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| Ref. No. 2010-12/OBE/16 |
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**Projects on Promoting Outcome-Based Education  
2010-12  
Application for OBE Funding**

**PART I: General Information**

**1. Title**

Improving Learning by the Students for the Students: Student-Directed Creation of Blended Learning Bites

**2. Name(s) of Applicant(s)**

Project Leader

| Name              | Dept | Post                             | Groupwise | Ext. |
|-------------------|------|----------------------------------|-----------|------|
| Prof. Iris Benzie | HTI  | Chair Professor & Associate Head | htbenzie  | 8572 |

Team Member(s)

| Name                   | Dept | Post                              | Groupwise | Ext. |
|------------------------|------|-----------------------------------|-----------|------|
| Mrs. Winnie Lee        | SAO  | Head, Student Development Section | sawinnie  | 6809 |
| Dr. Karl K. L. Fung    | HTI  | RAD Prog. Leader                  | htkarl    | 8569 |
| Dr. Daniel M. Y. Sze   | HTI  | MLS Prog. Leader                  | htsze     | 8591 |
| Dr. Raymond K. Y. Tong | HTI  | BME Prog. Leader                  | htong     | 7662 |
| Mr. Namkiu Chan        | HTI  | Project Associate                 | htnamkiu  | 8659 |

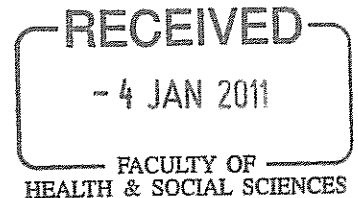
**3. Total funding requested**

HK\$ \_\_\_\_\_

**4. Expected duration of project: \_\_\_\_\_ 16 \_\_\_\_\_ months**

Proposed commencement date: 1 March 2011

Expected completion date: 30 June 2012



## PART II: DETAILS OF PROPOSAL

### 1. Project objectives and significance

*(What are your objectives in initiating this project? How does it align with the goals and targets of the University, your faculty/ school or your department in implementing OBE?)*

In PolyU's Strategic Plan for 2008/09–2011/12, the University has clearly stated the institutional learning outcomes and the desired graduate attributes expected of our graduates. The institutional learning outcomes can be broadly understood as covering four domains of development, including the development as competent professionals, creative problem solvers, effective communicators, and responsible global citizens. The Strategic Plan has also captured a broad global intent to incorporate blended learning, in particular, "to promote the wider use of blended learning (i.e. a combination of e-learning and face-to-face teaching/learning) to enhance quality".

In this project, we aim at enhancing the development of students' desired attributes through their active participation in the production and evaluation of a library of bite-sized educational aids. The educational aids, as developed by the students and for the students, will subsequently be integrated into the undergraduate curriculum and incorporated into the institutional-wide Learning Management System (LMS) for dissemination and deployment. Specifically, our students' generic skills on teamwork, problem solving, critical thinking, creative thinking, entrepreneurship, independent learning and communication will be addressed, as well as the reinforcement of their discipline specific knowledge. Under the guidance of academic advisors and project coordinators, students will take up the roles of creators, producers and consumers of the educational aids for blended learning on topics of intrinsic interest or challenge to them.

*As the producers*, students are asked to work in teams (with an Advisor/Mentor from academic staff and in association with the Project Associate) and produce a learning aid on one 'bite-sized' aspect of discipline-specific skill, topic, technique, instrument, or knowledge. This project will provide support for the development of educational aids to cover the production expenses as well as carrying out related experiments and/or field work to collect data; this will be capped at \$3K for each team. With the funding requested, up to 5 teams from each of the three undergraduate programmes hosted by HTI will be granted support, based on the quality of the submitted proposal. The final product could be in a form of a few presentation slides with voice over, a short video clip, a game, a case study, a problem-solving exercise, etc. This could be regarded as a 'mini-capstone' type of project for them. *Students will embed an OBE approach in setting their own learning outcomes for the educational aids to be developed, deciding on how the attainment of the learning outcomes can be assessed, and designing the corresponding assessment tasks*. To introduce some element of competition, entrepreneurship and reward, learning aids will be assessed (by students and teachers) for effectiveness, appeal and creativity, and 4 or 5 prizes of up to a maximum of HK\$5K each (awarded with financial support from the department, not from this project funding) will be awarded to recognize student efforts in developing outstanding educational/learning aids that can be used for future cohorts in a blended learning approach.

*As the consumers*, students are given the opportunities to use the learning aids (having been developed by the previous cohort of students) and are asked to critically evaluate the effectiveness of the aids. Building on the already-developed educational aids, students are encouraged to refine them for future use, or make reference to them and produce new ones on other topics of interest.

#### **In essence, the objectives of this project can be summarized as:**

- To develop desired attributes (including teamwork, problem solving, critical thinking, information gathering, creative thinking, entrepreneurship, independent learning and communication, ethical conduct) in our students through their active participation in the creation, production, consumption, and evaluation of a library of bite-sized educational/earning aids for blended learning, adopting an OBE approach
- To develop students' abilities to reflect on learning experiences to enhance their professional competence
- Reinforce and further develop some particular discipline-specific concept, skill, technique or knowledge in a student-centred and outcome based approach

**2. Target users** (*Who are the intended users of the deliverables of the project?*)

Students as *producers*, and who would:

- Work in a team to compile a proposal on producing bite-sized educational aids for blended learning
- Set their own learning outcomes for a selected skill or topic
- Decide on how the attainment of outcomes can be assessed and design the assessment tasks

Students as *consumers*, and who would:

- Use the educational aids (developed by the previous cohorts of students)
- Evaluate the effectiveness of the educational aids for blended learning
- Build on the already-developed educational aids and have them refined for future uses

Teachers as *Mentors and Facilitators*, and who would:

- Provide guidance and support to the students in acquiring the necessary knowledge and skills to develop the discipline-specific educational aids
- Learn more about the students' perspectives and students' beliefs and approaches to learning, which could help develop better strategies on teaching and mentoring
- Use (or recommend to students) the learning aids developed as complementary materials in T&L activities to improve student learning
- Benefit from gaining insight into those topics/skills/information/concepts etc that students find most difficult or important
- Gain understanding of how students think they can learn and/or teach others about these topics etc.

*If the target users are students, complete the table below:*

| Programme/<br>subject code | Programme/subject title                   | Credit<br>units | Mode of<br>study | Student<br>intake quota<br>per year         |
|----------------------------|---|-----------------|------------------|---|
| 55002 BME                  | BSc (Hons.) in Biomedical Engineering     | 110             | Full Time        | 30  |
| 55002 MLS                  | BSc (Hons.) in Medical Laboratory Science | 98              | Full Time        | 32<br>(increasing<br>to 44 from<br>2012/13) |
| 55003 RAD                  | BSc (Hons.) in Radiography                | 118             | Full Time        | 52<br>(increasing<br>to 98 from<br>2012/13) |

*Please insert rows in the table if more space is required for additional information.*

**3. Outcomes and deliverables**

**(a) Major outcomes and deliverables**

*(What will be the major outcomes and deliverables of the project?)*

|      | Major outcomes and deliverables with descriptions  |
|------|--|
| (i)  | Students with Desired Attributes: Through the production and evaluation of the bite-sized educational aids for blended learning, students could develop desired attributes on teamwork, problem solving, critical thinking, creative thinking, ethical conduct and communication.  |
| (ii) | Discipline-Specific Educational Aids: A library of bite-sized educational aids for blended learning produced by the students for the students, incorporated into the institutional-wide Learning Management System (LMS), which could help cope with double cohort as well as address the issue of inadequacy of laboratory settings |

|       |  |
|-------|--|
| (iii) | Reflective Journals by Students as Producers: Students are asked to report the challenges they have encountered and reflect on their problem solving process   |
| (iv)  | Evaluation Reports by Students as Consumers: Students are provided with a guiding rubrics to help them with the peer assessment on the effectiveness of the educational aids in attaining the intended learning outcomes |

Please insert rows in the table if more space is required for additional information.

**(b) Plan for developing and piloting / implementing the deliverables**

*(Detail the plan and procedures that you will adopt to develop and pilot/ implement the outcomes and deliverables. Also specify the dates of the pilot / implementation period)*

|       | Period              | Activities  |
|-------|---------------------|---|
| (i)   | Mar 2011 – Aug 2011 | <ul style="list-style-type: none"> <li>- Design a framework and develop an online platform for organizing the library of bite-sized educational aids for blended learning</li> <li>- Compile a list of sample topics and application scenario</li> <li>- Plan and develop a campaign for promoting the competition on "Creating Blended Learning Bites" among undergraduate students</li> <li>- Plan and develop curriculum for workshops on skills development in collaboration with colleagues from Student Affairs Office</li> <li>- Develop a set of validated instruments, including questionnaires and semi-structured interview scripts, to collect qualitative and quantitative measures to evaluate the effectiveness of the project</li> </ul>  |
| (ii)  | Sep 2011 – Jan 2012 | <ul style="list-style-type: none"> <li>- Launch the promotional campaign on "Creating Blended Learning Bites", targeted at the students of the three undergraduate programmes through various channels, including banner ad at departmental website, mass email, and messages relayed from class representatives</li> <li>- Issue the invitation for proposals at the project website, including sample topics and application scenario as well as a list of academic advisors with contact information for consultation (Deadline for Submission: Early December 2011)</li> <li>- Conduct a briefing session for students to further explain the regulations of the competition and encourage them to form their own teams and consult with academic advisors of their choices to come up with workable proposals for submission</li> <li>- Release the results of screening: Up to 5 teams from each programme will be granted for support, based on the quality of the submitted proposal, with overall funding limit for each team proposal at \$3,000</li> </ul> |
| (iii) | Feb 2012 – Jun 2012 | <ul style="list-style-type: none"> <li>- Students in teams attend the series of workshops on skills development conducted in collaboration with colleagues from Student Affairs Office</li> <li>- Students in teams work with academic advisors to articulate intended learning outcomes, to design on how the attainment of outcomes can be assessed, and to develop the educational aids for blended learning</li> <li>- Students in teams submit their educational aids, together with the reflective journals reporting the challenges they have encountered and reflecting on their problem solving process</li> <li>- Announce the results of competition: Winning entries will be acknowledged and awarded with prizes (financial support from the department has been sought in providing prizes for the students in recognition of their efforts in developing outstanding educational aids)</li> </ul>  |

Planned pilot / implementation period of the deliverables:

Start Date (dd/mm/yyyy): 01/03/2011

End Date (dd/mm/yyyy): 30/06/2012

#### 4. Dissemination and sharing plan

*(How are you going to disseminate and share the outcomes and deliverables of your project?)*

The following arrangements will be made to disseminate findings from this project:

- (i) The library of bite-sized educational aids for blended learning will be showcased via an online platform made available to all teachers and students.
- (ii) Forthcoming cohorts of students will build on the educational aids, and revise, refine and extend these for subsequent use in teaching and student-centred learning activities.
- (iii) Seminar/workshop(s) will be conducted to showcase the project outcomes, serving as an experience sharing session for the project team to explain in detail the findings to colleagues across PolyU.
- (iv) New students can be introduced to the learning bite library during Orientation and freshman seminar activities.
- (v) The library will be made available to our students and teachers to use to promote student learning
- (vi) A paper presenting the implementation and evaluation of the project will be prepared for publication in a peer-reviewed journal.

#### 5. Evaluation plan

*(How do you plan to evaluate the effectiveness of the project, particularly its impact on the implementation of OBE in PolyU?)*

***\*For the purpose of monitoring the quality of funded projects, an evaluation plan with clear evaluation objectives, appropriate methodologies and specific timeline must be included in the proposal.***

Both formative and summative forms of evaluation will be conducted for this project. A set of validated instruments, including questionnaires and semi-structured interview scripts, will be used to collect qualitative and quantitative measures as evaluation data through the following channels:

- Monitoring the Progress: Students and academic advisors work together and go through the process of "OBE in Action" as a team, with agreed-upon milestones
- Assessing the Impact on Learning: Discuss with the students as producers on the challenges they have encountered and the lessons they have learned after they have developed the bite-sized educational aids for blended learning
- Evaluating the Educational Aids: Assign a selected group of students as consumers of some educational aids, and ask them to assess their effectiveness in attaining the intended learning outcomes and to suggest possible directions for further refinement
- Also, we will record usage of the learning aids by subsequent cohorts of students and obtain feedback from teachers who sue or recommend them to students

## 6. Impact

*(How will the project contribute to the success of the implementation of OBE in PolyU/ Faculty/ School/ Department/ programme/ subject?)*

The project will have a direct and positive impact on student learning at all levels. Specifically,

### (i) Impact on Students:

- The project will actively engage our students into OBE (know-what and know-how): Students have to set their own intended learning outcomes and devise an action plan to achieve them (self-regulated learning)
- The project represent "OBE in Action" with the participation of both students and teachers to improve learning outcomes as a team but with student centred focus is indeed what we are aiming at with OBE
- Getting students to think about what they find difficult and/or most important in their courses
- Getting students to think about how they themselves and other students (their target audience for their educational aids) learn and in what way learning could be brought about effectively
- Providing students with an opportunity to work in a team and produce something creative, entrepreneurial and useful for other students - while learning more about that topic and skills themselves
- Linking up undergraduate students from different cohorts for peer mentoring
- Linking up with alumni: Strengthened alumni network, and be aware of concerns and issues in the professional arena as well as the need for lifelong learning as a reflective practitioner

### (ii) Impact on Teachers:

- Providing teachers with an insight into students' perceptions on how they learn
- Providing teachers with an insight into what topics and skills students think are difficult, confusing, or important enough to need an educational aid tailored for their learning
- Providing teachers with evidence to "showcase" our students' creativity and competence on problem-solving
- Producing a library of useful 'bite-sized' educational aids for blended learning that teachers and/or future students can use - especially useful with the proposed increased student intakes and with double cohort challenge through 2012/13 to 2014/15

**PART III: BUDGET OF PROPOSAL**

**\*Important Notes**

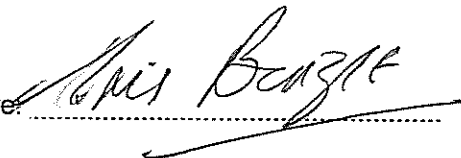
1. Funding requests for equipment and/ or software will be considered only if:
  - a. the equipment / software is essential to the successful implementation of the project, AND
  - b. it is not available in the department concerned. The Project Leader has the responsibility to check this out.
2. The purchasing policies and procedures of FO must be followed for the procurement of approved items.
3. Funding request for conference attendance will not be considered.

**Project Leader**

Name: PROF. IRIS F.F. BENZIE

(in block letters)

Signature:



Dept: HTI

Date:

04/12/2011

**PART IV: ENDORSEMENT**

**Endorsement by Head of Department (Host Department of the project leader):**

Comments on the proposal:

Name: PROF. BENJAMIN YUNG Signature: Ben Yung Date: 4/1/2011  
(in block letters)

**Endorsement by Chair of F/SLTC (Host Faculty/School of the project leader):**

Comments on the proposal:

*Rank #2 proposal that permeates through 3 programmes*

Name: Dr Danny Gohel Signature: [Signature] Date: 20/1/11  
(in block letters)

**Endorsement by Dean of Faculty/ Director of School (Host Faculty/School of the project leader):**

1. Comments on the proposal:

*FLTC Chair's remarks are endorsed*

2. Priority of the proposal (if there is more than 1 submission from the Faculty/School):

*see above*

Name: Prof. George Woo Signature: [Signature] Date: 21 Jan 2011  
(in block letters)

Please return this form to Miss Kevinia Cheung,  
Secretary of the Working Group on Outcome-Based Education, c/o Educational Development Centre  
by 14 January 2011