



加拿大國際發明及創新比賽金獎及特別獎

傳統的教育，著重各科習作及功課的操練，促使學生獲取更好的學習表現。其實相比起強制訓練，讓學生自由選擇喜歡的題目及方式作為日常練習，更能引發強大的學習動機。因此，香港教育大學英語教育學系的鄒迪博士，與及數學與資訊科技學系謝浩然博士設計了一個個人化英語詞彙學習系統，讓學生選擇自己喜歡的形式及興趣，進行英語練習。



鄒迪博士
英語教育學系

個人化英語詞彙學習系統

靈活運用大數據 自由選擇最佳練習模式



系統運算作答結果
推薦最適切練習

當鄒博士介紹她與團隊創立的這個英文詞彙學習系統時，特別提到雖然這是一個教育系統，但同時它自身也在不斷「學習」。「我們系統的運作原理，應用了Nation and Webb's (2011) 提出的『技術特徵分析清單』(Technique feature analysis) 理論框架，系統把收集回來的大數據加以運算，估算出學生有可能喜歡的練習類型，再以推薦的形式建議他們繼續餘下練習，營造個人化的教學效果。」鄒博士指出數據主要以3個因素來計算，分別是學生的學習表現、偏好和各項練習的分數。當系統收集愈來愈多數據，就能更準確地計算出學生喜歡什麼類型的練習。

系統背後有精密運算，那麼對使用者而言，系統能提供怎樣的機能？鄒博士指出：「我們設計的是一個針對學習英文詞彙的系統，如果是初次使用，系統會為學生提供5個練習以供選擇，是為第一階段，當中包括了閱讀、寫作、說話、聆聽，其訓練亦是針對詞彙知識。」她續道，學生可以按照興趣揀選一個練習去完成，然後系統就會根據練習結果進行運算，再建議另外兩個練習，是為第二階段。

系統共有60多個練習，只要學生願意繼續，它就能提供愈來愈準確的學習材料，收集的數據亦愈來愈多，透過這種互動式的學習過程，系統得以記錄學生的學習歷程及情況，對教育者而言，是相當有用及珍貴的回饋。



給予學習自由 特定題材提高學習樂趣

「我想給予學生很大的自由度去進行學習。」鄒博士笑言，香港的教育環境偏重功課量，一般概念是老師派發下來，學生就必須完成。「每個學生的程度不一，不是每份練習也適合每人水平，系統不但可讓學生揀選想訓練的技能，更有不同程度可作調適，從學生的意見中反映，他們增強了學習動機，更自願去學習。」學生可以從過程中了解自己的需求及偏好，教師亦然。

系統的使用群組目前以教大的學生為主，為了令學習更有趣，鄒博士與團隊在各項練習的內容上亦花上心思。例如使用者是男同學的話，就提供有關運動或電動遊戲等主題；女同學則準備了有關時裝、美容等主題，目的是希望學生學習之餘，也找到樂趣。



尊重及信任學生 引入多媒體內容豐富系統

這個結合數據分析、個人化技術、多元練習類型的網上英語學習系統，能夠讓不同程度的學生按照自己需求、喜好及學習經歷來提升英語技能，既能惠及學子，亦能令老師更全面地了解自己學生。這項教育科技能獲得加拿大國際發明及創新比賽金獎及特別獎，鄒博士表示最大的得著是引證了在教與學的關係裏，最重要是懂得尊重學生，信任他們其實能為自己作出最好決定，這樣他們才能自願學習。

問到未來系統的發展，鄒博士略帶遺憾地表示目前系統的說話練習部分的確比較單向，將來希望研究如何應用人工智能技術，讓系統能夠與用家作出口語上的互動；亦希望結合多媒體設計，如增加圖片、影片及動畫等的元素，製作成手機應用程式，讓更多學生能輕鬆自在地學習英語。

Task 1: Cloze Exercise

Fill in the blank with the word appropriate from the given words.

(1) pretend (v.) Think about something carefully especially before making a decision or reaching a conclusion.

(2) break (v.) Break open or apart suddenly and violently especially as a result of an impact or internal pressure.

(3) startle (v.) cause to feel sudden shock or alarm.

(4) shatter (v.) break or cause to break suddenly and violently into pieces.

(5) gather (v.) draw together with a view to similar engagement.

(6) drive (v.) proceed towards the stated, be persuaded or undeterred.

(7) highlight (v.) make (a) building, chapter, etc. stand out as important or significant.

(8) available (v.) not suddenly, instantly, or readily.

(9) shiver (v.) shiver slightly and uncontrollably as a result of being cold, frightened, or excited.

'A SCARY NIGHT'

It's a cold winter night. It's midnight and it's very quiet. I'm still awake and studying. I have a test tomorrow. I need to read two chapters. I finish one chapter and I read the next chapter. It's too difficult. I can't give the test. What do I do? Should I keep working? Can I take the test some other time? Shall I give up? I'm (1) many things. I think my head is going to (2)

Suddenly some noise (3) me. Something (4) on the ground. I look at the window. What? What is that? I see a light across the street. It is there a few hours. It's strange. It's like I'm inside the vacuum case. They asked me to (5) the lawn for them while they're gone. Nobody should be there. Oh, I see the light again.

There it (6) on me. Someone is (7) the house. I'm afraid. What do I do now? I have to call the police. I look for the phone and call the police.

After ten minutes, the police arrive. They search the house. As the police search the house, someone hides outside the house. The police ask, "Hey, right there! That man with a black mask, open up the window, open the house. Then he (8) down that hill on the road. The police finally catch him. The police take off the mask. He gets into the car and goes to jail.

The policeman comes to my apartment. The first one looks very serious. He doesn't greet me. He just asks for my name. Then, he says, "Thank you very much about the problem. The other one is friendly. He inquires about a couple of things. He wants to know when I last saw the light. He (9) some notes.

The policeman says good night and everything is quiet now. What a strange night! I'm glad that it's over. But I can't (10) a little. So I just open my eyes. This might help me. I can't really say longer and can't sleep right now.

I decide to read a book. I go to a bookstore yesterday. The title is "Annie on Street Station". I look at the first chapter. And I give up at the title to read. "My life as a Bangler" by A Man with a Black Mask.

Fill in the blank with the word appropriate from the given words.

(1) pretend (v.) Think about something carefully especially before making a decision or reaching a conclusion.

(2) break (v.) Break open or apart suddenly and violently especially as a result of an impact or internal pressure.

(3) startle (v.) cause to feel sudden shock or alarm.

(4) shatter (v.) break or cause to break suddenly and violently into pieces.

(5) gather (v.) draw together with a view to similar engagement.

(6) drive (v.) proceed towards the stated, be persuaded or undeterred.

(7) highlight (v.) make (a) building, chapter, etc. stand out as important or significant.

(8) available (v.) not suddenly, instantly, or readily.

(9) shiver (v.) shiver slightly and uncontrollably as a result of being cold, frightened, or excited.

Task 5: Picture Generation

Read and respond for each appropriate picture that matches the description.

(1) A man in a black mask is running away from the police.

(2) A man in a black mask is running away from the police.

(3) A man in a black mask is running away from the police.

(4) A man in a black mask is running away from the police.

(5) A man in a black mask is running away from the police.

(6) A man in a black mask is running away from the police.

(7) A man in a black mask is running away from the police.

(8) A man in a black mask is running away from the police.

(9) A man in a black mask is running away from the police.

(10) A man in a black mask is running away from the police.

Task 2: Sentence Writing

Write a sentence for each of the given words.

(1) ostensible (adj.) seeming to be true, but not necessarily so.

(2) pernicious (adj.) very harmful.

(3) envisage (v.) envisage on sth. to break a promise, an agreement, etc.

(4) apprehensive (adj.) worried that sth. unpleasant may happen.

(5) test (v.) to a particular characteristic, personality or quality that someone or sth. has.

(6) taunt (v.) (to) abuse or insult, to speak to by laughing at him.

(7) anticlimax (adj.) humbling and unexciting.

(8) latitude (n.) a state of tolerance.

(9) indispensable (adj.) absolutely essential.

(10) divulge (v.) (to) give sth. to sth. to tell others information that should be secret.

個人化英語詞彙學習系統中設計了多個不同類型及題目的練習，鄒博士及團隊希望給學生學習的自由，自己揀選不同題目，提高英語技巧。

個人化英語詞彙學習系統示範：



<https://qrqo.page.link/3Kxkf>

如有興趣商品化本項目，或進行後續合作計劃，請聯絡香港教育大學知識轉移辦公室。