

**Quality Education Fund**  
**Application with Grant Sought Not Exceeding \$150,000**  
**Part B: Project Proposal**

<b>Project Title</b> Differential Instruction for Cross-subject Reading Scheme	<b>Project Number</b> 2015/0292 (Revised)
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**Basic Information**

**Name of School:**

**Beneficiaries**

- (a) Sector:  Secondary  
(b) Students: 300 (in number)\* and S1-S3 (class level/age)  
(c) Teachers: 10 (in number)\*  
(d) Parents: 600 (in number)\*

**Proposal**

**(I) Project Needs**

- (a) Please state the aims of the project in clear and concise terms and elaborate how the proposed project could impact on school development.
1. To introduce and apply Differential Instruction (DI) in English classroom to cater learning diversity.
  2. To promote students' interest in interdisciplinary reading through implementing (mapping and integration) mobile learning and our new school-based S1 to S3 English reading curriculum and RAC resources.
  3. To co-operate between Librarian and English Subject to integrate mobile English reading contents into our regular learning periods during classroom time and after-school's extended learning session to cultivate self-directed learning and ultimately to foster our teachers' collaboration and capacity in applying IT for English learning.
- (b) (i) What are the areas of the needs and priorities of the school?
- Enhance learning and teaching to facilitate students' knowledge on subjects / learning areas / generic skills development
  - Enhance school management / leadership and teachers' professional development / wellness
  - Others: Promote collaborative culture across KLAs and capacity building by using elearning for effective teaching and learning
- (ii) Please give background information to justify the demonstrated needs as mentioned in (b)(i).
- School development plan: (1) Our school shares a vision to prepare our students for the future with required skills for the society. English Language, as the global language, is important for our kids. In our development plan, we place Reading, Self-learning and elearning as our focusing areas. (2) Effectiveness of teaching and learning are concerned in our long term plan. Through introducing new pedagogies, DI and e-learning are the core strategies to arouse learning interests and ability, and finally better address the learning diversity and enhance our teaching and learning effectiveness.
  - Survey findings: Survey from our S1 to S3 showed (1) significant need of support because family support is inadequate. (2) students' self-initiated learning motivation in reading and learning is low especially in traditional books (3) positive interest in using e-learning to read so we understand that different means and strategies is needed to make a change for our students.
  - Literature review summary: (1) As Carol Ann Tomlinson defined, DI means teachers observe and understand the differences and similarities among students. Research on

the effectiveness of differentiation shows that DI benefits a wide range of students, from those with learning disabilities to those who are considered high ability. Through the mobile technology, we can easily structure the learning tasks in different levels to follow. (2) With reference to the latest EDB's "Ongoing Renewal of the School Curriculum – Focusing, Deepening and Sustaining", the value and the importance of adopting a cross-curricular approach to language learning is stressed. It reinforces learners' learning experiences by exposing them to different texts that cover various subjects and topics from the other KLAs. (3) Thus we will collaborate among English Language faculty, Library and different KLAs to bring a new synergy and model for our reading and e-learning culture.

- Assessments on students' performance: Data tells us that the reading diversity for our S1 to S3 students is huge. Results from our Attainment Test, school examinations and TSA shows that the general reading ability of our students are ranging from very foundation to beginners, while some may be up to intermediate (with ability to read books with 500-words). This diversity drives us to apply DI and elearning at classroom and for self-learning.
- Relevant experiences: In 2014 through the WIFI 100 under EDB and Project WeCan, we set up the wireless network on campus and purchased 80 tablets to be shared with different KLAs.
- Others: We piloted DI at our English learning period in one of our S1 classes last year. The results are positive and we can see DI can better support our learning diversity and enhance our classroom teaching.

- (c) Please elaborate the innovative ideas or new practices to enhance, adapt, complement and/or supplement the existing practices that will facilitate the development of the school to address the needs specific to its own context.

This project evokes innovative pedagogy, paradigm change of RAC reading and learning. It also fosters a collaborative approach for our teachers to promote English reading across curricula with the aid of elearning and mobile technology.

1. Using DI for our school-based RAC programme

We will apply DI as the core pedagogy to address learning diversity and to enhance learning interest. Applying DI in the classroom involves dividing the classroom learning groups and assigning different reading activities based on the same reading contents. In order to do so, we need to carefully design the way we present those contents, and tucking the reading contents so that we can run the classroom with differential instructions. Mobile application can enable us to assign students in different ability groups and switch them between different tasks easily. This can supplement our existing practice of use of textbooks.

2. A collaborative approach with school-based RAC

This is the first time that we have the Librarian teacher work together with our English panel team to launch a co-curricular mapping programme to promote read to learn culture. We will link this cross-domain reading curricular with different KLAs to integrate their curriculum themes or topics. Diverse KLAs topics can better address learning interest of different learners and link up learning from different KLAs in English reading.

3. Mobile Learning with individualized e-reading path

We use mobile devices in the English classroom and bring collaboration activities together. To ensure we have enough equipment, we will purchase some tablets that can have English version and dedicated for our English learning classroom. In this case, mobile learning and differential instruction can be taken place at the classroom regularly. We allow diverse learners to use e-learning tools on a one-to-one or shared reading setting with table devices. Different reading activities including read aloud, paired reading, paired recording and peer assessment can be adopted at the same time. With such, our classroom and self-learning can be more fun and diverse.

## (II) Project Feasibility

(a) Please describe the design of the project, including:

(i) Approach/Design/Activity

### ***DI with mobile learning as the Classroom Pedagogy and extension to self-learning***

Through co-planning meetings, we will identify learners learning styles, ability and interest to decide RAC topics and contents and integrate them into our school-based curriculum. Based on this framework, we will develop our DI Classroom facilitation strategy and related supporting resources with support of RAC mobile learning content.

We will follow Carol Ann Tomlinson's suggestion on Differential Classroom:

- ✓ "Content" – we will differentiate the content by designing classroom learning activities for groups of students that cover different levels of understanding. Lower ability group will first read the story or text and match vocabulary words to definitions, finding out the text's details from pictures while higher ability groups will differentiate fact from opinion from the text and think of a situation that happened to a character in the text and a different outcome. Initially we shall have 4 RAC readers per level be used in our classroom (12 readers for 3 forms plus 12 sets of teaching and learning resources supporting DI classroom.)
- ✓ "Process" – each student has a preferred learning style. Visual, auditory and kinesthetic and words may be different possible ways to tackle our learning diversity. So we will develop our school-based RAC framework and 12 sets of resources and stored them at the e-platform and mobile application. Since we have tablet devices, visual and word learners will access the tablet for the silent reading mode of the RAC content, auditory learners will access to the audio mode while kinesthetic learners and active learners can create their own ebooks after some basic learning activities.
- ✓ "Product" – We would name this as Learning outcome. They can be in the forms of comprehension exercises, reports, recording, or drawing. Read and write learners can write a book report or comments to share online, visual learners can create a graphic organizer of the story, auditory learners can give an oral recording of their story and kinesthetic learners can act out the story or recreate the story ending. All learning outcomes will be stored and shared at the e-platform as the recognition.
- ✓ "Learning Environment" – in our classroom, we can hardly change the furniture but we can smartly form students in pairs and different groups. Reading groups will take place for the discussion and collaboration. We will keep students in a very dynamic way that they will be busy with assigned tasks and each task they complete will link up the other's work so they will have the responsibility to contribute to the whole class' learning.

For self-directed learning, we will assign related RAC and English learning content as extended learning after classroom learning so they can repeat the learning and build up their language foundation at the e-platform. Our librarian will also record this part in a RAC reading log. Award Scheme will be fostered to motivate and recognize their learning. We will require students to complete at least 4 RAC reading content / readers during the project year. For those who have difficulties in accessing it, our librarian and English corner will be ready for them to go online and to borrow printed RAC books. Printed books will be prepared for capable learners to read at their own pace and for those who cannot access online at home to bring home. Our teachers will also access to the reading log and online report to review their learning status and pace bi-weekly.

*Catering for the more able/gifted students and developing their self-directed learning and/or creativity:*

During the DI classroom, we will use the core reading text and video together (either through mobile application or printed resources) to facilitate the whole class participation. For gifted children, they will be assigned with more learning responsibility. Before the lesson, they will research the background of the topics. They can share and give some background information to the whole class. During the classroom learning, they may comprehend faster than the others, they can quickly complete the core learning tasks and move on to more challenging tasks. So the learning output we assigned for them will be far beyond the basic understanding of the text, for example, retell or interpret the whole text, apply the learning vocabularies or language functions to create another text or ebooks. Since they will be engaged in more challenging tasks, teachers can free up their time to look after the other students. Afterward, gifted students will present and share their learning outcomes to the class. Another way around is to assign them with more challenging ebooks that are related to the same topic or theme so they can be exposed to more reading texts and reading activities.

For self-directed learning, they will be assigned with more challenging reading texts. So the expectation in terms of difficulties and quantity will be higher and more. We will also set up the reading log that requires them to have more reflection and creative use of the knowledge and language extended from the text to the real-life. We will design this through our co-planning meetings.

*RaC - The relationship of the project outcomes to the learning and teaching of Integrated Science (IS), Integrated Humanities (IH) and Liberal Studies (LS):*

The expected learning outcomes will include the form of retelling and interpretation of the text; application of the learnt knowledge and language for real time (poster, notice, write an email for a specific purpose). English is the media to acquire the knowledge related to IS, IH and LS. The extension will focus on how to apply those knowledge to real life for understanding or for applications.

Modules (English Language)	Proposed themes (Readers)	Learning elements in English Language	Learning elements in IS, IH and LS
S1 Festival, Family and Culture of the World	Animals	<p>1. Description of an animal's life and features (body, how it looks like, how it lives, what animals live together as a family and look after each other, what problem it faces)</p> <p>2. Vocabulary : different body parts, cubs, habitat, family words describing relationship</p> <p>3. Language: use of connective to express time, use of the simple present tense</p> <p>4. Reading Strategy: Scanning, Sequencing, Distinguish fact and</p>	<p>IS:</p> <p>1. animal's life cycle;</p> <p>2. how they grow up and start hunt for food themselves;</p> <p>IS + IH + LS:</p> <p>3. how the environment affect their life;</p> <p>4. how human changes their existence.</p> <p>➔ Students can base on the vocabulary, reading skills and language to explore more details on this theme and use the taught expression to share their understanding.</p>

		<p>opinion.</p> <p>→ Learning the same theme under IS, IH and LS provide learners more in-depth understanding of the topic and the opportunity to apply the language learning in further extended learning tasks on the same theme or topic.</p>	
S2 Health, Food and Olympic Games	Foods	<p>1.Description of food groups, nutrition, healthy and unhealthy food.</p> <p>2.Vocabulary : different parts of the food pyramid, food groups, names of nutrition, examples of healthy and unhealthy food, common health problems</p> <p>3.Language: use of connective to show result and conditional sentence structures to show probability.</p> <p>4.Reading Strategy: Scanning, Classification, Distinguish cause and effect.</p> <p>→ Learning the same theme under IS, IH and LS provide learners more in-depth understanding of the topic and the opportunity to apply the language learning in further extended learning tasks on the same theme or topic.</p>	<p>IS:</p> <ol style="list-style-type: none"> <li>1. different food groups</li> <li>2. parts of the food pyramid</li> </ol> <p>IS + IH:</p> <ol style="list-style-type: none"> <li>3. nutritional values of food</li> <li>4. what are healthy food and unhealthy food</li> </ol> <p>IS + IH + LS</p> <ol style="list-style-type: none"> <li>5. what is a healthy diet</li> <li>6. what are the health problems among Hong Kong students</li> <li>7. how to make a smart choice</li> </ol> <p>→ Students can base on the vocabulary, reading skills and language to explore more details on this theme and use the taught expression to share their understanding.</p>

S3 Popular Culture, Jobs and Voluntary Work	Volunteering	<p>1. Description of various voluntary work, the reasons of volunteering and how to contribute to society.</p> <p>2. Vocabulary : names of voluntary work, names of some local and overseas non-profit making organizations, common social problems in Hong Kong.</p> <p>3. Language: use of connective to show result, conditional sentence structures to show probability and adjective patterns.</p> <p>4. Reading Strategy: Scanning, Classification, Distinguish cause and effect, Critical thinking</p> <p>→ Learning the same theme under IH and LS provide learners more in-depth understanding of the topic and the opportunity to apply the language learning in further extended learning tasks on the same theme or topic.</p>	<p>IH + LS</p> <ol style="list-style-type: none"> <li>1. different kinds of voluntary services in Hong Kong</li> <li>2. common social problems in Hong Kong</li> <li>3. introducing one or two famous non-profit making organizations</li> <li>4. why people volunteer</li> <li>5. benefits of volunteering</li> </ol> <p>→ Students can base on the vocabulary, reading skills and language to explore more details on this theme and use the taught expression to share their understanding.</p>
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*Students' learning to take charge of their own learning:*

Students are expected to have the in-classroom and after school access to this RAC programme. Using RAC topics or content in English is new and may be challenging for our students. We will use more visual and audial resources to support the reading text or subject context. Since our learners are not highly motivated students, we will design more possible ways for them to express and share what they have learnt.

Interesting ways of expression, e.g., by actions, by drama, by drawing and by different ways of learning can be designed so they can freely express their way of understanding. We believe when they are not limited to write and speak in the traditional way, they will be more willing to take charge of their learning.

Tentatively we have suggested the following topics for this project (these are modules aligning our school-based curriculum):

- S1 Festival, Family and Culture of the World
- S2 Health, Food and Olympic Games
- S3 Popular Culture, Jobs and Voluntary Work

***Collaboration (students to students and teachers to teachers)***

Through bi-weekly co-planning and regular reflection and lesson observation, we will refine our school-based DI teaching pedagogy. Meanwhile, we invite teachers from IS, IH and LS to participate on this project so our RAC reading resources and releasing schedule can be aligned with their teaching sequence. Different ability groups will work in different tasks online and offline and they will take the role to show and tell their learning outcomes and collaboration can be effectively nurtured.

(ii) Key Implementation Details

**Project period:** (Jan/2017) to (Jan/2018)

<b>Month / Year</b>	<b>Content / Activity / Event</b>	<b>Target Beneficiary/Participants</b>
Jan 2017	- Administration on quotations - Teacher training workshop - Co-planning meetings - Lesson plan framework and teaching flow - Develop lesson plan integration of RAC reading contents for DI Classroom. - Liaison with e-platform development co.	Principal & Project team Consultants and all teachers
Jan 2017 to Jun 2017	- Pilot DI classroom with RAC contents in mobile learning. - Schedule regular RAC reading activities at Library - Design and implement award scheme - Co-planning, lesson observation and review and monitoring	Principal & Project team S1-3 students Teachers from IS, IH and LS
Jun 2017 to Jul 2017	- Sharing of collaboration result (story telling recording, reading log and etc) - - Review and revise teaching plans, Parent Seminar	Principal & Project team, Teachers from IS, IH and LS S1-3 parents
Aug-Sep 2017	- Focus Group, reflection record, survey, statistic report, sharing of project result at school website - Prepare for implementation for 2017-18.	Principal & Project team, Teachers from IS, IH and LS S1-3 students
Sep 2017 to Jan 2018	- Continue the learning and teaching - Review and revise teaching plans and materials	English Panel Chair, English teachers and teachers from IS, IH and LS.

(b) Please explain the extent of teachers' and/or principal's involvement and their roles in the project.

(i) Number of teachers involved and degree of input (time, types, etc.):

A project team with 10 members will be formed by our Principal, our English panel team, Librarian, technical support and representative teachers from IS, IH and LS. The project team will collaborate to design, co-plan, implement, monitor and review the project's implementation and effectiveness through on-going meetings and reflection. Our Librarian will lead in RAC reading activities and competitions while our subject coordinators will focus on curriculum mapping, DI Classroom design and teaching resources with representatives of IS, IH and LS and support from consultant. Our Principal and panel chair will support us in directional development and administration side so we can schedule lesson periods and required resources.

*Roles of subject teachers:*

Subject teachers under this scheme will select certain related topics under this project to make their unit teaching relevant to our commonly selected topics and modules. We will try to work out some common areas for those units so subject teachers can align with this scheme to better promote learners' understanding and applications.

*Teacher training of Differentiated Instruction (DI):*

Teacher training workshops, co-planning and classroom observation will be conducted. Various DI strategies will be fostered and reviewed to fit our school-based situation.

We will hire a consultant or an institution to conduct a training workshop (1 session of training and 1 session of debriefing after lesson observation about the application of Differentiated Instruction). Topics to be covered: Why do we use Differentiated Instruction at our school? How can it be applied to bring better learning benefits? Last, we expect to pick up a content or topic to illustrate how DI can be used with adapted content, teaching process with mobile learning and assessment be designed.

Since mobile learning and blended learning are our proposed direction, our Panel Chair will collaborate with a consultant or institution to design a practical application of DI for mobile learning classroom.

*Teachers' involvement in developing the learning and teaching materials:*

**S1 Festival, Family and Culture of the World (Tentative themes)**

Readers	Teachers-in-charge	Teaching materials to be produced
1	Teacher A	4 Lesson plans (for DI), 4 sets of graded worksheets, 4 extended learning tasks,
2	Teacher A	
3	Teacher B	
4	Teacher B	

**S2 Health, Food and Olympic Games (Tentative themes)**

Readers	Teachers-in-charge	Teaching materials to be produced
1	Teacher C	4 Lesson plans (for DI), 4 sets of graded worksheets, 4 extended learning tasks,
2	Teacher C	
3	Teacher D	
4	Teacher D	

**S3 Popular Culture, Jobs and Voluntary Work (Tentative themes)**

Readers	Teachers-in-charge	Teaching materials to be produced
1	Teacher E	4 Lesson plans (for DI), 4 sets of graded worksheets, 4 extended learning tasks,
2	Teacher E	
3	Teacher F	
4	Teacher F	

(ii) Roles of teachers in the project:

(iii)

Leader

Co-ordinator

Others: resources development and co-planning



(c) Please provide the budget of the project and justify the major items involved.

**Grant Sought: HK\$120,100**

Budget Item	Expenditure Detail		Justifications
	Item	Amount (\$)	
Service	Co-planning meeting with consultant for integrating DI into the use of mobile learning and RAC content (700 x 4 hrs x 4 sets)	11,200	Hire consultant to assist us to develop the teaching resources that support the implementation of mobile learning and DI classroom. Through this and teacher training, our teachers will be more confident to apply DI.
	Teacher Training with lesson observation (750 x 4 hrs)	3,000	
	Platform:  School-based RAC content licenses and right of use (with support to develop 12 sets school-based RAC contents with adaptation)  e-Platform and reports (one-off license);  Cloud service and mobile applications	90,000	Licensed quality content with adaptation is essential to address our diversity.  e-Platform and reports can allow us to run our DI at classroom efficiently and help us trace students' performance at classroom and at home so we can adjust the teaching pace.  Mobile applications to support students to develop their ebooks for the learning outcome and have collaboration learning activities.  Remark: The school-based RAC content (Worksheets and Teaching resources) can be reused by our school after the end of the project.
General expenses	Auditing fee	5,000	This is to motivate and encourage students to collectively complete the reading tasks. RAC books to provide variety of books for reading
	RAC Reading Log	900	
	Purchase of RAC printed books (100-150 copies)	10,000	
<b>Total Grant Sought (\$):</b>		<u>120,100</u>	

The project team will ensure that all procurements of goods and services are carried out on an open, fair and competitive basis.

Asset Usage Plan: Not applicable

### (III) Expected Project Outcomes

(i) Please describe how to evaluate the effectiveness of the project:

- Observation: Through observation, (1) diverse learners are actively engaged in RAC reading at classroom, (2) students are willing to complete the online self-learning tasks online after school. (3) students' learning interest is enhanced in DI classrooms with mobile and elearning support.
- Focused group interviews: (1) Collect feedback from teachers on their experience in applying Differential Instruction and RAC and (2) reflection on their experience in using mobile technology at classroom and reading in terms of engaging students and arousing learning interest and (3) effectiveness of this project on those newly introduced pedagogy and in relation to students' feedback and performance.
- Performance change of students in assessment: (1) We expect a measurable positive increase of students' reading ability. For example, they can complete reading at least 4 RAC English books in the first year and show their understanding through follow up reading exercises and reflection log ((2) Students are able to retell the story using different expressions.
- Others (please specify) 80% of students can complete the assigned leveled reading contents online (in an electronic reading format) either at home or at school during after-school enrichment learning time.

(ii) Please state the project deliverables or outcomes.

- Learning and teaching materials (S1-3 school-based e-learning curriculum for reading, 12 sets of RAC teaching and learning resources supporting DI classroom)
- Others: RAC Learning Log, Documentation to share our project vision and design with sample lesson recording and lesson plan

(The ownership and the copyright of the deliverables will vest in QEF so that it can be disseminated to all schools.)

### **Report Submission Schedule**

My school commit(s) to submit proper reports in strict accordance with the following schedule:

<b>Project Management</b>		<b>Financial Management</b>	
<b>Type of Report and covering period</b>	<b>Report due day</b>	<b>Type of Report and covering period</b>	<b>Report due day</b>
Progress Report 1/1/2017 – 31/12/2017	31/1/2018	Interim Financial Report 1/1/2017 – 31/12/2017	31/1/2018
Final Report 1/1/2017 - 31/1/2018	30/4/2018	Final Financial Report 1/1/2018 - 31/1/2018	30/4/2018

## Sample Lesson Plan

**Date:** \_\_\_\_\_

**Class:** F.1 Group 1 (24 students)

**Teacher:** \_\_\_\_\_

**Materials/Tools** 24 tablet PCs , 6 printed readers, evaluation forms

**Module:** S1 Festival, Family and Culture of the World

**Theme:** Animals

### Aims

1. To learn an animal's life cycle and features (body, how it looks like, how it lives , what animals live together as a family and look after each other, what problem it faces)
2. To learn topic related vocabulary (e.g. different body parts, cubs, habitat, family words describing relationship)
3. To use simple present tense to describe facts and habits (students' prior knowledge)
4. To practice reading strategies (scanning, sequencing, distinguish fact and opinion)

## Procedures

<i>Time (minutes)</i>	<i>Procedures</i>
5 mins	<ol style="list-style-type: none"><li>1. Divide the class into 2 groups:<ol style="list-style-type: none"><li>a) The strong group: Students who already have understood the vocabulary items and the basic idea of the reader, such as the meaning of the keywords (e.g. cheetah, gemsbok, grizzly, salmon, to study, to catch, to kill, to look after, to grow up, etc.).</li><li>b) The weak group: Students who are still struggling with the basic vocabulary items of the reader.</li></ol></li><li>2. Assign readers and different reading and learning tasks for students according to their learning progress.</li><li>3. Distribute tablet PCs and / or printed readers.</li></ol>
20 mins	<ol style="list-style-type: none"><li>1. Strong group:<ul style="list-style-type: none"><li>● Each student receives a tablet PC and finishes the comprehension exercises (core and challenging parts) after reading.</li><li>● In pairs, students check their answers of the comprehension exercises.</li><li>● In pairs, students choose a specific animal and search its information of the life cycle and body parts online.</li></ul></li></ol>

	<p>2. Weak group:</p> <ul style="list-style-type: none"> <li>● In groups of 3-4, teacher(s) explain the basic vocabulary items and ideas of the readers to the students.</li> <li>● Each student finishes the comprehension exercise (core part) under the guidance of teachers.</li> <li>● Each student labels a diagram of the body parts and life cycle of the animal mentioned in the reader.</li> </ul>
10 mins	<p>1. Strong groups:</p> <p>Each pair of students present and introduce the animal in front of the class. Other students listen and evaluate the presentation (evaluation form) and vote for the best presentation.</p> <p>2. Weak groups:</p> <p>Students listen and evaluate the presentation of the strong groups (evaluation form) and vote for the best presentation.</p>

Extended learning tasks:

Strong groups:

Each student creates and draws an animal with its body parts labelled. Also, write a paragraph of about 70 words to describe the life cycle of the animal, making use of simple present tense and 'when' to express time.

Weak groups:

Each student finishes the comprehension exercise (challenging part). Also, write a paragraph (or in point form) of about 40 words to describe the life cycle of the animal mentioned in the reader, making use of simple present tense.

