

Quality Education Fund
Application with Grant Sought Not Exceeding \$150,000
Application Form -- Part II: Project Proposal

Schedule 1 P. 4

Project Title A pilot run for flipped Classroom for Chun Hanian – a pedagogical change of learning, teaching and assessment to foster self-regulated learning	Project Number 2014/0240 (Revised)
---	--

Basic Information

Name of School / Organisation / Individual

CUHKFAA Chan Chun Ha Secondary School (香港中文大學校友會聯會陳震夏中學)

Beneficiaries

- (a) Sector: Secondary
- (b) Students: 480 and S.1-6
- (c) Teachers: 10
- (d) Parents: 480
- (e) Others: Sharing with partner schools in HK (around 50 educators)

Proposal

(I) Project Needs

- (a) Please state the aims of the project in clear and concise terms.
 - To promote learners' self-regulated learning through a pedagogical change of learning, teaching and assessment in English Language and Information and Communication Technology, Mathematics and Science;
 - To develop our school-based e-learning platform (with e-resources) to facilitate the implementation of flipped classroom and to facilitate diverse learners' participation and
 - To foster our capacity building among teachers through training, project implementation, reflection and sharing.
- (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 students' self-regulated learning habit
- (ii) Please give background information to justify the demonstrated needs as mentioned in (b)(i).
 - School development plan: The proposed project is aligned with our school's 2014-17 development plan and it further assists us to achieve nurturing learners' self-regulated learning habit through e-learning, developing teachers' capacity and fostering our teaching and learning effectiveness.
 - Survey findings: A survey conducted shows that most of our students have access to computers and the Internet at home for this project. (A computer room is provided for students to use after school for this project.)
 - Literature review summary: Professor _____ has shared a lot of overseas' cases on the effectiveness of flipped classroom. Please refer to www.fed.cuhk.edu.hk and
 - Relevant experiences: Our English teachers and IT in Education Team visited the flipped Classrooms models and implementation model at Guangzhou, China in April 2014 and we have summed up the experience and studies and designed this pilot run.
 - Others (please specify) Self-regulated learning in both e-learning and paper-based learning are blended in our curriculum. This project goes further to integrate them in our regular teaching, learning and assessment practice and we believe it will help us to foster the developing of self-regulated learning in a long run.
- (c) Please elaborate the innovative ideas or new practices to enhance, adapt, complement and/or supplement the existing practices of the school.

Flipped learning puts the learners in the driving seat and guides them to learn by themselves at home before the classroom learning. With the background and pre-learnt knowledge, teachers can focus on areas students find challenging– they can divide students of diversifying abilities into different groups and prompt them to tackle the challenging tasks collaboratively. This ‘inverted’ learning model frees up class time for hands-on work– students learn by doing and asking questions, they can also help each other, a process that benefits both the advanced and less advanced learners.

Under this pedagogical change, we will have partial lessons on English Language and IT in Education Team to pilot in the first 6 months. A school-based e-learning platform will be developed to facilitate the secured storage of pre-lesson learning resources. The ‘conventional’ flipped classroom model usually uses videos as the main teaching materials, but for this project, we will allow our teachers to decide what to “assign” before the class so that it will fit our students’ needs. This pedagogical change is definitely a drastic one as students will learn not because we assign after-lesson exercises, but through pre-lesson learning. It is believed that, with this pedagogical change, students will be more able to tell and show what they know and go deeper into something more challenging.

This project we will focus on the pedagogy of English Language and Information and Communication Technology and other subjects such as Mathematics and Science. It is believed that students will have more opportunities to communicate with genuine academic purposes and apply what they are learning under this model. We believe this innovative approach will shed light on our future development of teaching and learning.

Lastly, the e-learning platform under our conceptual design will have the e-resources to generate instantaneous report to assess diverse learners’ participation and performance. Students’ learning progress in our school-based flipped classroom will be measureable and assessable, both at pre-lesson learning stage at home and during classroom activities.

(II) Project Feasibility

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

(i) Approach/Design/Activity

Strategy:

- This project adopts flipped learning as a strategy to promote (1) self-regulated learning and enhance (2) effectiveness of teaching and learning.
- Diverse tactics will be employed to engage students to learn (through reading and listening) the pre-lesson resources at our school-based e-learning platform so that diverse learners can participate actively and be well-equipped with background and language for the classroom learning.

Approach and Design: Step by Step “Semi-flipped learning”

- Semi-flipped learning approach will be created at our school. Our teachers will identify and co-plan the topics in our subject curriculum for piloting this new model and self-developed materials, videos or any resources suitable for our students and our target topics will be uploaded to the e-learning platform. All participated teachers will create their own playlist (Learning resources) so students can view the materials before the lessons.
- Some research show that it may bring heavy workload to teachers as to develop all the resources themselves in the beginning of the flipped learning. With this concern in our mind, we will pilot a few modules in the first stage and extend it to the second stage with more modules and in-depth use of flipped model.
- To ensure our teachers have higher chance to succeed, our IT team will provide more support in this project and we will share internally the details of implementation and encourage the other subjects to pilot this mode of teaching in a voluntary basis.

Activity: A new structure of learning at CCH

- In the early stage of planning, we will identify topics in our curriculum that teachers find it suitable for flipped learning approach. We will co-plan those resources and share them with our colleagues. Additional resources can be uploaded in later stage to enrich the self-learning resources.
- Teachers will upload pre-lesson learning resources (videos, audios, texts, pictures or URLs) to the platform and assign them to the group of students concerned.
- Students will pre-learn the topics before the lessons. During the lessons, teachers will spend 5 to 10 minutes highlighting the key learning items (can be a concept, a language

function and etc) and then start the lesson with further inquiry and application through discussion, presentation, group works and etc.

- Teachers will review the students' participation on the platform on specific contents regularly to adjust the classroom pace and facilitation flow.

(ii) **Key Implementation Details**

Project period: September 2015 – August 2016

Month / Year	Content / Activity / Event	Target Beneficiary / Participants
September 2015	Project planning, quotation for e-resources and e-platform, organise workshop to teachers, finalize logistics and implementation timeline, hardware preparation	School's administrators 10 teachers
September – December 2015	Develop the platform and e-resources, co-plan the learning modules and test the tablets and PC; organize parents' seminar and students' briefing, enhance conceptual understanding and go through case studies of flipped classroom within project team	Platform developer e-resources provider Facilitator for teacher training, 10 teachers and 1 administrator 480 parents and 480 students
	Flipped classroom in place, On-going development, review and enhancement, regular co-planning and lesson reflection between teachers and within the project team	10 Teachers
January – February 2016	Reflection, evaluation on platform data and from observation, small- group sharing with students to collect feedback; re-define 2 nd phase implementation approach and flow, platform and e-resources enhancement.	10 teachers, 20 Students Platform developer e-resources provider
February 2015 – June 2016	2 nd phase launching; sharing with parents on the project, students briefing to new S1 students, teachers' regular sharing and co-planning, survey to students and teachers, data analysis from module assessment and students' participation at the e-platform. Sharing our experience on our website and organizing a workshop to share with the other schools.	10 teachers 2 administrators (Principal and Vice Principal) The other schools' teachers
July – August 2016	Final evaluation	Project leader, teachers and students

Details of the pre-lesson learning resources and sample of teaching or learning activities showing how the pre-lesson learning resources can enhance the teaching and learning in different subjects:

In our school-based flipped model, we are expecting teachers to use relevant resources available in internet or produced by ourselves or provided by service provider(s). They can be presented in:

- Video
- Audio
- Text
- Graphical image or painting

They are resources for pre-lesson learning. Students can contribute on this as they enquiry on what they are going to learn.

Meanwhile our teachers will research on online resources that are interesting and relevant to what we have within our curriculum.

- Video resources master table is attached in Appendix 1.
- Learning and teaching samples are attached in Appendix 2.

- (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.):
 2 administrators and 10 teachers will collaborate in this project and participate in project design and planning, project implementation, training and supporting.
- (ii) Roles of teachers in the project:
- Leader
 - Co-ordinator
 - Developer
 - Service recipient
 - Others: Inventor of our school-based flipped learning model

- (c) Please provide the budget of the project and justify the major items involved.
Grant Sought: HK136,800

Budget item	Expenditure Detail		Justification
	Item	Amount(\$)	
Service	<u>School-based e-learning platform</u> - database design - user management - security control - content (video, audio, picture, URL and text) uploading - teachers can easily view students' access and participation - bi-lingual interface - students channel (Vote, share, post, like, discuss)	80,000 (All features are the important part we need to start on)	We consider this as our secured school-based e-learning platform to facilitate our project objective and we will centralize our pre-lesson lesson resources. It will also be able to cultivate the "home" feeling for our students and teachers. Since it is very school-based, subject teachers other than our project members can also get access to it easily. It is hoped that more subjects will participate in it in the future. Reporting system is needed for this project, as one of the key elements of the project is to create our school-based flipped model. Due to our students' diverse learning abilities, we need real-time and sophisticated data to assess whether our students have learnt the pre-learning materials before the lesson, and are engaged during the lesson. Their writing in response to our posted questions before or after classroom learning can serve as data to show their level of understanding. This will help us to promote Assessment for Learning in a long run. Some copyright or license fee for some contents is budgeted so that we can have higher flexibility to plan and hence achieve what we need.
	<u>Reporting features</u> - Serves as assessment for learning as it can extract real-time data on students' participation on voting, like, writing and sharing and their performance on some questions posted by teachers. - Can provide data on students' access to the platform so teachers can review the progress	20,000	
	<u>School-based e-resources</u> For resources that require copyright fee or convention to fit in our platform or anything fee related to the learning content or licenses. (e.g. e-readers for English language)	17,000	

Equipment	4 teacher tablets with screencast apps for teachers to use in the classroom (Students' tablets will be provided and supported under our school's development fund.) (\$3,700*4)	14,800	These 4 tablets will be shared among teachers for classroom facilitation. Teachers can also borrow the to prepare for the lessons and get familiar with the tablets interface. Besides, teachers can borrow it to lead group discussion outside the classroom so they can collaborate with students to extend their learning.
General expenses	Audit fee	5,000	For auditing.
Total Grant Sought (\$):		136,800	

Assets Usage Plan

Category	Item / Description	No. of Units	Total Cost	Proposed Plan for Deployment
Computer hardware	Tablets (with screencast apps)	4	\$14,800	Teachers continue to use tablets for lesson preparation.

(III) Expected Project Outcomes

- (i) Please describe how to evaluate the effectiveness of the project;
- Observation: To observe whether students participate actively in the classroom learning activities and their responses during the learning process. Attention will also be paid to the quality of students' responses in individual responses and group work.
 - Focused group interviews: A small-scale focused group interview will be conducted to collect students' feedback for project enhancement.
 - Pre- and post-activity surveys: Survey will be conducted to collect feedback from both students and teachers regarding students' learning attitude, preference and performance before and after the project (home-preparation and in-class learning) and in comparison to traditional ways of "lesson- then- homework" approach.
 - Performance change of students in assessment: Positive change of students' performance in assessment, including their module assessments and group work is expected
 - Others (please specify): Assessment report will be produced to show learners' participation in the pre-lesson learning process and their contribution at the e-learning platform through voting, discussion and response (audios, texts, videos and URLs) at the platform.
- and (ii) Please state the project deliverables or outcomes. *
- Learning and teaching materials
 - Resource package
 - DVD
 - Others (please specify) sharing at school's website
- *Ownership and copyright of the deliverables will be vested in the Grantor so that they can be disseminated to all schools.
- Learning and teaching materials (resources developed and upload to the platform will be owned by QEF except resources we subscribe or pay for copyright for the project year.)
 - Resources package (for lesson plans that developed by our teachers for classroom teaching and learning will be owned by our school)
 - Sharing at our school's website

Report Submission Schedule

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

Project Management		Financial Management	
Type of Report and covering period	Report due day	Type of Report and covering period	Report due day
Final Report 1/9/2015 - 31/8/2016	30/11/2016	Final Financial Report 1/9/2015 - 31/8/2016	30/11/2016

VIDEO RESOURCES MASTER TABLE

(FOR PRE-LESSONS)

Form Level	Subject	September - December	January - June
S.1	English	2	2
	Mathematics	2	2
	Science	/	/
	ICT	N.A.	N.A.
S.2	English	2	2
	Mathematics	2	2
	Science	/	/
	ICT	N.A.	N.A.
S.3	English	2	2
	Mathematics	2	2
	Science	/	/
	ICT	2	2
S.4	English	2	2
	Mathematics	2	2
	Science	2	2
	ICT	1	1
S.5	English	2	2
	Mathematics	4	4
	Science	4	4
	ICT	1	1
S.6	English	2	2
	Mathematics	4	2
	Science	4	4
	ICT	1	1

LEARNING AND TEACHING SAMPLES

Sample 1 (English Language): Express English: Shopping

<http://www.youtube.com/watch?v=X5qiBigtc8w> (0:44)

STUDENT CORNER:

1) Do you prefer chain stores or small boutiques shops?

Suggested answer: Chain stores make it easy to find a specific item very quickly; boutique shops offer some unusual, quirky one-offs that can be satisfying to find.

2) Is it good to have choice when we're shopping?

Suggested answer: Choice is good – but too much choice makes it almost impossible to make a decision sometimes.

Pre-lesson Learning: Lead-in Video

Hong Kong's Gender Gap Grows, by WSJ Live

<http://blogs.wsj.com/chinarealtime/2012/07/31/hong-kongs-gender-gap-grows/tab/video/> (3:26)

[1] Trying to find someone to date is hard enough, but it is now statistically more difficult for women in Hong Kong to locate a good man. The numbers don't lie: ten years ago, the ratio was 960 males per 1000 females. Now, there are just 876 men to every 1000 women.

[2] So, will women now contemplate the option of 'marrying down'? Will they settle for a partner with a lesser standard of education or from a lower social class? Not according to the statistics.

[3] The usual age for marrying is somewhere between 20 and 49 years. And yet in this age group, the number of unmarried Hong Kong men has risen from 534,000 ten years ago to 545,000 today. You would have thought, perhaps, that with men being somewhat scarce in the territory, they would be eagerly snapped up by the number of women eager to find a husband. Apparently not: the number of never-married women also rose in the same time period, from 448,000 to 509,000.

[4] I'll do the maths for you: the increase in never-married women was more than five times that of never-married men.

[5] Are women getting more fussy about who they want to marry? Or is it just that the men aren't good enough for them?

[6] The statistics are derived from the census data acquired in Hong Kong. The Census and Statistics commissioner, Lily Ou-Yang Fong, pointed out that, "Being able to find a spouse is a personal matter and not only related to the sex ratio." She is right that statistics are only one part of the picture. Life has changed enormously in the recent past, especially for women, who now have many more opportunities available to them. Family culture has changed too and young women are not immediately expected to marry, produce babies and look after the old folk. Women today undoubtedly have higher expectations of a marriage partner than their grandmothers' generation.

[7] Men and women are now getting married about a year older than they did ten years ago: men are now on average 31.3 years of age when they marry, and women are 28.8. It is likely that both social and economic factors have an impact on these intriguing results, although unfortunately the census doesn't pry so closely into personal lives as to draw any firm conclusions.

Sources:

1. http://www.thestandard.com.hk/news_detail.asp?pp_cat=11&art_id=119960&sid=35496581&con_type=1&d_str=20120222
2. <http://www.census2011.gov.hk/en/press-release-summary-report.html>

Class Discussion

1. What can you conclude about the analysis of census data?

The passage shows that although census data allows us to see the big picture of what is going on it does not give us all the answers and does not tell us why something is happening. For example, we know from the census data that men and women are marrying later but we would need to use different methods to discover the reasons behind this.

2. What does this piece suggest women want in their marriage partner?

The passage suggests that as women have more options available to them in life, they are likely to have higher expectations of a potential marriage partner.

Sample 2 (Mathematics):

S.1 Chapter 4 Introduction to Geometry

Drawing Angles

Video Resources:



<http://goo.gl/XgmXzX>



<http://goo.gl/nAdW3a>

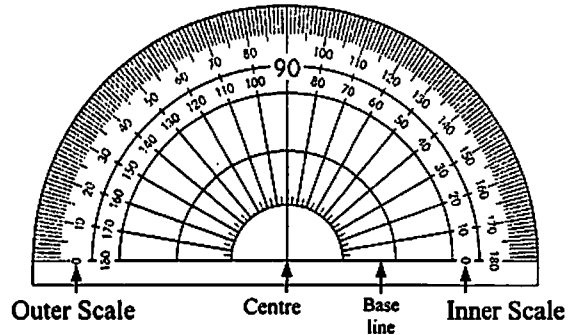


<http://goo.gl/XGzkfc>



<http://goo.gl/wvfwu>

The shape of a protractor is generally a **semi-circle** which is divided into 180 equal parts. Each part indicates **1 degree**.



Watch the above videos, read p.4.14-4.15 and complete **Class Exercise 4.2 on p.4.16**.

Summary:

<p>Scale of understanding (4 the highest):</p> <p>I understand / do not understand / have learned</p>	<p>1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/></p>
---	---

Extended Question:

1. Complete the following table.

Angle	2 right angles	0.5 straight angle	$\frac{2}{9}$ round angles	4 right angles	$\frac{3}{4}$ round angles	$\frac{7}{8}$ straight angles
Size						
Type of angle						

Classwork: Ex. 4.2 #2, 6, 10, 15, 18

Sample 3 (Science): How Long Can People Survive Without Gravity?

Content Sources:

<http://www.youtube.com/watch?v=Y1ujxiTgH64>

STUDENT CORNER:

1) How does zero gravity affect the muscles in a human body?

Suggested answer: The absence of gravity weakens our muscles. The muscles begin disintegrating and diminishing.

2) What is triggered every time we run or walk?

Suggested answer: The impact triggers fresh bone tissue growth.

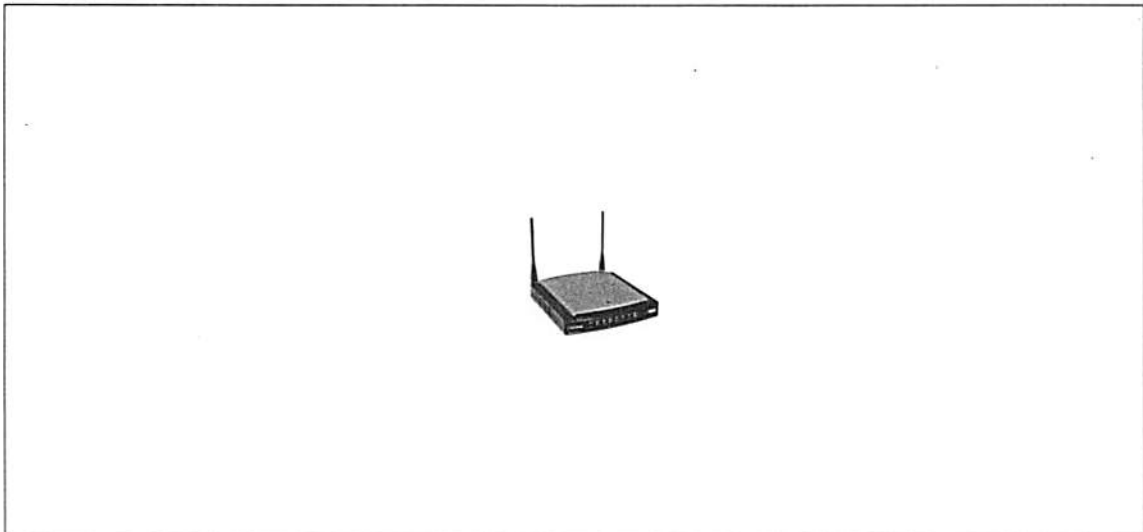
Sample 4 (ICT): S.4 ICT 資訊及通訊科技: 建網及互聯網基本知識

1. 從書本及兩段影片，寫下「電腦網絡」的定義。

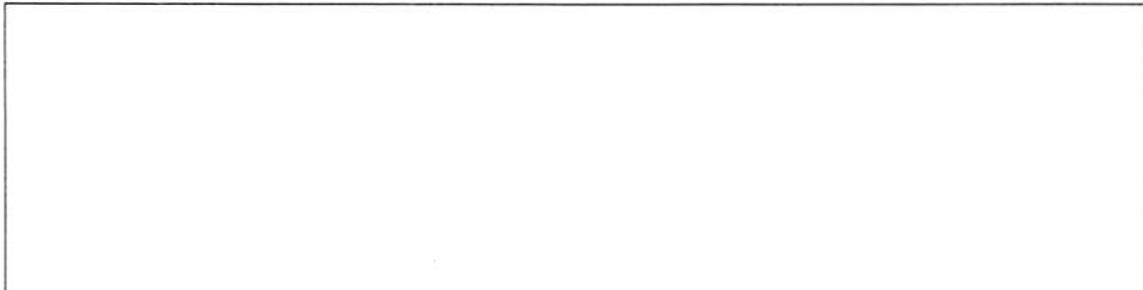
書本 (p.167)	影片一： https://youtu.be/JvXro0dzJY8	影片二： https://youtu.be/FMdBfoQOSng

2. 從兩段影片所學，列出電腦網絡的六個主要服務。

3. 畫出你家中的網絡結構。



4. 參考圖 16.3，畫出學校的網絡結構。



5. 舉出局域網(LAN) 和廣域網(WAN) 的兩個分別。

6. 就局域網的兩種架構，比較「對等網絡」和「客戶/伺服器」的優點及缺點。

	對等網絡	客戶/伺服器
優點		
缺點		