Project Title:
Promoting self-regulation and personalized online learning through supporting teachers, students, and parents (2020/0196 revised version)

Name of Organisation: Hong Kong Baptist University

Project Period: 9/2021-8/2023 (24 months)

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1. Needs Assessment

During the outbreak the Covid-19 epidemic, the online teaching and learning have become a necessity. The massive migration to online learning has posed great challenges for teachers, students, and parents. As we step into post-Covid era, there is a widespread perception that online teaching and learning will become a new normal (Dans, 2020). It then becomes imperative to better prepare teachers and students for online teaching and learning. In the preparation of the proposal, we had informal interview with teachers in participating schools to understand their needs.

Needs of teachers

As the traditional mode of education disrupted by Covid-19, teachers had to take responsibility in designing, developing, and implementing online instruction. Hodges and colleagues (2020) maintained that effective online learning requires careful instructional design and planning, yet in the situation of "emergency remote teaching", teachers are in lack of time, support, and capability for such design process. The teachers we talked to also shared the same problems. In particular, they felt a need for better engaging students in online learning environment. In other words, they need guidance and support in designing and implementing online teaching and learning to enhance students' online engagement.

Needs of students

Young students nowadays are digital natives who grow up in a technology-saturated world. Digital technologies are considered double-edge sword in learning context. On one hand, a wide range of digital tools allow for flexible learning at anytime and anywhere. On the other hand, there is a growing concern over the negative influence of digital devices such as over dependency (Lee & Busiol, 2016) and distraction for learning (Deng, 2020). When digital devices become the main platform for learning, the effectiveness of learning is heavily dependent on students' self-regulation capability (Schacter & Szpunar, 2015). However, students did not have adequate guidance and support on how to block digital distraction and self-regulate online learning. According to a survey with local secondary school students regarding their online learning experience under epidemic, it was reported that the students felt stressful and not prepared for regulating their learning online (CUHK, 2020). Therefore, there is a pressing need to guide and support students to regulate their online learning and use digital devices appropriately in daily life.

Needs of parents

The transition to home-based learning during epidemic period has posed great challenges for parents as well since more responsibilities are shifted to parents to monitor, mentor, and motivate students (Curtis & Werth, 2015). A local survey conducted by Hong Kong Institute of Family Education has revealed that over 80% of parents felt stressed by home-based online learning. Meanwhile, parents play a vital role in guiding and supporting young people in using digital devices properly. Unfortunately, many parents did not know how to provide suitable and effective mediation and support due to lack of awareness or skills (McDonald-Brown, Laxman, & Hope, 2017). Hence,

parents are in dire need of support and guidance on how to provide mentorship, regulation, and support for their children's online learning and digital practice.

To sum it up, against the backdrop of digital technologies deeply embedded in the youngster's life and online learning as a new norm, it becomes critical to prepare teachers, students, and parents to optimize online teaching and learning. Teachers need to know how to better motivate and engage students in online learning environment; students need to know how to become self-regulated learners; parents need to know how to support home-based learning and regulate and guide their children in the use of digital devices.

2. Goals and Objectives

First, this project aims to develop and implement a series of student-centered professional development activities that will equip teachers with guidelines and hands-on experience of the design and implementation of personalized online materials that focus on students' self-regulated learning. Second, the project endeavors to increase students' awareness and practice of regulating online learning. Third, the project will also support parents through raising their awareness of their role as media mentors and empowering them to better monitor and guide the youngsters in online learning and daily use of digital devices. The project is likely to have far-reaching implications beyond the project. Teachers and schools will be better prepared for various online teaching and learning initiatives. Through involving and empowering the main stakeholders – teachers, students, and parents, the project will create a partnership between school and parents in providing quality online learning experiences for youngsters. Furthermore, students' diversity has long been a challenge for educators. Teachers involved in the project will explore how to create personalized and flexible online learning experience for students of diverse abilities. Additionally, self-regulated learning is an important capability for lifelong learning, hence the increased self-regulation skills will benefit students in a long run. The increased awareness on how to regulate digital devices could contribute to a healthy, responsible, and balanced use of digital devices on the part of Hong Kong youngsters.

3. Objectives

1. To enhance teachers' readiness for online teaching and foster the capability of designing personalized online teaching and learning materials that emphasize students' self-regulation.
2. To enhance students' self-regulation and engagement in online learning.
3. To enhance parents' involvement in online learning and their capability of regulating, mentoring, and supporting positive use of digital devices.

4. Applicants' Capability

5. **Targets and Expected Number of Beneficiaries**

The project will target at three main stake-holders: teachers, students, and parents. First, the project plans to deliver online training for primary school teachers, students, and parents. The online training packages will be available on project website for free access, hence could potentially benefit all the primary school teachers, supporting staff, students and parents. The training package for the teachers are discipline-independent, which could benefit local teachers in all subjects. Additionally, we will take a school-centered approach and work closely with 6 primary schools. On-site professional development workshops will be provided to all the teachers in charge of upper-primary levels (P4-P6), which will amount to approximately 180 teachers in total. In addition, workshops will be provided to interested parents of P4 and P5 students. We expect to attract at least 60 parents in each school, which accumulate to at least 360 in total. The workshops will guide parents in supporting online learning and acting as media mentor at home.

The participating schools will be recruited based on the following criteria:

- schools that emphasize online teaching and learning and embrace blended learning as a new normal;
- schools that identify self-regulation as one of core skills for students;
- schools that have students with varied abilities, hence a need for differentiated instruction and personalized online learning.

6. **Innovation**

This project is innovative in several ways: First, we combine three models of teacher professional development (TPD), that is, individual self-directed TPD, standardized program, and school-centered TPD approach (Gaible & Burns, 2005). First, online training packages will offer flexibility and convenience to busy teachers since they could access the materials at any time and place. More importantly, the online training will model the best practice of designing personalized online learning materials. Second, the workshops will center on the practical implementation of the knowledge and skills acquired through online training. Third, the program will adopt site-based approach by involving each participating school as a cluster. Such an approach has an advantage in providing more tailor-made and sustained professional learning, encouraging collaboration and school-based community of practice (Gaible & Burns, 2005; McLaughlin & Talbert, 2006).

Second, we will emphasize the sustainability of the project by cultivating online communities among participants through mailing list and social media (e.g. Facebook). In online community of practice (CoP), teachers are engaged in sharing and development of knowledge and practice rooted in local practice (Barab et al., 2004). We will follow the models and guidelines of cultivating CoP, for example, setting goals and norms, clarifying roles of participants, encouraging communication and participation (Deng & Yuen, 2007; Kimball & Ladd, 2004; Preece, 2000). In particular, online facilitators will be assigned to monitor, stimulate interaction, and provide feedback. We will further elaborate sustainability issue in section 14 (Sustainability). Third, we adopt a holistic approach by involving all the main stake-holders including teachers, students, and parents. Such an approach will contribute to a partnership between school and home, and create a synergy in addressing the issues of online learning systematically.

7. Significance

Impact on teachers and school

Through participating in a series of trainings, workshops, and online community, teachers will be equipped with the pedagogical strategies and practical skills on creating student-centered and personalized online materials. We will help the teachers to develop good practices and share their work through online platform, which will encourage the reuse and remix of online resources developed in local contexts. Through participating in an online CoP, the teachers could share their successful experiences as well as lessons learned, engage in collective problem-solving, and support each other. At the school level, the resources and exemplary cases will inform various online learning initiatives (e.g. flipped classroom, BYOD) at schools. At the end of the project, we will provide each school a report summarizing the findings and offering recommendations on developing policies, guidelines, and programs in relation to online teaching and learning.

Impact on students

Through the project, the students will understand the perils of digital distraction and the importance of self-regulation. They will explicitly trained on how to self-regulate their online learning and be more focused. They will be equipped with awareness and skills of managing their learning environment, time, and digital devices for optimal learning experience. They will also learn to better regulate their daily use of digital devices, ward off the negative effects, and put the devices into positive use.

Impact on parents

Our project also acknowledges the important role of parents in supporting and regulating youngsters in online learning and their digital practice. Through training and engagement in online communities, parents will be equipped with the awareness and skills of regulating and supporting home-based online learning and mediating digital practice of their children. It will contribute to healthy digital lifestyles in families and promote a positive use of digital technologies in general.

8. Teachers' and Principals' Involvement in the Project

We will work closely with the principals and teachers of the participating schools in both design and implementation of professional development activities. We will coordinate with the principals in planning professional development activities. Teachers will be the core participants in a series of professional learning activities such as online training, workshops, and online communities. The detailed plan for involving teachers can be found in Section 10 (Implementation plan).

9. Conceptual Framework

Self-regulated learning

Self-regulation ability has long been recognized as a key factor associated with learning in classroom-based and online contexts (Müller & Seufert, 2018). Self-regulated learning (SRL) is often described as an active processes of setting task-specific learning goals, employing specific strategies to monitor, regulate and control learning (Pintrich, 2000; Zimmerman, 1989). One critical question here is what exactly learners need to regulate during the learning process. In this respect, Pintrich (2000; 2004) identified four main areas for regulation namely *cognition*, *motivation/affect*, *behavior*, and *context* (as shown in Figure 1). Regulation of cognition involves setting goals, planning, monitoring, selecting and adapting learning strategies. Regulation of motivation and affect concerns various motivational beliefs such as goal orientation (intrinsic or extrinsic), task values and difficulty, self-efficacy, personal interest, and strategies for dealing with negative affect like anxiety. Regulation of behaviors includes time and effort planning, management and seeking help. Lastly, regulation of context mainly concerns managing environmental conditions, eliminating the distractions in the environment (Pintrich, 2004; Zimmerman,1989).

In online learning environment, Lynch and Dembo (2004) pinpointed that self-regulated

online learners needed to manage their time, prioritizing tasks, deploying environmental resources including technologies for help seeking, and enhancing interaction and learning. Furthermore, a large body of research have identified digital technologies as the main source of distraction for student learning (e.g. Rosen, Carrier, & Cheever, 2013). Hence, it becomes important for students to manage their use of digital technologies, block out distraction, and better engage in online learning. It has been shown that the self-regulation ability can be acquired and enhanced through training (Broadbent et al., 2020). In this project, we will provide direct training for students on self-regulated online learning.

Theories and frameworks for pedagogical design

From teachers' perspective, what can they do to enhance students' self-regulation? A commonly used way to foster self-regulation is the use of prompts in designing teaching and learning materials. Scholarly work has shown that prompts in educational videos designed specifically to trigger self-regulation could enhance students' self-regulated learning (e.g. van Alten et al., 2020). Prompts can be presented as questions, hints (Berthold et al., 2007), examples, or sentence starters that can help activate specific learning strategies (Yen et al., 2018). Berthold and associates (2007) introduced different types of prompts including cognitive prompts to stimulate (1) organization (e.g. how can you structure the content?); (2) elaboration strategies (e.g. Can you think of examples?) and (3) meta-cognitive prompts (e.g. What need to be clarified in the lecture video?). In our project, teachers will be guided to develop various prompts in online instruction to support students' self-regulation.

Another aspect of designing online teaching materials concerns how multimedia elements are designed and presented. Mayer, an influential scholar in multimedia research, have advanced general principles for multimedia design including coherence, signaling, redundancy, spatial contiguity, and temporal contiguity (Mayer, 2008). In more detail, teachers should aim to reduce unnecessary elements (coherence), highlight important information (signaling), eliminate redundant on-screen text (redundancy), placing texts and corresponding graphics close to each other (spatial contiguity), and presenting visual and corresponding narration at the same time (temporal contiguity).

Personalized learning

Personalized learning, as a departure from "one-size-fit-all" mode of learning, emphasize a student-centred approach of providing diverse learning experiences and support to address the distinct learning needs and interests of individual students (Tomlinson, 2014). Teachers can adjust learning objectives, content, and even assessment (Bondie, 2019) or provide learning choices and learner control (Alamri et al., 2020). There are various strategies teachers can apply to promote differentiated instruction such as providing varied or supplementary resources, varied support mechanisms, modeling, interest-based materials (Tomlinson, 2014). In particular, the Universal Design for Learning (UDL) has been employed widely in recent years to guide the design of personalized learning. The model points to the needs to provide multiples means of engagement, representation, and expression for students (CAST, 2018).

The advent of online technologies has offered tremendous opportunity for providing learner choices regarding when, how, and where to learn (Grant & Basye, 2014). Digital tools could provide students with learning support through various techniques such as prompts, feedback, hints, annotation (Zheng, 2018). In our project, we will work together with the teacher in designing differentiated online instruction and supporting personalized online learning.

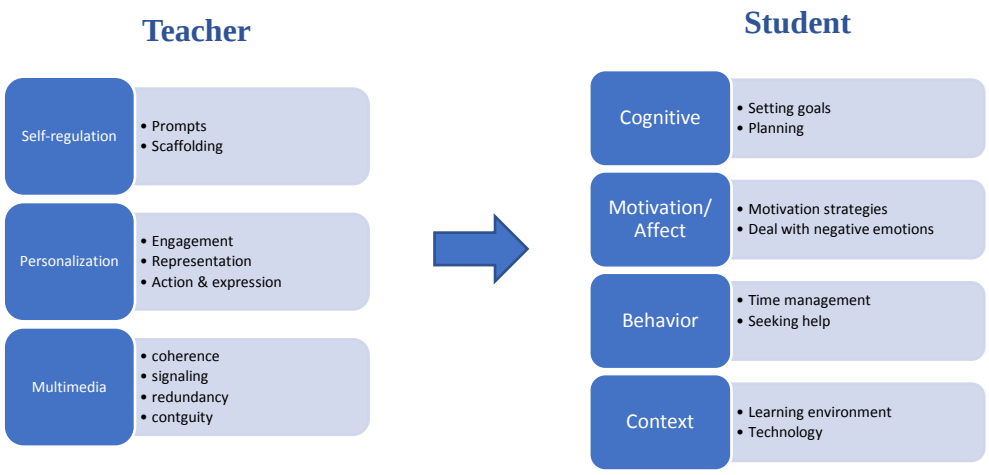

Figure 1: Conceptual framework of supporting self-regulated online learning

10. Implementation Plan with Timeline

Phase 1: Preparation of training packages and workshops (September2021 – January 2022)

In the first phase, we will work with two primary schools as partner schools that will be closely involved in the development of the training materials. The two partner schools are Wong Kam Fai Secondary and Primary School and Pooi To Primary School. The development of the training package will go through the process of needs assessment, drafting, consultancy, pilot testing, and revision. First, the needs assessment survey will be conducted with the teachers, students, and parents to gather their perceptions and needs. The results of the needs assessment survey will greatly inform the design and development of the training packages and workshops. An expert in self-regulated learning and online learning will be hired as consultants to review the training package. The initial package will also be pilot tested with 8 teachers, 4 students, and 4 parents who will offer feedback and suggestions for improvement. Another main task for the phase 1 is to design and construct the project website and preparation of workshops.

September 2021	Form project team Prepare needs assessment survey
October 2021	Briefing on project; Needs assessment survey among teachers, students, and parents in partner schools
November - December, 2021	Development of training package draft
January 2022	Training package consultancy & user feedback
December 2021 –June 2023	Design and construction of project website
December 2021 – January 2022	Preparation of workshop

Phase 2: Implementation with partner schools and interim evaluation (February 2022 – July 2022)

In phase 2, we will continue working with the two partner schools and implement trainings, workshops, online communities, and interim evaluation. First, online training will be provided to teachers through both self-paced asynchronous and real-time synchronous modes. The proposed topics for the training can be found in Appendix I (A). Teachers and schools can choose to participate in either self-paced or real-time mode based on their schedule or preference. Following the online trainings, we will organize two 3-hour on-site workshops for each school on (1) design for self-regulated online learning and (2) differentiated online instruction and personalized online learning. In sum, teachers in each participating school will receive about 2-hour online training and 6-hour on-site workshop, hence the total teacher training will be 48 hours. Each workshop will involve all the teachers in charge of the upper levels. As the follow-up to the workshops, the materials developed by the teachers will be reviewed and feedback will be provided. Our team will also provide on-going support to teachers in further developing online teaching materials through monthly meetings with

teachers.

Second, we will liaison with ICT coordinator of the schools to provide training for students or integrating the training into related curriculum or program. The details of the topics and learning objectives can be found in Appendix I-B. Each unit will last about 20 minutes with animation-based lecture, group discussion, and other activities such as role-playing. Third, parents will be informed of the training their children received and provided with tips for helping students exercise what they learn when learning at home. In addition, parents of P4 and P5 students will be invited to take online training of three units with each for about 30 minutes. At the end of phase 2, we will conduct interim evaluation and reflect through questionnaires, focus-group interviews, review of teachers' work, and analysis of students' online activities. The details of evaluation plan will be presented in section 13. Based on the evaluation, we will revise the training packages and workshops in preparation for the larger scale implementation.

February – May 2022	Implementation of online training Professional development workshops for teachers
February 2022 - June 2023	Development of online community
March – April 2022	Preparation of instruments for evaluation
April - May 2022	Training for students and parents
June – July 2022	Interim evaluation and reflection

Phase 3: Large-scale implementation (August 2022 – February 2023)

In phase 3, the training and workshops will be implemented in additional 4 primary schools following the same procedure in phase 2.

Phase 4: Final evaluation and dissimilation (March – August 2023)

To evaluate the outcomes of the project, we will conduct questionnaire and interviews with different stake-holders. In addition, dissimilation of the project outcome will be conducted through participation in local events, organization of symposium, and academic publication. A one-day symposium with about 200-300 participants will be organized for teachers to showcase their work, share experience and disseminate the project outcome to the public. The registration will be open to all the local teachers. The detailed dissimilation plan is elaborated in Section 15 (Dissimilation).

August – September 2022	Briefing on project; Needs assessment survey among teachers, students, and parents
September – October 2022	Revision of training package and workshops
October 2022 - February 2023	Implementation of online training and workshops
March – April 2023	Final evaluation and reflection
	Organize symposium
May – August 2023	Report writing, dissimilation and publication

11. Budget

Expenses items	**Description**	**Total**
A. Staff		
Project Officer (PO) *($32,000 x 24 months x $1500MPF)*	PO should have a Master's degree preferably a PhD and at least three years' experience in the field of education or instructional design. He/she should be adept at multimedia design (e.g. video editing) and various online educational tools. As a core member of the project, he/she should be knowledgeable	804,000

	about self-regulated learning and have experience working with local teachers. He or she should also have research experience with both qualitative and quantitative methods and experience of managing research project. His/her main duties include: • Assist project leaders in overseeing and managing the project • Assist the design and production of project deliverables, • Review teachers' work, facilitate CoP, and provide support • Coordinate with participating schools, consultants, technical staff, and other stake-holders • Assist design and implementation of evaluation • Manage the finance of the project and prepare reports • Supervise SRA and student helpers	
Senior Research Assistant (SRA) *($23,000 x 24 months x 1.05)*	SRA should have a relevant degree (preferably Master) in education or instructional design. Preference will be given those with teaching experience. He/she will assist PO in implementing various project duties.	579,600
B. Equipment		
Smart audio-recorder	The smart audio-recorder will be used to record interviews and convert them into transcripts automatically.	999
C. Services		
Consultancy fee *($1,000/hr x 20hrs)*	An expert in self-regulation and online teaching will be hired to review the online training packages (11 modules)	20,000
Workshop instructor ($780/hr x6 hours x 6 schools)	An experienced instructor will be hired to give on-site workshops in 6 schools. The instructors will have relevant background in self-regulation and online teaching as well as the experience with professional development training.	28,080
Design and production of website and online training packages	An IT company will be hired to provide professional services on web design and video production.	190,000
Honorariums for guest speakers (*$880/hr)*	Two guest speakers will be invited to the dissemination symposium	880
Wages for student helpers ($60 x 100 hours)	Student helpers will be hired to help data input, clerical work, and dissemination symposium.	6,000
D. General expenses		
Office expenses	General office supplies,	1,028
Printing	Printing materials for workshops, questionnaires, meetings, sharing sessions, dissemination seminar and certificate	7,000

Venue and IT equipment for seminar *($1500 x 3 hrs)*	The venue rent and equipment fee for the half-day symposium	4,500
Audit fee		15,000
University Overhead (15%)		246,313
	Grand total:	1,903,400
	Total:	**1,903,400**

We will ensure that all procurement of goods and services are conducted in an open, fair and competitive basis with measures taken to avoid conflict of interests in the procurement process. We will accept the QEF Intellectual Property Rights Policy and ensure that the deliverables shall not infringe any copyright or other intellectual property rights of any third party.

12. Expected Project Outcomes and Deliverables

1. *Online training packages for teachers*

The online training packages will be developed in both English and Chinese and available on project website for free access. The package will include 5 modules with 20-30 minutes for each module. The detailed description of the proposed topics and learning objectives can be found in Appendix I-A. The package in self-paced mode will include audio and videos of lectures, examples, and questions for reflection and further discussion. Online helpdesk will be set up for teachers to ask questions and seek help. The real-time online mode will integrate lecture, examples, and online feedback and discussion. The participants can seek help through online chats during the training. Online communities will be developed to provide support and facilitate the exchange of experience among teachers.

2. *Professional development workshop for teachers*

Two two-hour workshops will be provided for each school to help teachers gain hands-on experience with (1) developing online teaching materials for self-regulated online learning and (2) differentiated online instruction and personalized online learning. The content of workshops will be customized to match the existing teaching practice and technological platforms of the school. New technological tools will be introduced based on needs. To foster ownership, teachers are encouraged to bring online teaching materials they developed before or the topics they want to work on.

3. *Training materials for students*

We will provide training materials for students that will be composed of three units covering (1) self-regulated learning, (2) tools for self-regulation, (3) information literacy and balanced digital life.

4. *Online training for parents*

Online training for parents will cover (1) how to support self-regulated learning, (2) tools for self-regulation, (3) technology use at home. Each unit will take about 30 minutes. The proposed topics and learning objectives can be found in Appendix I-C.

5. *E-handbook on online teaching and learning*

We will compile the materials of the project into a handbook and make it for free download from the project website. The handbook will also include training materials, templates and checklists, and examples of good practice.

6. *Project website*

The project website will serve as an open and central dissemination channel for sharing training materials and resources so that anyone who are interested could access and learn from it. The main contents include:

- Online training packages
- Showcase teacher-designed materials for online teaching and learning
- A curated resources of online resources in relation to online teaching and learning

7. *Online communities for teachers*
8. *Dissimilation symposium on online teaching and learning (see Section 10)*

13. Project Evaluation

The project will use questionnaires, interviews, online teaching and learning artefacts and activities to gauge the changes in capability, attitude, and practice on the part of teachers, students, and parents. Appendix 2 provides detailed information on objectives, measurements, evaluation activities, and success criteria.

Teachers

The pre- and post-questionnaire will evaluate whether teachers' readiness for online teaching show improvement. The scale of readiness for e-learning (Gay, 2016) and flipped classroom (Chou et al., 2020) will be adapted to evaluate to what extent the teachers are ready for online teaching. Additionally, focus group interviews will be conducted with 24 teachers (6 focus groups) to gather their perceptions and feedback. We will also collect the online teaching materials developed through the program and analyze them to see to what extent teachers have implemented the design principles they have learned.

Students

For students, we will focus on their self-regulation ability before and after program by adapting Chinese version of self-regulation in online environment scale validated by Fung and associates (2018). Focus group interviews will be conducted with 48 students (12 groups) to gather their feedback and experience of online learning. To examine the effects of the trainings, three online materials developed by teachers will be selected and tried out among all the students in P4 and P5. Their work online will be examined to see to what extent they could follow and complete the online activities designed for enhancing self-regulation and personalized learning.

Parents

At the beginning of the project, we will examine parents' involvement in online learning and media mediation with questionnaires. The scale of parental involvement developed by Liu and associates (2010) and parental mediation of digital devices developed by Hwang and Jeong (2015) will be incorporated. At the end of the project, we will organize 6 focus group interviews with parents to gather their feedback on the online training and students' online learning.

14. Sustainability of Project Outcomes

One salient problem of one-shot TPD workshops or seminars is the lack of support to teachers when they bump into difficulties in the process of implementation. We intend to address this issue and seek to sustain the project in three ways. First, we will provide on-going support after workshops. Our team will pay monthly visit to each school working closely with teachers in further development of materials for online teaching and learning. Second, online communities will be created for teachers to share resources, experience, and exchange support. Community of practice among teachers can serve as a valuable venue for teachers to share their problems and tips, seek help and support, which will contribute to sustainability of new practice. Third, all the training materials and recorded workshops will be available on the project website. We will discuss with HKEdCity (www.hkedcity.net) seeking the opportunity to move the content of the website to their server after the completion of the project.

15. Dissemination/Promotion of Project Outcomes

We will arrange a series of dissemination and promotion activities. First, the project team will promote and disseminate the project outcome in "Teaching and learning expo" expected to be held in December 2022. This largest event in relation to educational technology will provide great avenue for the project team and participants to share experiences. Second, we will organize a half-day symposium inviting teachers to share their experience, successful stories and lessons learned. The event is expected to attract 200-300 participants from local educational community. Third, the team will disseminate the project experience and outcome with wider research community through presentation in international conferences and publications in international journals.

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17. Report Submission Schedule

The applicant commits to submit proper reports in strict accordance with the following schedule:

Project Management (Should be submitted via the "Electronic Project Management System" (EPMS))		**Financial Management** (Hard copy together with supporting documents should be submitted to the QEF Secretariat by mail or in person)	
Type of report and reporting period	**Report due on**	**Type of report and reporting period**	**Report due on**
Progress Report 01/09/2021 - 28/02/2022	31/03/2022	Interim Financial Report 01/09/2021 - 28/02/2022	31/03/2022
Progress Report 01/03/2022 - 31/08/2022	30/09/2022	Interim Financial Report 01/03/2022 - 31/08/2022	30/09/2022
Progress Report 01/09/2022 - 28/02/2023	31/03/2023	Interim Financial Report 01/09/2022 - 28/02/2023	31/03/2023
Final Report 01/09/2021 - 31/08/2023	30/11/2023	Final Financial Report 01/03/2023 - 31/08/2023	30/11/2023

Appendix I Proposed topics for online training packages

A. Training for teachers (5 modules)

	Modules	Topics	Objectives
1	Introduction to online teaching and learning	• Modes of online learning • Process of design and development • Synchronous and asynchronous online learning	• Get familiar with the key concepts and different modes of online teaching and learning • Understand the process of design for online environment • Understand the strengths and limitations of different modalities and tools and be able to select tools for different learners and instructional goals.
2	Strategies and best practices for online teaching and learning	• Enhance motivation and online engagement • Consideration to physical and social well-beings • Communicate and work with parents	• Get familiar with the models of motivation and differentiated instruction • Be able to design and incorporates the strategies to motivate students and encourage active online learning, • Learn from the best practices of offering feedback and scaffolding to facilitate online learning.
3	Design online learning to foster self-regulation	• Design principles for educational videos • Models of self-regulated learning (SRL) • Strategies for enhancing self-regulated online learning (e.g. dealing with distractions, time management, reflection, and help-seeking) • Tools for enhancing SRL (e.g. Mobile Apps, learning diary)	• Get familiar with the principles for educational videos • Get familiar with the components of SRL • Understand the strategies for supporting SRL (e.g. prompting, scaffolding, visualization) • Familiar with strategies for helping students in dealing with distraction and managing time. • Know how to encourage students' reflection and support help-seeking.

4	Differentiated online instruction & personalized learning	• Models of differentiated online instruction • Universal design for learning (UDL) • Personalized online learning	• Get familiar with the models of differentiated instruction. • Understand the strategies to support personalized online learning. • Know how to support personalized online learning through various online tools (e.g. prompting, scaffolding, annotation)
5	Real-time online instruction & Flipped classroom mode	• Live vs. pre-recorded videos • Synchronous vs asynchronous online teaching strategies • Support interaction through video-conferencing tools • Prompts for synchronous teaching • Design considerations for flipped classroom mode	• Understand the strengths and constrains of live and pre-recorded videos and know how to choose. • Apply the strategies to capture and hold participants' attention during live online class. • Know how to support student-teacher and student-student interaction through online tools. • Learn from the best practices of using videos in flipped-classroom mode

B. Training for students (3 units)

	Modules	Topics	Objectives
1	Self-regulated learning	• Components and three phases of SRL • Multitasking and distractions • Environment structuring • Reflection on process and outcome • Self-motivation and self-rewarding	• Understand the components and phases of SRL. • Understand the risks and effects of multitasking and digital distraction. • Know how to structure learning environment to block distraction and increase engagement. • Know how to reflect on learning process and outcome and revise the SRL strategies. • Know the strategies for self-motivation and self-rewarding.

2	Tools for enhancing SRL	• Embedded SRL components in online learning • Learning tools with SRL functionalities • Generic tools for enhancing SRL	• Understand the purposes of SRL components and know how to use them. • Understand the SRL functionalities on various learning tools. • Familiar with other means for enhancing SRL
3	Information Literacy & digital balance	• Information literacy • Balance of online and offline activities • Social media and digital friendships • Ethical use of digital devices	• Learn the strategies for balancing online and offline activities • Know how to put digital devices into a positive use and enhancing social and psychological well-beings. • Know how to use digital devices ethically.

C. Training for parents (3 units)

	Modules	Topics	Expected outcomes
1	Support for self-regulated and home-based learning	• Self-regulation strategies • Roles of parents in home-based learning • Partnership with teachers and school	• Understand the self-regulation strategies and how to support them • Understand parents' roles and responsibilities in home-based learning • Know the strategies for enhancing communication with teachers and school
2	Tools for enhancing self-regulation	• Tool-kits and resources • Structure family environment to help self-regulation	• Get familiar with the tools and resources for supporting parents. • Know the strategies of constructing family environment to encourage self-regulation • Get familiar with the tools to help self-regulation
3	Parent mediation for technology use at home	• Styles of parental mediation and control • Strategies for keep children off devices • Parents as role models and media mentor • Positive technology development	• Understand different types of parental mediation and decide on the suitable style • Understand the roles of parents as role models and media mentor • Know the strategies of cultivating positive technology use.

Appendix II Project evaluation plan

Objectives	Measurement tools	Evaluation activities	Success criteria
PO1	Pre- and post-program questionnaires	• Compare teachers' readiness for online teaching before and after program.	• Significant increase in teachers' readiness for online teaching
	Online teaching materials	• To evaluate to what extent and how teachers apply the strategies learned.	• All teachers participating in workshops will be able to design online teaching and learning materials • The online teaching materials developed should reflect at least one strategies for promoting SRL and personalized learning.
	Focus-group interview	• Understand teachers' perceptions and feedback on the project	• Majority of teachers perceive the project positively.
PO2	Pre- and post-program questionnaires	• Compare students' level of self-regulation before and after the project	• Significant increase in students' level of self-regulation in online learning.
	Focus group interviews	• Gather students' perceptions and feedback on the online teaching and learning materials and the project	• Majority of students perceive the project positively. • Majority of students perceive the online teaching and learning materials as helpful in enhancing their learning.
	Online learning activities	• Understand students' online learning behaviors	• 80% of students will complete the online learning activities.
PO3	Questionnaire and focus-group interview	• Compare parents' involvement and mediation practice before and after the project	• Majority of parents perceive the project positively. • Majority of parents showed the increased awareness of their roles in supporting online learning.