Nowadays, e-Learning is a rapidly developing learning mode. Compared with the traditional learning mode, e-Learning has its own advantages. In this issue, we will investigate the features of the e-Learning platforms and introduce a new e-Learning platform for Mathematics: e-Tutorial Class.

### From the Editor

### Knowledge Enrichment

### The Application of e-Learning in Mathematics

#### Features of an e-Learning Platform

One of the visions in e-Learning is that with the aid of various media using electronic technology, such as computers, networks and multimedia, students can lead the learning process, realizing self-directed learning.

There are different types of e-Learning platforms on the Internet. Some of them can help students to do self-assessments, and to revise and enhance what they have learnt. With reference to that type of e-Learning platform, we have sorted out some of their features, including various results analysis reports, functions to give learning suggestions or comments to students, etc.. Details are listed in the following table.

<table>
<thead>
<tr>
<th>Features</th>
<th>Details</th>
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<tbody>
<tr>
<td>Results Analysis Reports</td>
<td>1. Users can review the performance of a single exercise.</td>
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<tr>
<td></td>
<td>2. Users can compare the performance across exercises for different topics and levels.</td>
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<td></td>
<td>3. Users can compare the performance between exercises.</td>
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<tr>
<td>Learning Suggestions</td>
<td>According to a student’s performance, learning tips and suggestions are automatically generated by the system.</td>
</tr>
<tr>
<td>Cross-platform Design</td>
<td>Compatible with various operating systems such as Windows®, Mac OS, iOS and Android.</td>
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Example of an e-Learning Platform – e-Tutorial Class (http://www.etutor.hk)

Here, we introduce a new e-Learning platform: e-Tutorial Class. e-Tutorial Class is developed by Hong Kong Educational Publishing Co. and Xtown Mobile. It is a platform designed for New Senior Secondary students to let them have self-assessments and get prepared for the HKDSE Exam.

e-Tutorial Class is a personal e-Learning platform for self-study which merges revision, learning and assessments as a whole. For each senior form, different stages have been designed to better suit students’ needs and personal learning progress with exercises at various levels and topics. It also provides ‘Results Analysis’, ‘Learning Suggestions’ and ‘Tutorial Videos’ to solve students’ learning difficulties.

Features

1. Personalized learning process

Students can have their own learning process according to their learning progress and ability.

Structure

Pre-Test
Stage 1
Stage 2
Stage 3
Stage 4
Stage 5
Stage 6
Stage 7
Stage 8
Stage 9
Stage 10

Learning process

Pre-Test

Stage 1 Level 1
Class 1 & 2

Failed:
Redo exercises

Passed:
Level-up

Finish exercises

Progress Test

Stage 1 Level 2
Class 1 & 2

Finish exercises

Progress Test

Stage 2 Level 1

Stage 2 Level 2

Students perform exercises at different levels according to the test results.

Remarks: Each stage has the same structure.

Base on the above flow diagram, students can perform exercises at different levels, for a better learning effectiveness.
2. Results analysis

Each student owns an e-portfolio for keeping track of overall learning performance. The auto-marking function can generate 8 analysis reports, including ‘Overall performance in all stages’, ‘Overall performance in all strands’ and ‘Performance in different topics’. With these analysis reports, students can review the level of understanding of each topic and identify areas that need further revision.

<table>
<thead>
<tr>
<th>Performance in all strands</th>
<th>Performance in different topics</th>
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</table>

3. Learning suggestions and online tutoring

According to the results analysis, learning suggestions are provided. Students can choose the most suitable tutorial course. Videos of problem-solving skills and common error analysis demonstrated by tutors are available.

<table>
<thead>
<tr>
<th>Test results and learning suggestions</th>
<th>Tutorial video</th>
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</table>

4. Cross-platform, compatible with Windows®, Mac OS, iOS and Android

Students can get access to e-Tutorial Class with iPhone, iPad, Mac or Android devices, and are not limited to PCs.
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