facilitate such active exercises like exploring different learning facilities on campus, the potentials offered by our app seem immense in boosting the students’ ability to learn and live a more fulfilling campus life.

On top of its values in mental health and learning facilitation, one other significant benefit for students in using our app can be derived from how it has been designed to help students to step out of their comfort zones to get to know people in an increasingly diverse campus. Unlike in a more typical environment where students tend to gather based on their cultural and racial affinity, the app provides a good tool to connect people with the same interest regardless of their racial and ethnic backgrounds. This feature is potentially able to address the entrenched problems of segregation and the formation of cliques found on most campuses.

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