The development of an online English summary writing platform for discipline-specific language learning

Teaching Development Grant (TDG) Project Sharing Session
Principle investigator: Professor Cheung, Hintat
Department of Linguistics and Modern Language Studies

Collaborations for this TDG project

<table>
<thead>
<tr>
<th>Role</th>
<th>Name</th>
<th>Department/ Unit</th>
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</thead>
<tbody>
<tr>
<td>Principal Project Supervisor(s)</td>
<td>Prof. CHEUNG, Hin Tat</td>
<td>Linguistics and Modern Language Studies</td>
</tr>
<tr>
<td>Co-supervisor(s)</td>
<td>Prof. CHOW, Hung Kay Daniel</td>
<td>Health and Physical Education</td>
</tr>
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<td></td>
<td>Dr. CHAN, Wai Hong Daricks</td>
<td>Mathematics and Information Technology</td>
</tr>
<tr>
<td></td>
<td>Dr. LIU, Fung Ming</td>
<td>Linguistics and Modern Language Studies</td>
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</table>
Outline

1. Rationales

2. Constructing the learning platform

3. Students’ learning activities on the platform

4. Students’ evaluation and feedback

Purposes of the project

- To enhance HPE and MIT students’ overall summary writing skills through continuous summary writing practice.
  - (i) To establish two discipline-based text banks with guided summary writing tasks.
  - (ii) To construct an online English summary writing platform that can provide automatic feedback.
  - (iii) To embed the above mentioned English summary writing platform into the Moodle system at EdUHK.
Rationales

The needs of our students as a result of EMI

- Needs for developing discipline-specific language learning and writing activities
- Support for Honours project - summary writing skill
- Needs for a platform that allows self-study.
Constructing discipline-specific text banks

Texts selection criteria:

1. **Discipline-specific and relevant**: texts are relevant to the subject-matter in the respective majors and they are the key literature/readings students need to read.

2. **Language proficiency level**: texts are suitable for Year 4 or 5 students who are going to work on their honors projects.

Constructing guided summary writing tasks

<table>
<thead>
<tr>
<th>Departments</th>
<th>Types of summaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>HPE</td>
<td>Summarizing a general physical education article</td>
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<tr>
<td></td>
<td>Summarizing a book chapter</td>
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<tr>
<td></td>
<td>Summarizing a literature review</td>
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<tr>
<td></td>
<td>Summarizing research methods and findings</td>
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<tr>
<td></td>
<td>Summarizing a whole research article</td>
</tr>
<tr>
<td>MIT</td>
<td>Summarizing a general mathematic article</td>
</tr>
<tr>
<td></td>
<td>Summarizing mathematic literature</td>
</tr>
</tbody>
</table>

The summary writing tasks were developed based on the literature provided by academics in the respective departments.
Sample summary writing tasks for the HPE department

Summarizing a general physical education article
Read the following news article *Time to encourage more exercise*. Summarize the main viewpoints of the article and the evidence used to support the viewpoints.

Summarizing a physical education book chapter
Read the following book chapter on *Physical activity in young children* and complete three short summaries below:
(1) purposes of the book chapter;
(2) the first recommendation on physical activity and its rationales;
(3) the second recommendation on physical activity and its rationales.

Sample tasks for the MIT department

Summarizing a general mathematic reading
Read page 2 and page 3 of the article - ‘Who said the mathematics will be boring’ and summarize in 200 words the approach to teach science and math as suggested by the author.

Summarizing a mathematic literature
Read the following article and summarize possible approaches to deal with controversies found in measuring perimeter in 150 words
Collecting expert summaries

Expert summaries were collected from the content experts in the disciplines.

Expert summaries were used to train the learning platform.

Constructing an on-line summary writing platform
Summary writing workshops and on-line summary writing

- Study summary writing skills through face-to-face workshop.
- Hands-on experience of writing a summary using the on-line summary writing platform.

Submitting summaries to the on-learning platform
Automatic generated score and reference summary

Submission:
Creating a safe environment is a crucial element in being an effective sports coach. The coach must be aware of health safety in three stages which are before, during, and after coaching practice. Additionally, it is essential for any coach to have attended a first aid course because the course can provide the basic knowledge on how to respond to some emergencies situations and treatments on injuries. Also, coaches may also go through Normal Operating Procedures and Emergency Operating Procedures once some minor incidents or some emergency accidents occurs. Moreover, a risk assessment should be carried out by the coach because differing facilities will require differing approaches to health and safety.

Score: 63.32
Reference summary: Health and safety related issues are also discussed. Coach is required to ensure a safe coaching environment throughout practice. He/she is required to have sufficient knowledge to deal with health and safety issues. Advice, such as attending a first aid course, checking the performer's personal insurance, familiarizing procedures and first aid kit, are provided. Two examples, a netball coach using an indoor sports hall and a rugby coach using an outdoor facility, were employed to demonstrate how a coach ensures a safe and healthy coaching environment.

Sample grammatical feedback

Creating a safe environment is a crucial element in being an effective sports coach. The coach must be aware of health safety in three stages which are before, during, and after coaching practice. Additionally, it is essential for any coach to have attended a first aid course because the course can provide the basic knowledge on how to respond to some emergencies situations and treatments on injuries. Also, coaches may also go through Normal Operating Procedures and Emergency Operating Procedures once some minor incidents or some emergency accidents occurs. Moreover, a risk assessment should be carried out by the coach because differing facilities will require differing approaches to health and safety.

Feedback on grammar

Self-reflection on content

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## Workshop feedback questionnaire responses

<table>
<thead>
<tr>
<th>Statement</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The content of this workshop is relevant to my study.</td>
<td>30</td>
<td>2</td>
<td>5</td>
<td>4.07</td>
<td>.868</td>
</tr>
<tr>
<td>2. There were sufficient practice activities provided in this workshop.</td>
<td>30</td>
<td>3</td>
<td>5</td>
<td>4.23</td>
<td>.568</td>
</tr>
<tr>
<td>3. This workshop addressed my needs in writing a summary.</td>
<td>30</td>
<td>3</td>
<td>5</td>
<td>4.10</td>
<td>.662</td>
</tr>
<tr>
<td>4. The workshop helped me develop an understanding of characteristics of</td>
<td>30</td>
<td>3</td>
<td>5</td>
<td>4.20</td>
<td>.805</td>
</tr>
<tr>
<td>a good summary.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. The summarising skill that I learned in this workshop will be useful</td>
<td>30</td>
<td>3</td>
<td>5</td>
<td>4.13</td>
<td>.681</td>
</tr>
<tr>
<td>for my future writing (such as honors project writing).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. I would like to attend more summary writing workshops like this one.</td>
<td>30</td>
<td>2</td>
<td>5</td>
<td>3.97</td>
<td>.850</td>
</tr>
<tr>
<td>7. The feedback provided by the online learning platform is helpful</td>
<td>30</td>
<td>2</td>
<td>5</td>
<td>3.93</td>
<td>.740</td>
</tr>
<tr>
<td>8. The online writing platform provides me with chance for self-study.</td>
<td>30</td>
<td>2</td>
<td>5</td>
<td>4.13</td>
<td>.776</td>
</tr>
<tr>
<td><strong>Valid N (listwise)</strong></td>
<td>30</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
Post-workshop interviews

Major themes
- EMI education and discipline-specific language needs
- Perceptions of discipline-specific summary writing workshops
- Perceptions of machine generated feedback
- On-line learning platform and chance for self-study
- Expectations of future discipline-specific language support

EMI education and discipline-specific language needs

*Academics’ and students’ language proficiency are a major challenge of EMI education.*

- Academics’ language proficiency
- Students’ language proficiency
Perceptions of discipline-specific workshops

**Relevancy to the subject matter and familiarity**
- Relevant to the subject matter.
- More attractive or interesting.
- Easier to learn summarizing skills because of familiarity

**Benefits of discipline-specific language learning**

Perceptions of discipline-specific workshops

**Attainment in summary writing skills**
- Structure of a summary
- Strategies in organizing a summary
- Strategies in extracting useful information from the text
- Chance of practising summarizing skills
Perceptions of discipline-specific workshops

**Attainment in summary writing skills**
- Reported evidence of use summarizing skills
- Useful for Honours project report writing

Perceptions of machine generated feedback

**Strengths**
- The system helps with checking the grammar.
- The reference summary tells us what a good summary look like.

**Limitations and suggestions**
- Feedback focus on language only.
- It would be better if feedback on content and logic can be provided.
- It would be better if bullet points can be provided.
On-line learning platform and chance for self-study

- Good chance for self-study
- Students with learning needs are more likely to use the system.
- The on-line learning system can be more interactive

Students’ expectations of future discipline-specific language workshops

In general, students responded that they expect more similar discipline-specific workshops in the future, which would possibly focus on:

- Words and vocabulary that suitable for academic writing.
- Developing introduction and conclusion.
- Developing the structure of an essay.
- Write lesson plans and rationales.
- Disciplinary language courses for different year groups.
Sum up

- The current project develops an on-line learning platform that are suitable for discipline-specific language learning, and the system has been tried out with HPE and MIT students.
- The study reveals that students have discipline-specific language needs.
- The on-line summary writing platform support students’ learning needs by helping them develop summary writing skills, and offering chance for self-study.

Way forward

- The current on-line summary writing platform can be further developed and used to provide continuous writing support for MIT and HPE students.
- The on-line learning platform can be re-trained by the texts from other disciplines, so as to provide summary writing training for other departments.
- More discipline-specific workshops can be provided on other topics and writing genres.
For any further questions, you can send an email to Shirley: xiaoyi@eduhk.hk.