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TRANSFORMING EDUCATION, DRIVING INNOVATION AND ADVANCING LIFELONG LEARNING FOR EMPOWERED WORLD

COLLOVOC: TECHNOLOGY-ENHANCED LISTENING PROCESSING APPROACH

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ABSTRACT

Colloquial language presents challenges for students in listening comprehension, particularly when it includes implied meanings, idiomatic expressions, and informal conversational phrases. However, mastering it equips learners for real-world interactions and makes entertainment more enjoyable. Therefore, an innovative Teaching and Learning (T&L) strategy namely ColloVoc has been created by the AIMS group using Top-Down/Bottom-Up (TD-BU) processing model for learning colloquial language interactively. This innovation integrates digital instructional strategies by incorporating YouTube, YouGlish and AI tools to strengthen students' listening comprehension and ability to decode informal language structures in spoken English. Through two cycles of iterative lesson planning, observation, and refinement, 20 students from the A1P3 practicum engaged in enhanced lesson activities and instructional materials designed to achieve learning objectives. This T&L innovation explores how the TD-BU Model, combined with digital learning tools, can improve inferential listening skills. The findings highlight the significance of structured interventions and technology-driven language tools in bridging academic instruction with real-world conversational English. As part of the ongoing educational reformation aimed at fostering a digital generation, this innovative strategy offers valuable insights into the pedagogical adjustments needed for integrating technology into language learning, equipping students to confidently engage in authentic conversations.

Keywords: *Colloquial language, Digital tools, Listening comprehension, T&L innovative strategy, TD-BU model*

INTRODUCTION

Digital technology has transformed language education, shifting teaching methods to meet evolving learners' needs. A major challenge in English acquisition is listening comprehension, especially for post-secondary students struggling with colloquial expressions and implied meanings. Traditional approaches focus on formal speech, leaving learners unprepared for real-world conversations. To address this, the innovative Teaching and Learning (T&L) strategy "ColloVoc" enhances instruction, helping students grasp unfamiliar phrases and non-standard grammar patterns while actively engaging in their learning within today's digital era.

ColloVoc integrates digital tools like YouTube, YouGlish and AI tools to immerse students in conversational English. Grounded in Hattie's (2012) visible teaching concept, it challenges learners based on cognitive levels. ColloVoc refines instructional methods using the TD-BU model, as it enhances inferential listening and bridges academic learning with real-world communication, fostering innovation and sustainable education.

METHODOLOGY

Research Design and Objectives

This innovation used Kemmis and McTaggart's (2005) action research model with two cycles of planning, acting, observing, and reflecting (Figure 1) to systematically improve teaching practices for students' conversational English listening comprehension and assess active participation in listening activities.

Figure 1.: The two iterative cycles process

Participants

The study involved 20 A1P3 practicum students from Kolej Matrikulasi Negeri Sembilan (KMNS), selected through purposive sampling. The innovation project ran from mid-February to early April 2025, with the problem identified by January 2025.

Innovative Intervention / Strategy

The intervention, named ColloVoc, is designed to enhance classroom instruction for colloquial language, specifically integrate the TD-BU processing model (Field, 2008), structured around five learning phases: Bottom-Up processing, Top-Down processing, Integration, Reflection, and Language Focus. This model strengthens inferential listening skills by focusing on phonetic recognition (Bottom-Up) and leveraging prior knowledge and context (Top-Down), as illustrated in Figure 2. ColloVoc integrates YouTube, YouGlish and AI as digital tools in providing authentic audio-visual content to enhance student participation in conversational English. This approach transforms traditional teaching into dynamic, technology-driven learning experiences that foster engagement and language acquisition. This shift enhances engagement and effectiveness (Safuan & Fong, 2003), supports students in grasping concepts more easily (Nurkhamimi & Rozhan, 2017), improves learning quality (Lever-Duffy & McDonald, 2018), and ultimately boosts student achievement (Jahidih et al., 2019).

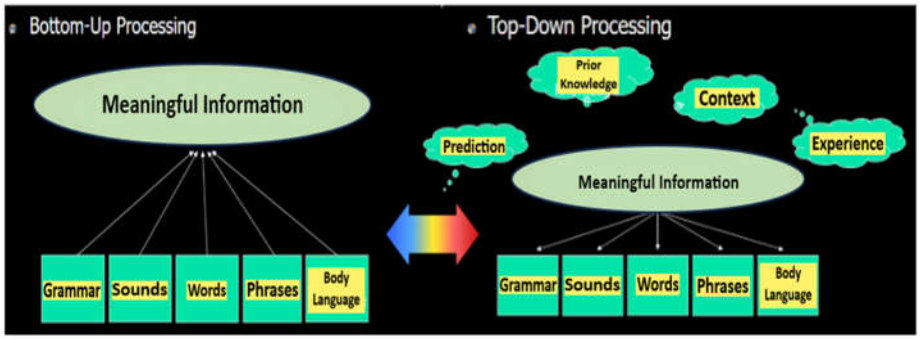

Figure 2.: Top-Down/Bottom-Up Model

Data Collection Methods

Data was gathered through mixed methods, including observation checklists, debriefing records, student interviews, and questionnaires. Researchers also kept reflective notes on implementing the ColloVoc strategy, especially its integration with digital tools.

Data Analysis

Data analysis combines qualitative and quantitative methods. Qualitative data from reflections and interviews was collected. Quantitative data from questionnaires were analysed using descriptive statistics (percentages) to summarise students' responses and measure changes across the intervention cycles.

Ethical Considerations

Ethical considerations were addressed by obtaining formal approval for the innovation project from the KMNS College Director. Participant confidentiality was ensured by focusing solely on the T&L

innovation strategy and avoiding the display of any individual student examination data. All procedures adhered to ethical guidelines, proceeding only after the institutional approval.

RESULTS AND DISCUSSION

Implementation of the T&L Innovation

Cycle 1- Teaching-Learning Using Contextual Clues and Inference Methods

Lesson Plan Cycle 1's Link: https://shorturl.at/tucwV

In Cycle 1, AIMS members and knowledgeable others observed Ms. Madeline Liew's lesson with 20 A1P3 semester two students. The focus was on colloquial language comprehension using TD-BU processing strategies. Feedback was gathered from observers and students via the Observation Toolkit.

Reflection on Cycle 1:

Cycle 1 observations showed strong engagement from Ms. Madeline and her students during the colloquial expressions lesson. Group activities boosted teamwork and helped students analyse tonal shifts and contextual meanings through audio examples. Insights from the AIMS team's debrief, structured feedback, and interviews with three participants informed refinements for Cycle 2.

Student A: "I enjoyed working in groups but sometimes struggled to understand the example."

Student B: "The audio clips were helpful, but I wish we had more real-life examples."

Student C: "It was interesting to learn about tone, but I'm still not confident in recognising it myself."

Cycle 2- ColloVoc – The Innovative T&L Implementation

Lesson Plan Cycle 2 Link: https://shorturl.at/13oEZ

The second cycle of the ColloVoc strategy was conducted on 12.2.2025, implementing the enhanced lesson plan. Revisions were made to the plan based on insights, reflections, and feedback gathered during the Cycle 1 debriefing session, ensuring a more refined and effective instructional approach.

Reflection on Cycle 2:

Building on the first session, this lesson integrates technology to enhance authentic language exposure and collaborative learning. Feedback from students and AIMS members assesses ColloVoc's effectiveness. A structured analysis, as shown in Table 1, provides insights into pedagogical improvements, refining strategies for enhanced language instruction.

Table 1.: Students' responses to Cycle 2 lesson

Questionnaire Items	Mean Score (1-5)	Distribution of Participants' Responses				
		1	2	3	4	5
1. ChatGPT helped discover and understand	4.4	0%	0%	15%	30%	55%
2. YouGlish.com increased understanding	4.6	0%	0%	5%	30%	65%
3. Creating dialogues improved confidence	4.3	0%	5%	10%	35%	50%
4. Technology tools more engaging	4.7	0%	0%	5%	20%	75%
5. Motivated to continue learning	4.5	0%	0%	10%	30%	60%
***Likert-Scale: 1- 'Very Poor' - 5- 'Very Good'						

Qualitative feedback responses are as below:

Student D: "YouGlish was amazing - seeing real people use these expressions made them stick in my mind."

Student E: "I never thought AI could help me learn English, but ChatGPT made it fun to discover new expressions."

Student F: "Creating our own dialogues helped me remember the expressions much better than just memorising them."

Cycle 2 reflections showed marked improvement over the previous cycle, with technology driving higher student engagement and learning outcomes. Students participated more actively, produced creative language, and used personal devices for interactive peer feedback, discovering relevant expressions in authentic, real-world contexts. Tools like ChatGPT, YouGlish, and Padlet enhance lesson effectiveness, though targeted support is still needed to ensure all students benefit equally.

ColloVoc's impact has proven that integrating the TD-BU Model and digital tools enhances inferential listening, engagement, and confidence among 20 A1P3 students. Through two iterative cycles, learners showed greater motivation, improved real-world English comprehension, and vocabulary growth, with Figure 3 reflecting notable listening proficiency progress.

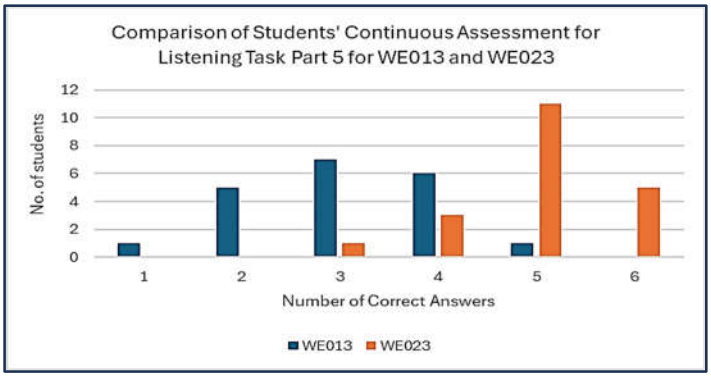

Figure 3.: Students' Listening Task Part 5 (Semester 1 & 2)

The ColloVoc findings show that integrating interactive listening, inference, contextualisation, and technology in the TD-BU Model greatly improves students' understanding of colloquial conversation. This approach modernises listening pedagogy, proving that real-world contexts make learning more meaningful while blending traditional and digital methods to support student-centred instruction and professional growth in technology-enhanced language teaching.

Level of Commercialisation

On 16.5.2025, results were shared with 13 KMNS English Language Unit lecturers during an Intellectual Discourse session, receiving highly positive feedback. Three lecturers said it reshaped their view of listening instruction. A Teacher Sharing Session was also held with lecturers from other matriculation colleges on 11.7.2025 and post-secondary institutions to encourage wider collaboration.

CONCLUSION

ColloVoc promotes collaborative reflection, technology integration, and balanced processing to boost engagement and comprehension. Differentiated strategies support all learners, offering a scalable model. Future plans include refining methods and expanding real-world applications while maintaining high language acquisition standards.

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