Sustainable Development Goal (SDG)# 3 – Wellness and Curriculum Design for Cyberbullying

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Background

The concepts of sustainable development (SD) have been highly debated subjects and are of great importance for the future, especially in the higher education sector where students are being prepared to face the world's impending challenges and where they are expected to develop themselves personally and professionally in a sustainable manner. Szitar (2014) argues that community development is related to sustainability which needs to have stakeholder collaboration, linking up changes with sustainability, and adopting interdisciplinary and multidisciplinary approaches in teaching. Pinho et al. (2015) also stated that university education not only enables professional growth, but also promotes *development on a personal level* (p. 162). Additionally, they highlighted that contextualisation is crucial in university education, including creating a variety of contexts for students to learn how to perceive the world, how to handle adverse situations, how to experience practical content, and how to create professional networks via extracurricular activities complementary to their studies.

In fact, Gedzune (2013), Gedzune and Gedzune (2012) and Pohl et al. (2010) also argue that teacher training and engagement through reflection, active research and co-production of sustainability-related research are needed to understand the importance of a broader and interrelated perspective on issues surrounding sustainable development for the future. As early as 2005, Kitagawa examined the role of universities in a knowledgeable society in light of the emergence of new research and learning systems, conditioned by forces of both globalisation and regionalisation with the impacts of these new relationships perceived in four principal dimensions: economy, human resources, governance and community.

Challenges in Educational Institute

Osborne (1999) has bought up that the content, the purpose, the organization, the values, and the standards of curriculum should be the centre of education. Hence, when designing the curriculum, the great interest of learners, of parents and of the community should be well considered in details. Educators should increase the exposure of its teaching staff in relation to making use of *quality concepts in curriculum design for learners to meet the changing needs of the society; and to develop a positive attitude of implementing QA mechanism*. This is particular crucial for supply chain management as this industry should evolve with the dynamics of a business as mentioned by Collin et al. (2009).

Under UN Sustainable Development Goal #3 wellness, the key elements for maintaining *good health holistically include health system, maternal/ newborn and child care and survival, mental health and ways to reduce the impact on natural disasters, complex emergencies and demographic shifts*.

Based on a recent study Niu et. Al. (2020) on cyberbullying and association with depression, the results indicated that: "(1) cyberbullying victimization was positively associated with depression through the mediating effect of psychological security and (2) both the direct association between cyberbullying victimization and depression and the indirect association through the mediating effect of psychological security were moderated by growth mindset. Specifically, growth mindset could significantly alleviate the adverse effects of cyberbullying victimization on psychological security and on depression. "
(Niu et. al. 2020, p.1)

In order to improve the wellness for adolescents, it is time to re-invent the key elements in curriculum (formal / informal learning format) related to cyberbullying, depression and self-management from a quality assurance perspective to prevent cyberbullying victimization to depression, targeting to focus on

SDG#3 wellness, mental health and preventive measures to reduce the levels of depression and the associated negative influences of cyberbullying / non-cyberbullying among adolescents.

SERVQUAL and Educational Services

Yeung (2010) quoted a study of Husain at el. (2009) about adopting SERVQUAL model to assess educational service delivery and students' satisfaction. The dimensions that he had adopted were:

1) Tangibles – physical facilities, equipments and appearance of personnel;
2) Reliability – consistency and reliability of the service performance;
3) Responsiveness – staff willingness to help customer and provide prompt service;
4) Assurance – knowledge and courtesy of employees and their ability to inspire trust and customer confidence;
5) Empathy – human factors in service performance, like caring and individual attention.

However, some doubted the effectiveness of SERVQUAL. Brown, Churchill, Peter (1993) cited the argument of Carman (1990) that SERVQUAL was designed as a generic measure that could be used in any service, it was necessary to customize when adopting in some specific services, for instance, making some changes on the wording of the aspects.

Principles and Development of TQM and ISO

Total Quality Management (TQM) concerns quality of product, quality of process, quality of work and quality of company. Top management should focus on customer-orientation, employee orientation, society and environmental orientation and cross-functional context when setting quality policy for management with the spirit of teamwork and learning capabilities of people.

Therefore, quality improvement should be interpreted in terms of reducing product or organizational defects, having high productivity, improving human relationship and leading the organization to success. In fact, quality improvement lies heavily on top management leadership and vision.

The matrix of House of Quality in Six Sigma can help reduce defects by finding out the major elements in designing curriculum from the eyes of stakeholders while aligning the requirements of ISO 9001: 2008 for improving curriculum to meet the needs of society. Hence, the author has integrated the idea of QFD – House of Quality in Six Sigma and ISO 9001: 2008 to analyse the relationship between voice of internal customer - curriculum design requirements and voice of external customers – the community for cybersecurity related programme improvement.

Integrating Six Sigma into Curriculum Design

As curriculum design activities are situational – based on the needs and wants, requirements and expectations of stakeholders, using systematic thinking for building inter-relationship of components in curriculum design is very important. Metcalfe (2006) mentioned that human behavior is very situational. Przekop (2006) mentioned that a fundamental driving principle behind Intuit's Six Sigma efforts is to incorporate three stakeholders into outcomes of improvement. The three key stakeholder groups are: students, teachers and community of carers, for example, parents, counsellors and social workers.

The Study – Stage 1 Quantitative Study

Based on SDG 4, Quality Education, it is expected that there is a need of qualified teachers and transformative ways of knowledge transfer under COVID-19. T*hrough conducting survey (from July to December, 2021) sponsored by Zonta Club of Hong Kong East on mutual concerned issues, for example, the present situation of cyberbullying and bullying on students aged 10 to 21), stakeholders, for example, students, teachers, parents, social workers, psychologists, IT security experts and policy making parties are expected to be engaged to realise the situation and to take preventive actions to tackle cyberbullying/ bullying cases on young people with on-going tailor-made training on cybersecurity to make behaviour*

change and improve the well-being of students.

Respondent Information – Total Number of Respondents, Gender and Age Groups

A survey on student cyberbullying was conducted in Hong Kong from July to December, 2021 by Zonta Club of Hong Kong East. There are a total 561 respondents (aged from 10 to above 21 years old studying from primary 3 to secondary 6) who did the survey, 244 (43.49%) of them were male and 317 (56.51%) were female. In this survey, we would like to see the different perspectives from students on cyberbullying and bullying issues with suggested solutions for implementation.

For the age group, 43.14% respondents aged 13-15 followed 40.46% aged 10-12 and only 1.07% aged under 10 years old. For grade level, 51.87% respondets studied Secondary1-Secondary2 followed by 30.48% studied in Secondary3-Secondary4 and only 5.7% studied at Primary3-Primary6.

Perception of Cyberbullying

More than 93.32% of respondents have heard cyberbullying. The top three areas (with multiple answers) have been rated by respondents are considered as cyberbullying:

1) When some students bully another student on the internet. (96.68%)
2) When you send unfriendly te messages or pics to another student. (87.08%)
3) When you call another student with inappropriate name online. (83.95%)

The lowest precentage (65.31) for the statement is: When you pretend to be another student online.

Chance Come Across Cyberbullying

For the statement of "Have you been cyber-bullied", the percentage of "Yes" is 16.67%, the percentge of "No" is 58.14%, and there are 25.19% said "No sure". This opens up a learning opportunity for primary and secondary students about the definition of cyberbullying and bullying through ongoing dialogue with teachers, parents, social workers and experts in cybersecurity, for example, relevant workshop on cyberbullying/ bullying cases to make students realise their rights and actions for self protection.

Reactions on being Cyberbullied

For the ways to get over cyberbullied experiences (multiple answers), the highest percentage (over 30%) for the top 3 statements are:

- Never respond (56.42%)

- Block offending users (39.91%)

- Screenshot the case to report (32.57%)

Frequency of Cyberbullying

For the frequency on the occurrence of cyberbullying, there is *40.45% responded that it happens all the time* and only 1.83% responded that it never happens. Moreover, there is *62.73% of respondents replied that cybullying is annoying.*

Hence, it is assumed the suggested structure curriculum and training on cyberbulling/ bullying with emotion sustainability and harmony in peer relationship have to be supported by the government with reference of good practices from not only Hong Kong, but also Asian countries to enhance the quality of futures of education and talent development.

Issues related to Cyberbullying

For other kinds of bullying besides cyberbullying, the followings are the top ranked examples (over 30%):

1) Called by friends by particular names to make fun (48.87)
2) Being insulted (47.42%)
3) No experience of other kinds of being bullied (30.93%)

Source of Help for Cyberbullying

For the solutions, similar to Q9) get over cyberbullied experiences (multiple answers), the highest percentage (over 30%) for the top 3 statements are of which students preferred to talk to parents in the situation of besides cyber-bullying :

1) Block offending users (58.19%)
2) Screenshot the case to report (57.35%)
3) Talk to parents (57.14%)

Can Schools and Family Manage Cyberbullying?

For cyberbullying experiences that respondents mentioned to parents/ teachers and the reasons of not telling **parents** are:

Lack of trust in parents (33.80%)

Parents don't understand the importance of being bullied (31.48%)

Family relationship is not good (20.83%)

Not telling **Teachers** are:

Lack of trust in teachers (43.81%)

Teachers don't pay much attention to students (30.48%)

Teacher-student relationship is not very good (22.86%)

Teachers don't understand the importance of being bullied (17.14%)

Based on the above findings, it is recommended to have training and workshop for parents and teachers on the ways to build and gain trust from students on cyberbullying and bullying. Trust and relationship building may be a regular discussion area in Parent-Teacher Association (PTA).

For the solutions to help parents/ teachers tackle bullying (multiple answers), the top 3 statements (30%+) are:

1) Social workers share solutions to successfully resolve bullying (55.34%)
2) Put 'bullying' issues in the curriculum (44.66%)
3) Holding a sharing session (33.98%)

Follow-up Actions - What else needs to be done?

Based on the survey results, the key suggestions mentioned by respondents are listed as below:

- Educate teachers how to be alert to students' emotional changes about the use of digital technologies (69.28%)
- Educate parents how to set privacy setting high (56.63%)
- Suggest government to adopt policies to protect children (54.02%)
- "Big sister"/ "Big brother" program to share good practice (41.97%)

Based on the above findings, it is time to design a structure curriculum and training to parents/ teachers/ students on the possible solutions to tackle cyberbullying and bullying through formal and informal education. And, stakeholders (e.g. social workers, family counsellors, emotion therapists, technology experts…etc.) who have expertise on handling these issues can be invited to share their experiences.

Cybersecurity Protection

Based on the survey results, literature has been reviewed for possible solutions to be implemented. The following proposed methods are worth to be considered with collaboration from cybersecurity experts, psychologists and social workers.

1) The identity of information provider needs to be protected without releasing any private information;
2) A platform with cyberbullying reporting and blocking functions are expected; and
3) A cyberbullying/ bullying awareness programme needs to be designed for students, teachers, parents, and social workers for self-protection so as to reduce undesirable physical, mental and emotional impacts, for example, loss of sleep, feeling upset and embarrassed, and losing interest in study or doing things that students are passionate.

The Zonta Club of Hong Kong East has sponsored a survey on cyberbully under the leadership of the President, Ms May Lam and Chair, Advocacy Committee, Ms. Margaret Leung. On Feb, 26, 2022, the club sponsored and organised a virtual cyberbullying seminar with survey results announced and solutions proposed. During the seminar, social cyberbullying issues and countermeasures have been discussed with

speakers from psychology, cybersecurity, NGOs and academic perspectives. The seminar has engaged over 40 participants from Hong Kong, Indonesia, Myanmar, and U.S.

The cyberbullying survey project is led by the author. She introduced the findings of a survey on the prevalence of cyberbullying among the youth. 531surveys have been collected from respondents about their perceptions, concerns and possible solutions to cyberbullying. The survey found that while only 16.67% of respondents confirmed that they had experienced cyberbullying online, 25.19% of respondents were unsure whether they had experienced cyberbullying, indicating that teenagers are relatively aware of cyberbullying. lower. Fortunately, most respondents knew how to deal with cyberbullying, and more than half already had useful measures to eliminate the practice.

Surprisingly, however, most teens refuse to ask their parents and teachers for help when they are insulted online. Lack of trust accounted for about 40% of the reasons, and about 30% of respondents felt teachers were not paying attention to their situation. Clearly, the relationship between adults and teens should be improved to prevent cyberbullying.

Dr Susanna Wong Ip, acting head of Gratia Christian College / one of the invited speakers for the seminar presented her findings on ways to combat cyberbullying from counselling and psychology perspectives. She mentioned that cyberbullying stands out among other bullying behaviors because bullies think they can get away with bullying. She went on to lay out 6 ways to fight cyberbullying: don't respond immediately as the bully wants you to respond to their insults, follow up on the case after calming down, take screenshots of the crime as evidence, stop checking posts frequently, report and block offensive users, and notify the police to seek guidance. These measures can effectively address cyberbullying without causing any mental and emotional harm to the victim.

Another invited speaker is the president of Rotary Club of HK Island East and expert from technology area – Mr. Bernard Lee, then pointed out that the emotional pain experienced by victims of cyberbullying is the same as the physical pain. He said adolescence is the time when most teens become frustrated with cyberbullying. However, this is also when most parents let go of listening. Therefore, it is crucial for parents to take care of their children during adolescence, as this is the last chance to alleviate the problem.

The last speaker who is an IT professional and served in JCI Ocean Chapter for many years - Mr. Alex Hong said cyberbullying has worsened during the COVID-19 pandemic, as staying at home exposes teens to a completely virtual world. While virtual reality learning experiences can foster their connection with friends, this on the other hand makes cyberbullying more common, spanning social media, online courses, gaming platforms, and more. Therefore, it is important for tech companies to have regulations against bullying.

Finally, the president of Global Minnesota - Mr. Mark Ritchie shared his thoughts on microaggressions - unintentional bullying such as nicknames and accidental humiliation. He believes that inadvertent insults can also cause harm to people who are mentally weak.

Positive comments have been received from participants, for example, a junior secondary school student from Hong Kong and a doctor from Myanmar:

"Personally, I obtained useful information about cyberbullying from this talk. Cyberbullying is definitely a pressing issue as it can mentally and emotionally damage users and have profound adverse effects on society. I learned how to recognize bullying that can come up anytime on the internet, how to stay calm and unaffected when insulted, and most importantly, how to stand firm against bullies. We should always be aware that the bully's intent is only to destroy our mindset, so we should never be bothered by their intimidation. Most importantly, we should design a structured curriculum for schools that educates bullies that the key to spiritual well-being is not to hurt someone's heart, but to help their friends and get them out of depression."

(A Secondary School Student from Hong Kong)

"Wonderful presentation! People at all age can be affected by cyberbullying. The new normal in the virtual world, we have to protect our next generation from the risk of cyberbullying attack by building/strengthening partnership at all levels, designing a policy to integrate the cyberbullying topic in regular school curriculum and creating an enabling environment by building capacity of parents/teachers. Wake our heart up to fight against cyberbullying!"

(Doctor from Myanmar)

Based on the quantitative survey analysis and comments from participants, the author has design a curriculum on cybersecurity and self-management with SERVQUAL Model. (see Fig. 1)

Fig. 1 A SERVQUAL Model for Cyberbullying and Self -Management Wellness Curriculum for Sustainable Development

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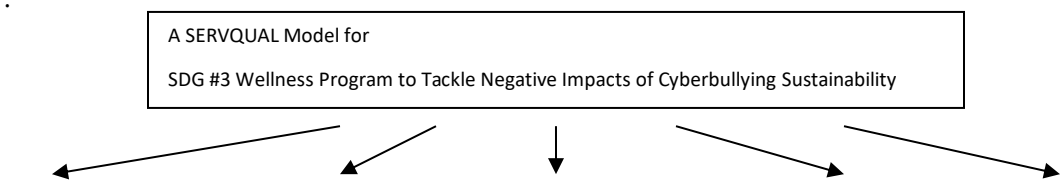

1) Reliability	2) Responsiveness	3) Assurance	4) Empathy	5) Tangible
Availability of technology, database and competent cybersecurity / counsellors/ psychologists/ social workers/ teachers/ parents/ NOG practitioners and policy-makers to provide ongoing training in use of technology to prevent cyberbullying/ non-cyberbullying / workplace bullying with policy to support	Curriculum design of cybersecurity and self-management training has to cover the following issues in response to the needs of the virtual world e.g., contemporary learning issues/ emotional awareness/ self-care techniques/ technology with growth mindset art related therapy to combat depression caused by cyberbullying	Operational and change strategies with performance indicators of conducted cybersecurity and self-management training to maximise positive outcomes and impacts for curriculum users and programme accreditation body	Understanding adolescents' needs, wants and requirements to facilitate learning and research For example, building trust with parents and teachers on cyberbullying related issues	Space usage, availability of facilities, training manuals/ materials, artefacts related to curriculum to reimagine cybersecurity and self-management related educational services

Conclusion

In this survey, we can see that there are different perspectives on cyberbullying/ bullying. For the proposed solutions, it is worthwhile for educators, parents, policy-makers and NGOs to consider as cyberbullying and bullying affect the wellbeing of students. It is expected to have ongoing dialogue and research on the impacts of technology in relation to the quality of relationship building among peers, the quality of family and teacher/ student relationship for emotion sustainability, trust-building, respect / harmony enhancement, and the quality of teaching and learning indirectly.

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