



香港中學校長會有限公司
THE HONG KONG ASSOCIATION OF THE HEADS OF SECONDARY SCHOOLS LIMITED
(Incorporated in Hong Kong with limited liability)
(the "Association")

義務總幹事
Hon. Executive Secretary

黃謂儒 校長
Mr. Wong Wai Yu

義務顧問
Hon. Resources Adviser

李石玉如 校長
Mrs. Lee Shek Yuk Yu

主席
Chairman

鄧振強 校長
Mr. Tang Chun Keung

副主席
Vice Chairmen

劉瑤紅 博士
Dr. Lau Yiu Hung

連鎮邦 校長
Mr. Lin Chun Pong

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Hon. Secretaries

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Ms. Chan Shin Kwan

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Ms. Pang Wai Lan

司庫
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邱潔瑩 校長
Ms. Yau Kit Ying

執行委員會委員
Executive Committee
Members

鄭繼霖 校長
Mr. Cheng Kai Lam

羅紹明 校長
Mr. Lo Shiu Ming

溫家傑 校長
Mr. Wan Ka Kit

本會網址
Official website



Notes for Preparation of Invitation to Tender

Ref. No. : HKAHSS/Tender/2020/001

Date: 27 March, 2020

Subject: Supply of Service of the Design and Production of an Adaptive Learning On-line Platform

Description:

The Contractor is required to design and produce an Adaptive Learning On-line Platform that incorporates the features, infrastructure listed in the tender document.

In addition the contractor is required to design a game that can be incorporated into the above on-line platform with attractive Graphic Design, an Intelligent Tutor system, Reward System and Gamification as required.

Enquiry:

Mr. Cheng Kai Lam, Joe, Baptist Wing Lung Secondary School, Tai Hing Gardens, Phase 2, 6A Ho Hing Circuit, Tuen Mun, N.T.

Tel.: (852) 24643638

Fax: (852) 24634382

Email: ckl@bwlss.edu.hk

Closing Date and Time:

12:00 noon (Hong Kong time) on 27 April 2020 (Monday).

Late tenders will not be accepted.

In case Tropical Cyclone Warning Signal No. 8 or above is hoisted or Black Rainstorm Warning Signal is in force for any duration between 9:00 a.m. and 12:00 noon on the tender closing date, the tender closing time will be postponed to 12:00 noon on the first working day after the Tropical Cyclone Warning Signal No. 8 is lowered or the Black Rainstorm Warning Signal has ceased to be in effect.

Submission of Tenders:

Tenders are to be addressed to the Convenor, the Adaptive Learning Platform Management Committee, The Hong Kong Association of the Heads of Secondary Schools Limited deposited in the Tender Box situated at Baptist Wing Lung Secondary School, Tai Hing Gardens, Phase 2, 6A Ho Hing Circuit, Tuen Mun, N.T.



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Ref. No. HKAHSS/Tender/2020/001

Date 27 March 2020

By Registered Mail

Dear Sirs,

**INVITATION TO TENDER
FOR THE SUPPLY OF SERVICE OF
THE DESIGN AND PRODUCTION OF AN ADAPTIVE LEARNING
ON-LINE PLATFORM**

1. You are invited to tender for the supply of the services as specified in the enclosed written tender schedule. If you are not prepared to accept a partial order, please state this clearly on the written quotation/tender schedule.
2. Your sealed written tender, in duplicate, should be clearly marked on the envelope:
Tender for Supply of Service of the Design and Production of an Adaptive Learning On-line Platform. The envelope should be addressed to the Convenor, the Adaptive Learning Platform Management Committee, The Hong Kong Association of the Heads of Secondary Schools Limited deposited in the Tender Box situated at Baptist Wing Lung Secondary School, Tai Hing Gardens, Phase 2, 6A Ho Hing Circuit, Tuen Mun, N.T. and arrive not later than 12:00 noon on 27 April 2020. Late tenders will not be accepted. **Please do not identify your company on the envelope.** Your tender will remain open for 90 days from the "Closing Date", and you may consider your written tender to be unsuccessful if no order is placed with you within these 90 days.
3. If you are unable or do not wish to tender, it would be appreciated if you return the written tender form with reason to the above address at your earliest convenience.
4. Written Tenders will be accepted on an itemised basis. Please state if your company is willing to accept this clause.

Yours sincerely,

Mr. WONG Wai Yu, Michael
Convenor, The Adaptive Learning Platform Management Committee,
The Hong Kong Association of the Heads of Secondary Schools Limited



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27 March 2020

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Dear Sir/Madam,

Offering Gifts to our Organisation's Staff and Members

I am pleased to inform you that our organisation has formulated a clear policy on the solicitation and acceptance of gifts by staff or members in their official dealings.

In order to maintain a team of clean and honest staff, it is stipulated in our organisation's policy that no staff or members shall solicit or accept gifts, money or any other form of advantages in their course of duty without the special permission of the Management Committee.

Our staff and members have understood the policy in which any breach will result in disciplinary action and the organisation is ready to report all offences to the Independent Commission Against Corruption (ICAC).

We therefore earnestly request your support to our commitment of managing our organisation in a fair and just way. Should any member of our staff approach you for an advantage, please report to me immediately.

Thank you for your cooperation.

Yours sincerely,

Mr. WONG Wai Yu, Michael
Convenor, The Adaptive Learning Platform Management Committee,
The Hong Kong Association of the Heads of Secondary Schools Limited

Written Tender Schedule (to be completed in duplicate)
HKAHSS Adaptive Learning On-line Platform Specification

Part 1

The features and requirements listed in this section must be included in the design and production of the Adaptive Learning On-line Platform.

	Description/Specification
1	<u>The Important Features incorporated in ALP System</u> <ol style="list-style-type: none"> a. <u>Adaptive Learning:</u> The platform uses computer algorithms to orchestrate the interaction with the students and deliver customized resources and learning activities to address the unique needs of each student. b. <u>Artificial Intelligence(AI):</u> When the system collects sufficient amount of data, the platform will be able to deliver suitable question items to students based on their level of mastery of learning so as to <ol style="list-style-type: none"> (1) analyse students' learning pattern and explore their learning motivation (2) focus on students' learning goals (3) master students' learning progress (4) recognize students' learning difficulties / strengths and weaknesses (5) automatically offer learning paths that vary according to changes in students learning abilities and attitudes c. <u>Learning and Teaching:</u> <ol style="list-style-type: none"> (1) Students understand their learning needs and learn step by step according to one's pace (2) Teachers can prepare teaching in an easier and more focused way, such as prepare self-regulated guidelines/worksheets, draft lesson plans, offer assignments and assessments (3) Teachers can understand students' strength and weakness more accurately and thus offer more focused help. (4) Schools can understand students' learning abilities clearly and can better deploy resources to help them. (5) Educators can incorporate the insights gained from the learning data into curriculum and assessment design in the long run. d. <u>Engagement:</u> <ol style="list-style-type: none"> (1) Students are engaged through Social Learning and Gamification. (2) Users are attracted by interesting graphics and animation.

	Description/Specification
	<p>e. <u>Interface and Design:</u></p> <ol style="list-style-type: none"> (1) The System would be web-based and must run on <u>cross platforms (Mac, Windows, IOS and Android).</u> (2) It must be a <u>responsive web design (RWD)</u> which is an approach to web design that makes web pages render well on a variety of devices and window or screen sizes. (3) All interfaces would be bi-lingual. (4) Users are allowed to provide feedback to the system. <p>f. <u>Security and Privacy:</u> The proper security management processes must be in place to protect data as well as to mitigate the security risks in the system.</p> <ol style="list-style-type: none"> (1) An independent security assessment should be conducted to ensure full compliance with project security requirements by assessing the system as well as the source code. (2) Identification and Authentication <ul style="list-style-type: none"> ● Users and processes are authenticated. ● If the authentication is based on passwords, the user passwords being handled and stored with security. (3) Data Protection <ul style="list-style-type: none"> ● The data protection mechanism is implemented. ● All data is protected adequately at rest and in transit. ● If encryption is used, the encryption should be handled with security. (4) Error Handling <ul style="list-style-type: none"> ● The error messages should be handled with care. ● It should be guaranteed that there is no any chance of an information leak (5) Operation <ul style="list-style-type: none"> ● The segregation of duties and least privilege principles must be enforced. ● All built-in user IDs, testing user IDs, and IDs with default passwords should be removed from the system, web servers and application itself before final production is launched. ● The system administration procedures, change management procedures, disaster recovery procedures and backup procedures are fully defined. <p>The supplier should comply to the <u>personal data privacy policy</u> by the office of the Privacy Commissioner for Personal Data.</p> <p>g. <u>Confidentiality and Ownership Rights:</u></p> <ol style="list-style-type: none"> (1) The system content, source code, script, design and visuals are all owned by the HKAHSS. (2) All the contents and learning materials should not be disclosed to others. Upon completion, <u>all the contents and learning materials should be returned to the HKAHSS.</u>

	Description/Specification
2	Others
	<p>a. <u>Supplier's Credentials:</u></p> <ol style="list-style-type: none"> (1) The supplier must provide a verifiable brief summary of the company's background and history. (2) The supplier must provide resume of major staff responsible for this project and their relevant project experience (3) The supplier must provide a Hong Kong Business Registration number and enclose a copy of the local business registration certificate. (4) The supplier must provide a summary of projects done in the last three years and have a proven reputable track record of completion of similar projects. Experience of completing projects related to education can be listed and would be a bonus. Enclosure of previous sample work would help us understand the project and scope involved. (5) Provision of referee and contact is preferable. <p>b. <u>Payment by stages:</u> The payment is to be disbursed in stages. Before the start of project, HKAHSS Adaptive Learning Platform Management Committee and the supplier agree on the project plan and quality plan, which specify the quality and quantity of services and deliverables of each project phase and their methods of acceptance. During each project phase, HKAHSS Adaptive Learning Platform Management Committee would then base on the agreed plans to assess if the services and deliverables delivered by the supplier are accepted. Upon acceptance of its services and deliverables of a project phase by HKAHSS Adaptive Learning Platform Management Committee, the supplier would produce the invoice for the accepted part of the contract to HKAHSS Adaptive Learning Platform Management Committee for arranging payment.</p> <p>c. <u>Pitching</u></p> <p>The supplier would be invited to participate in a business pitch or interview to present and explain the ideas. Details would be given by HKAHSS after shortlisting qualified potential suppliers.</p>

Part 2

The following outlines the requirements and specifications of the design and production of the Adaptive Learning On-line Platform and the Game, graphic design and intelligent tutoring system. The amount required for the two items are to be listed separately.

	<u>Requirements and Specifications</u>	<u>Amount HK\$</u>
1.	<u>Infra-structure of the ALP Platform</u> There are five interfaces included in the ALP Platform: a. 1.1. School Administration Interface b. 1.2. Subject and Curriculum Management Interface c. 1.3. Teacher Interface d. 1.4. Student Interface e. 1.5. Parent Interface	Amount HK\$ (1,1.1-1.5) <hr/>
1.1	<u>School Administration Interface</u> a. Log in by school administration officers only for quick access to different technical and administrative management features. b. Include different sub-interfaces: a. School Profile; b. School Account Management; c. Class Management c. <u>School Profile</u> : include school particulars, such as school name, address, phone number, name of principal, teacher-in-charge, etc. d. <u>School Account Management</u> : manage the particulars of administration officers, teachers and students (1) Password Generation and Management (2) Different level of Access Right (e.g. read only, read and write, etc.) e. <u>Class Management</u> : manage different classes in different school years (1) Set up school years, classes, teachers and students' detail by batch (2) Manage subject groups and details (3) Necessary reports for levels, classes and individual students are generated online and csv version for evaluation	
1.2	<u>Subject and Curriculum Management Interface</u> a. The Subject and Curriculum Management Interface manages the input and browsing pathway of the "content" of the platform. b. The browsing pathway is adjustable and guided by a Knowledge Tree or Knowledge Nodes by HKAHSS. The Knowledge Tree or Knowledge Nodes will be updated and adjusted and needs to be imported into the system through an interface accessible to system administrator.	

	<u>Requirements and Specifications</u>	<u>Amount HK\$</u>
	<ul style="list-style-type: none"> c. The system would allow school users to import materials to the system. d. This interface will have the following functions: <ul style="list-style-type: none"> (1) Log in by school administration officers or subject teachers for knowledge or content management (2) Input topics or themes for different subjects corresponding to Knowledge Nodes. (3) Import learning materials, exercises, multi-media and Q&A bank into the platform according to their level of difficulties and Knowledge Nodes 	
1.3	<u>Teacher Interface</u>	
	<ul style="list-style-type: none"> a. Include different sub-interfaces: a. Class; b. Students b. <u>Class</u> <ul style="list-style-type: none"> (1) Invite and manage class members (2) Set specific settings for individual classes (3) Manage students' individual <u>learning profiles and reports</u> (4) Monitor students' individual <u>learning history</u>, including their self-learning progress, performance of the exercises and quizzes with online and csv version for evaluation c. <u>Subject</u> <ul style="list-style-type: none"> (1) <u>Assign the learning materials, exercises, quizzes and Intelligent Tutors to the class/group</u> (2) <u>Manage level/class/group progress reports with online and csv version for evaluation</u> (3) <u>Adjust the level of difficulties for individual students by the teachers.</u> 	
1.4	<u>Student Interface</u>	
	<ul style="list-style-type: none"> a. The student interface is organized by <u>Subject, Levels and then Topics</u>. b. Self-learning, assignments, quizzes, Intelligent Tutor and peer learning should be engaged. c. <u>AI is engaged to facilitate self-learning by automatic distribution of the question items with suitable level of learning so as to cater for individual differences.</u> d. <u>Self-monitored learning history and report are shown online</u> e. For peer learning, grouping and discussion board are included. Chatrooms would be a bonus. f. Also provides access and management to the game and reward system. <u>An attractive Reward system and gamification</u> provides clear learning objectives and visible learning progress chart to motivate students' learning g. Manage Intelligent Tutor so as to provide immediate and customized instruction or feedback to students. School can choose whether Intelligent Tutor will pop up only when the students request, or she will pop up when the needs of students are identified. 	
1.5	<u>Parent Interface</u>	
	<ul style="list-style-type: none"> a. Parents can <u>access</u> students' learning history and report. 	

	<u>Requirements and Specifications</u>	<u>Amount HK\$</u>
2	<u>Game, Graphic Design, Intelligent Tutor and Reward System</u>	Amount HK\$ (2)
	<p>a. Design an interesting simulation game, with characters that have clear goals to upgrade themselves based on an attractive reward system. The game is to be incorporated into the Adaptive Learning System which will be web-based and must run on cross platforms (Mac, Windows, IOS and Android).</p> <p>b. The Platform:</p> <ol style="list-style-type: none"> (1) The design of the Intelligent Tutor must be original. (2) Intelligent Tutors must be selective. (3) Screen layout must meet the requirements of the programming company. <p>c. Game:</p> <ol style="list-style-type: none"> (1) The game itself needs to be linked to learning. (2) Games must be able to attract students. (3) The game must be able to match the system's rewards system. (4) The images, characters, backgrounds, videos and sounds used in the game must be original. <p>d. <u>Interesting and attractive interface and graphic design</u> are needed, including the platform layout, features of intelligent tutor, reward system and gamification involved.</p> <p>e. A <u>creative</u> reward system and game for learning should be included.</p> <p>f. A rough draft on the game description is to be submitted and must include the following elements:</p> <ol style="list-style-type: none"> (1) <u>Character Bios</u> Describe each of the major characters and explain their roles in the games. (2) <u>Rough Plot</u> Describe the background of the game story and the tasks the users have to accomplish. (3) <u>Gameplay Description</u> Describe how the game is being played. (4) <u>Reward System</u> (5) <u>Artistic Style Outline</u> Describe the artistic style and feel. Cover actual in-game art, UI and menus and sound. Include either reference art or mocked up screenshots, and mocked up screenshots are preferred. (6) <u>Systematic Breakdown of Components</u> Give a rough outline of what systems will be required (for example, ones that will show up on most lists: 2D and/or 3D renderer, state machine, save/load system, UI system, collision system, particle system, etc). Include special features that, while they may not have their own system, will still need to 	

	<u>Requirements and Specifications</u>	<u>Amount HK\$</u>
	<p>be accounted for when creating systems (ie. day/night cycles, sound affecting gameplay, etc). State the API/SDK system used, if any.</p> <p>(7) <u>Asset Breakdown</u> Describe the visual assets, text and sound system.</p> <ul style="list-style-type: none"> ● Art Assets: List each major area of artwork (Player, Enemies, Worlds, UI/Menus, HUD, Effects) and the pipeline/programs used. ● Text Assets: Describe major areas (tutorial, tips, scripted dialogue/quests, dynamically presented dialogue, narration). ● Sound Assets: Describe the major areas (In-game sound, UI/HUD feedback sound, music, voice). <p>(8) <u>Suggested Game Flow Diagram</u> Give a game flow diagram that lay out step by step what the player experiences from as soon as they turn on the game until the end. E.g. Start Game → Cutscene → Tutorial → loop(Cutscene → Level → Results Screen) → End.</p> <p>(9) <u>Suggested Project Timeline</u> Give a schedule for the game's development that utilizes the breakdowns that were made earlier in the document.</p> <p>(10) <u>Additional Ideas and Possibilities</u> Any other additional information.</p>	

Part 3

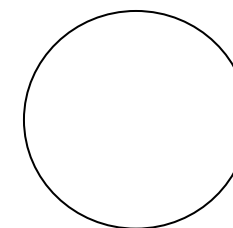
Working Schedule of the Adaptive Learning On-line Platform is as follows:

- The design and the launch of the whole platform would have to be completed within 18 months after the award of tender.
- Large scale trial run would be launched from the 19th to 24th month, and the system designer would have to amend and adjust the system when needs arise.
- A penalty is imposed if the works are not completed in the given time.

Time-line	Job description	Payment terms
May 2020	User requirement collection, to confirm the details of the Adaptive Learning Platform	
June - December 2020	<p>System Design:</p> <ul style="list-style-type: none">- Question Bank- Teachers' Account and Interface (Subject management, Class)- Students' Account and Interface- School Account and interface- Online evaluation and assessment- Build in the AI element (Pre-Algorithm) <p>Graphic Design (original):</p> <ul style="list-style-type: none">- Design the layout of the Adaptive Learning Platform- Design the Interface of School, Administrator, Teacher, and Student Accounts- Design and build the Reward System- Gamification of the ALP	1 st payment for System design and graphic design
December 2020 - June 2021	<p>System Design</p> <ul style="list-style-type: none">- Teaching Content of the Intelligent tutor- Parents' Interface- Design of Learning paths of individual student (pre-algorithm, artificial intelligent)- In-built the feature of Social Learning <p>Graphic Design</p> <ul style="list-style-type: none">- Design the layout of worksheet, test and examination- Design the Intelligent Tutor(s) and build the system- Incorporate Social Learning element	2 nd payment for system design and graphic design

Time-line	Job description	Payment terms
December 2021	<ul style="list-style-type: none"> - Put into test the various functions of the ALP, the social learning and gamification, and the Intelligent tutor - Problems shoot and fixed. 	3 rd payment for system design, after the completion of work

We/I understand that if we/I fail to supply the stores or services as offered in our/my written quotation/tender upon accepting school's order, we are/I am prepared to pay the price difference to the school if such stores or services are obtained from elsewhere.



Company Chop

Name of Supplier: _____

Name and Signature of Person authorized to sign Tender

Name (in block letters): _____ Signature: _____

Date: _____

Written Tender Form for the Supply of Service of Design and Production of an Adaptive Learning On-line Platform

Name and Address of Organisation: _____

Ref. No.: HKAHSS/Tender/2020/001

Written Tender Closing Date and Time: 12:00 noon on 27 April 2020 (Monday).

PART I

The undersigned hereby offers to undertake the service as described in the Tender schedule within the period of time as specified therein from the date of a firm order placed by HKAHSS at the price or prices quoted in the tender schedule including labour, materials, all other charges and in accordance with the details provided by HKAHSS. In so doing, tenders shall REMAIN OPEN FOR 90 DAYS after the Closing Date; and HKAHSS is not bound to accept the lowest tender and reserves the right to accept all or any part of any tender within the period during which the tender remains open. The undersigned also warrants that his Company's Business Registration and Employees' Compensation Insurance Policy are currently in force and that the items which his Company offers to supply do not to his knowledge infringe any patents.

PART II

RECONFIRMATION OF TENDER VALIDITY

With reference to Part I of this Tender document, it is reconfirmed that the validity of tender offered by this company remains open for 90 days from 27 April 2020.

The undersigned also agrees to accept the fact that once the validity of tender is reconfirmed, the pre-printed clause specified in the Company's tender forms in regard to this nature shall NOT apply.

Dated this _____ day of _____ 20____.

Name (in block letters) : _____

Signature : _____ in the capacity of _____
(state official position e.g. Director, Manager, Secretary)

Duly authorized to sign tenders for and on behalf of :

at the registered address _____

Telephone No. : _____

Fax No. : _____

Return Envelope Cover

Ref. No. HKAHSS/Tender/2020/001

**To: The Convenor,
The Adaptive Learning Platform Management Committee,
The Hong Kong Association of the Heads of Secondary Schools Limited**

**Baptist Wing Lung Secondary School,
Tai Hing Gardens, Phase 2, 6A Ho Hing Circuit, Tuen Mun, N.T.**



Tender Closing Date and Time:

12:00 noon (Hong Kong time) on 27 April 2020 (Monday).

Late tenders will not be accepted.