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## **Tools for Scaffolding the Development of L2 Speaking in English-medium Higher Education: Lessons from Poland and Australia**

### **Abstract**

Participating in oral L2 communication may be challenging for English-medium higher education students. While literature suggests that scaffolding facilitates the development of L2 speaking, research has not addressed the notion of tools for scaffolding its development. The aim of this study is twofold: (1) to investigate how scaffolding can be embodied in tool design to support L2 speaking and (2) to obtain and analyse student perceptions of the tools. We draw on questionnaire data gathered in two iterations of a larger design-based research study conducted in two contexts: English Studies students in Poland ( $N = 26$ ) and culturally and linguistically diverse L2 learners in Australia ( $N = 12$ ). This study illustrates how features of scaffolding were applied to map instructor, peer- and technology-based tools in terms of learning activities, resources, technology and feedback. The results suggest that these tools may cater to the multiple levels of student understanding and skill with regard to the development of L2 speaking found in modern L2 classrooms..

*Keywords:* scaffolding, L2 speaking, higher education, Poland, Australia

In English-medium higher education (EMHE) settings,<sup>1</sup> international students in English-dominant countries and some domestic students in non-English-dominant countries use English as a second or foreign language (ESL or EFL respectively; L2 henceforth) to communicate in a variety of genres, such as presentations, discussions, debates, with instructors and peers (Hyland, 2009; Wingate, 2015). Since L2 speech production is a complex and demanding cognitive activity (Bygate, 1987, 2009; De Bot, 2000; Kormos, 2006), participating in oral L2 communication and abiding by genre conventions may be challenging for these students. As illustrated in Levelt's (1989) model of speech processing and echoed in Kormos's (2006) elaboration concerning L2 speech production, students may encounter problems while planning content for speaking (conceptualization), turning ideas into sentences (formulation), and audibly expressing their thoughts (articulation) when their language competences (i.e., linguistic, discursive, strategic, and sociolinguistic) and world knowledge are limited (Chapelle et al., 1997) and/or when their knowledge of the elements of the target L2 is not automatized (DeKeyser, 2015, 2017). Although various courses and preparation programmes are offered to help EMHE students develop L2 skills, speaking English can still be difficult (McRae, 2018; Yates & Wahid, 2013). In addition, some students might be afraid of making mistakes, lack confidence while speaking and be reluctant to speak in class (Haidara, 2016). Finally, the utility of the offered courses may vary in educational contexts that include homogenous groups of non-native speakers learning L2 in a non-Anglophone country (such as Poland) and heterogeneous groups of non-native speakers learning L2 in an Anglophone country (such as Australia). Hence, taking steps to better support the development of English speaking skills among these students is of great importance and one way of doing so would be by scaffolding student learning with the use of adequate tools.

The pedagogical concept of scaffolding has been subject to research by scholars and educators in the field of L2 learning and teaching (e.g., Gagné & Parks, 2013; Hammond & Gibbons, 2001; Li & Zhang, 2020; Mercer, 1994; Walqui, 2006; Walqui & Van Lier, 2010). There is also a growing body of research into scaffolding conducted in the area of computer-assisted language learning (Botero et al., 2019; Chang & Sun, 2009; Chen & Tseng, 2021; Cheng, 2010; Fan & Chen, 2019; Hsieh, 2017, 2020; Jin, 2013; Lee, 2008; Li, 2010; Liou et al., 2006; Mills & Kennedy, 2013; Narayanan & Kumar, 2019; Nielsen, 2014; Ozaki & Ueda, 2021; Rezaee et al., 2015; Todd, 2014; Wu et al., 2012; Xu &

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<sup>1</sup> Differing from English language courses, English-medium instruction is delivered in English-dominant countries (Australia, the UK, etc.). This form of bilingual education is popular in Asia, it is offered to domestic and international students in e.g., Korea, China, etc. (Hu & Wu, 2020) and is also present in many European universities, as a result of the Bologna process promoting student mobility (Evans & Morrison, 2011). English-medium instruction prevails in language-related programmes such as English Philology, English Studies, Applied Linguistics, etc.

Xia, 2021). With regard to scaffolding the development of L2 speaking, the term has been used to refer to various classroom strategies (Ahmadpour et al., 2016; Gerakopoulou, 2016; Ghasedi et al., 2018; Zarandi & Rahbar, 2016), specific teacher-led activities, such as, for example, warm-up, pairwork and introduction of new language (Gilead, 2018), corrective feedback (Shooshtari et al., 2018), peer interactions (Ahmadpour et al., 2016; Azir, 2019; Nguyen, 2013), and technology (Kozar, 2016; Mirahmadi & Alavi, 2016; Tudini, 2003). While these studies suggest that scaffolding facilitates the development of L2 speaking ability, research has not explicitly addressed the notion of tools for scaffolding the development of speaking skills. Due to this lack of both theoretical and empirical studies, it remains unclear how to integrate tools to scaffold the development of L2 speaking for academic communication. Therefore, as speaking skills are central for a successful academic career in EMHE, articulating and integrating tools into instruction for scaffolding the learning process of diverse learners found in L2 classrooms in EMHE contexts is urgently needed.

When setting out to undertake empirical work in an under-researched area, it is essential to organise our knowledge of the issue at hand as an initial research step. Hence, in the first part of this paper, the purpose is to systematise our knowledge of scaffolding the development of L2 speaking skills with the use of tools, drawing on the conceptualisations in the existing literature. This research activity is a prerequisite for designing our empirical study. In the second part of this paper, the aim is to confront our theoretical considerations with the empirical reality by developing and evaluating the pedagogy for integrating tools for scaffolding the development of L2 speaking. Specifically, in this study, we seek to investigate how scaffolding can be embodied in tool design to support L2 speaking developmental processes in EMHE classrooms. To that end, we describe the tools we used in L2 speaking courses, the selection of which was grounded in the identified theoretical approach. Second, we seek to obtain and analyse student perceptions of these tools. With this in mind, we draw on questionnaire data gathered in two iterations of a larger ongoing design-based research (DBR) study conducted in two learning contexts: English Studies students in Poland and culturally and linguistically diverse (CALD) L2 learners in Australia. In this study we assume the sociocultural perspective to view tools as symbolic (e.g., concepts) and material (e.g., computers) artefacts that mediate human cognitive activity (Lantolf et al., 2015; Vygotsky, 1978) that can be organised to scaffold (Wood et al., 1976) the development of L2 speaking skills. Analysing students' perspectives from different contexts will help establish the extent to which the tools support students' learning.

Research activities reported on in the current paper serve to refine and clarify the concept of scaffolding in the area of L2 learning and teaching, organising our theoretical knowledge concerning the problem under study. Findings from this study also make contribution to practice with regard to the

design and development of pedagogical tools that scaffold the learning process in modern higher education L2 classrooms.

## Literature Review

### Scaffolding Learning

The concept of instructional scaffolding has its roots in sociocultural theory and Vygotskian assertion (Vygotsky, 1978) that learning, including L2 learning, occurs with the assistance of capable others that allows progress from the stage at which performance is demonstrated to a learner to the stage where they are able to perform the activity independently (Storch, 2017). New abilities are learned when they are internalised, that is, transferred from the interpersonal plane into the intrapersonal plane (Lantolf et al., 2015). Expanding this view, Wood, Bruner, and Ross (1976) applied the metaphor of scaffolding to denote an “adult controlling those elements of the task that are initially beyond the learner’s capacity, thus permitting him to concentrate upon and complete only those elements that are within his range of competence” (p. 90). Through scaffolding a learner is capable of conducting a task that is otherwise not attainable and the support is removed when independent performance is viable (Belland, 2017). Examples of support include modelling, demonstrating features of the task, questioning and providing hints to aid learner reflection (Puntambekar & Hubscher, 2005).

Instructional scaffolding is characterised by a number of features. In the broader field of education, Puntambekar and Hubscher (2005) assert that scaffolding should encompass: (1) a shared understanding of the goal of the activity (intersubjectivity)—ensuring that the learner knows when the task is completed successfully; (2) ongoing diagnosis—determining learner’s current level of understanding and performance in order to establish the right level of support needed; (3) graduated assistance (calibrated support)—based on the outcomes of the diagnosis, matching the support with the current needs of the learner; and (4) fading—eventual removal of support when a learner is able to perform independently. In the area of L2 learning, Van Lier (2004) argues that aspects such as continuity, contextual support, intersubjectivity, contingency, handover/takeover, flow (p. 151) are essential, whereas Hammond and Gibbons (2001) note the following: extending understanding, temporary support, macro and micro focuses (pp. 15–18). Although the understanding of the

concept of scaffolding does not diverge among the abovementioned and other authors, from an instructional design point of view it is important to pinpoint the theoretical features of scaffolding with precision in order to define criteria for the selection and organisation of tools for scaffolding learning. We regard the elements of scaffolding suggested by Puntambekar and Hubscher (2005) as easily translatable into L2 instructional design and, for this reason, we use the elements proposed as the criteria guiding the design of tools for scaffolding the development L2 speaking in EMHE courses.

Furthermore, apart from the identification of key elements, literature offers the categorisation of scaffolding according to who or what regulates the support. According to Belland (2014, 2017), scaffolding can be provided by:

- Teachers (one-to-one scaffolding): one teacher works with one student, provides learning activities, models, questions, explanations, hints, and feedback. Although this form of scaffolding is considered most beneficial, classroom realities limit opportunities for one-to-one scaffolding.
- Peers (peer scaffolding): support is provided by equally or more capable peers, for example through feedback. Despite one-to-one interaction that can be rendered, peer scaffolding may not be sufficient or adequate for learning.
- Computers (computer-based scaffolding): a computer is used for completing tasks.

This distinction is valuable while designing tools for scaffolding: it broadly indicates the types of agents that may be resorted to while planning and organising the provision of tools in modern EMHE classrooms, in which exclusive instructor-based one-to-one scaffolding cannot usually be warranted.

## **Tools for Scaffolding Learning**

Literature in the area of scaffolding in broader education and L2 learning refers to tools as scaffolds, providing scaffolding, or providing support (Goh, 2017; Puntambekar & Hubscher, 2005). Learning activities, paper-based or software tools, curricula, resources, artefacts, environments, as well as teachers and peers, are all considered as potential providers of support (Belland, 2017; Goh, 2017; Puntambekar & Hubscher, 2005). There is also some elaboration on specifying tools used for matching elements of scaffolding in classrooms, as summarised in Table 1.

**Table 1**

*Tools for Scaffolding Learning (Based on Belland, 2017; Puntambekar & Hubscher, 2005)*

Element of scaffolding	Examples of tools for scaffolding
Intersubjectivity	a launcher unit, staging activities;
Ongoing diagnosis	a teacher asks questions or observes student performance;
Graduated support	explanation, clarification, encouraging participation, modelling desired performance;
Fading	strategies provide decreasing support over time and are ultimately withdrawn;

Yet, this literature does not explicitly define the very concept of “tools.” As a result, it has been variably used to refer to instructional support. For example, Puntambekar and Hubscher (2005) use this term interchangeably with reference to an overarching category of different type of support provided (as, e.g., suggested in the title of the article “Tools for Scaffolding Students in a Complex Learning Environment”) or to denote one of the ways students can be lent support (as in “tools, resources, and curricula,” p. 7).

Hence, in this study, we return to the theoretical origins of scaffolding in order to conceptualise tools for supporting the development of L2 speaking through the lens of sociocultural theory. From this perspective, human mental functioning and development is viewed as a mediated process, wherein physical and conceptual tools are used to regulate and organise one’s activity or behaviour (Engeström, 2001; Lantolf et al., 2015; Vygotsky, 1978). While physical tools involve the manipulation of objects to accomplish a task, conceptual tools are used to interact with others and/or to impact others’ behaviour (Engeström, 2001; Hampel, 2019; Ma, 2017). Furthermore, according to this theory, mental development consists in “gaining greater voluntary control over one’s capacity to think and act either by becoming more proficient in the use of mediational resources, or through a lessening or severed reliance on external mediational means” (Lantolf et al., 2015, p. 209). Within this process, humans develop by transitioning from external object- and other-regulation towards self-regulation, which is the ultimate goal of learning. In L2 learning, object-regulation refers to the use of artefacts that enable cognitive activity (e.g., an online translator or software for oral presentations), other-regulation entails the presence of other people (e.g., teacher providing hints or feedback on language), and self-regulation characterises learners with internalised object- or other-regulated forms of mediation (Lantolf et al., 2015).

What this means for the present study is that L2 learning, including the development of L2 speaking skills in EMHE, can be scaffolded with the as-

sistance of external (physical and conceptual) tools, afforded through objects and other people. Furthermore, scaffolding learning entails creating spaces that guide individual L2 learners towards self-regulation in their L2 use. This necessitates providing learners with opportunities to achieve mastery of the skill to the extent to which external tools—object- or people-based—are no longer indispensable to act. Therefore, for the purpose of the current study, we define tools as physical and conceptual artefacts that can be intentionally organised to support the development of L2 speaking skills. This understanding yields the following instantiations of tools that can be applied to scaffold learning: learning activities, learning resources, instructor- and peer-based feedback and technology.

### **Tools and Scaffolding the Development of L2 Speaking**

Goh (2017) defines scaffolding in L2 speaking as “the process by which teachers provide helping activities to enable learners to accomplish a speaking task which they would otherwise have been unable to do well on their own” (p. 248). The same author envisages scaffolding for the development of speaking skills in terms of the provision of learning activities that allow learners to progressively build autonomy in task execution. Through scaffolding activities learners are helped while planning and organising speech. As an intentional pedagogical strategy, “scaffolding activities can be added on to regular speaking practice tasks to help learners become aware of speech processes and perform better” (Goh, 2017, p. 248).

Apart from the abovementioned work, a limited body of empirical studies have looked into the process of scaffolding L2 speaking. One strand of research describes how scaffolding is applied by teachers in L2 classrooms in an attempt to make sense of what is happening in the classroom by capturing the existing strategies that teachers apply to support their students’ L2 use and learning (Gerakopoulou, 2016; Gilead, 2018). Aside from this research, there are studies that focus on the role of peers in scaffolding processes, that is, providing peer scaffolding in a collaborative presentation task (Nguyen, 2013), peer-scaffolded tasks (Azir, 2019), and group work with peer assessment and scaffolding (Ahmadpour et al., 2016). The next strand of research comprises interventionist studies that optimise the development of L2 speaking and explore the effect of scaffolding strategies on L2 speaking (Mirahmadi & Alavi, 2016; Zarandi & Rahbar, 2016). The studies in the last group examine the effectiveness of scaffolding interventions with the use of various scaffolding strategies (Ghasedi et al., 2018; Shooshtari et al., 2018).

The rapid development of Web 2.0 tools including learning management systems such as Blackboard or Moodle, as well as increased opportunities for

authentic communication practice in the L2, has resulted in significant learning gains including improved L2 language skills (Levy, 2009; Chang & Windeatt, 2021a; 2021b). These tools have expanded opportunities for online and blended learning by allowing students to practise skills and collaborate on tasks outside of the classroom (Barrett & Liu, 2016; Chang, Power, & Windeatt, 2022), resulting in a more flexible learning environment (Liu, 2011). The technology for audio recording has also advanced to the point where students can easily record themselves speaking and share their recording using portable (mobile) devices (Chang & Windeatt, 2021b), as well as allow teachers to provide regular feedback to students (Moneypenny & Simon, 2017).

In sum, the existing research gives insight into the ways learners can be supported while they develop L2 speaking skills and the relevant findings point out that scaffolding—be it teacher-, peer- or technology-based—helps L2 learners enhance their speaking performance. However, the scholarship in the area of scaffolding the development of L2 speaking remains modest and many important issues are still unresolved. First, intervention studies overviewed above either tend to overlook the theoretical features of scaffolding (e.g., inter-subjectivity, ongoing diagnosis, graded support, and fading) while planning L2 speaking instruction or seem to grapple with incorporating scaffolding criteria in L2 instruction. Next, the concept of tools is absent from L2 speaking literature and so is the arrangement of tools that can be applied in the scaffolding process. Moreover, research has not yet included EMHE L2 students who need to develop L2 speaking skills for academic communication. Finally, despite the enormous potential of technology to scaffold the development of L2 speaking, this area has received very little attention. As noted by Goh (2017), “[i]t is worthwhile for researchers to consider how technology can be harnessed not just for practising speaking but also providing cognitive support in thinking and planning for learners during speech processing as well as developing discourse skills for face-to-face interactions” (p. 258). Consequently, it is unclear how tools can be employed to support the development of L2 speaking for EMHE students with diverse levels of proficiency often found in language classrooms, and how the scaffolding can be faded.

## Method

This exploratory study set out to investigate how well design ideas are embodied and enacted in tools implemented to scaffold the development of EMHE L2 speaking skills in speaking courses taught in two learning contexts of Polish and Australian universities. Defining tools for scaffolding the develop-



ment of L2 speaking skills as physical and conceptual artefacts, intentionally organised to support the development of L2 speaking skills, encompassing learning activities, learning resources, instructor- and peer-based feedback, as well as technology, the following research question was addressed: From the students' (users') perspective, do the tools (i.e., activities, resources, feedback, and technology) embedded in the designed L2 speaking courses support the development of L2 speaking skills of the L2 learners set in two distinct educational contexts? If so, how?

Taken the role of social and material contexts envisioned in sociocultural theory, tools may work differently across L2 classrooms. By analysing student perceptions of tools used in two different settings, we hope that the findings will provide context-sensitive theoretical insights that will underpin the designs of future similar-type interventions for developing L2 speaking skills in EMHE. The results of the study also influence practice as students' perceptions of the tools can be used in course development in forthcoming sessions.

## Research Design

In order to answer the research question, the present study uses part of the dataset obtained in two cycles of a larger design-based research (DBR) project which iterated to develop, implement, and evaluate an L2 speaking course for academic communication, with the ultimate aim of generating design principles for L2 speaking courses (Pitura, 2022). The DBR approach is defined as “a type of participatory research in which researchers and practitioners collaborate toward a common goal, namely creating new understanding of an educational intervention or issue through the progressive refinement or improvement of a design” (Rodríguez, 2017, p. 364). Accordingly, DBR provides a methodological framework allowing researchers and practitioners to work together towards solving practical problems, develop, and implement solutions in real classrooms by using multiple methods to collect and analyse data, and refine design principles to advance new theoretical and practical knowledge (Anderson & Shattuck, 2012; Reimann, 2011; Rodríguez, 2017).

In the current study, two researchers-practitioners collaborated to meet the challenge of developing speaking skills in their EMHE L2 classrooms. In line with the longitudinal and cyclical nature of the DBR approach, at the first phase, the tools were designed, developed, and pilot-tested by the first author (Joanna Pitura) at a Polish university in an L2 speaking course offered to undergraduate English Studies students in the 2018/2019 academic school year. These tools were next refined and implemented in another sociocultural context by the second author (Heejin Chang) at an Australian university in an L2 speaking course for CALD students during two sessions in 2020. With

the aim of testing the tools in different sociocultural conditions, Australian university was considered suitable as the next iteration of this research project. Given the exploratory nature of this study, qualitative data constituted the main source of information about the tools, while quantitative data were given less weight in data collection and analysis, serving a supplementary role. In this DBR study, we analyse and report on the same constructs under different conditions (Rodríguez, 2017). This user-based information will help evaluate the tools used and generate design principles for scaffolding L2 speaking courses.

In both educational contexts the tools were incorporated to help students meet the following course aims: (1) the development of spoken genre-based oral presentation and spoken interaction language activities (Council of Europe, 2001, 2018): presentations/talks, debates, discussions, interviews, conversations and chats, (2) the enhancement of the quality of spoken L2 at the B2+ level (Council of Europe, 2001, 2018) in terms of the range of vocabulary, accuracy, fluency, pronunciation, and coherence in spoken English, and (3) the expansion of students' general knowledge. The following tools were employed: (1) learning activities (i.e., reading to talk about current affairs, reading for summarising in class, podcasting, learning, and practising specific spoken genres), (2) learning resources (i.e., course materials made available on Moodle), (3) feedback (instructor- and peer-based), and (4) technology (Moodle, SoundCloud/Voice Thread), as presented in Table 2.

**Table 2***Summary of Course Tools*

Tool type	Cycle 1	Cycle 2
Learning activities	<p><u>Before the course:</u> self-assessment of L2 speaking, reflection on speaking skills;</p> <p><u>Before each class</u></p> <ul style="list-style-type: none"> <li>• preparing to talk about current affairs;</li> <li>• reading an article of students' choosing to be summarised in class;</li> <li>• recording a podcast using the SoundCloud application (3-minute talk on an instructor-assigned theme connected to technology) in line with the assessment criteria;</li> </ul> <p><u>In each class</u></p> <ul style="list-style-type: none"> <li>• Step 1. A conversation on current affairs; pairwork; 10 mins;</li> <li>• Step 2. Summaries of students' articles and a conversation on the related issues; pairwork, 5 minutes for each partner;</li> </ul>	<p><u>In first class:</u> self-assessment of L2 speaking, reflection on speaking skills;</p> <p><u>Before each class</u></p> <ul style="list-style-type: none"> <li>• preparing to talk about current affairs by pasting links to the article in a designated online space;</li> <li>• recording a podcast using the VoiceThread application (3-minute talk on an instructor-assigned theme);</li> </ul> <p><u>In each class</u></p> <ul style="list-style-type: none"> <li>• Step 1. Presenting a summary of what students read; 5–10 mins;</li> <li>• Step 2. Provide comments, referring to the assessment criteria listed in the task;</li> </ul>

	<ul style="list-style-type: none"> <li>• Step 3. Evaluation of partner's podcasts; students access partner's podcast using a QR code displayed on the Moodle site, listen to it using own headphones and take notes for feedback, referring to the assessment criteria listed in the task; pairwork; approx. 10 mins;</li> <li>• Step 4. Spoken genre presentation and practice; whole group, pairwork, individual; approx. 60 mins;</li> </ul> <p><u>In last class:</u> assessment: a test on vocabulary, self-assessment of L2 speaking and genre-based speaking skills;</p>	<ul style="list-style-type: none"> <li>• Step 3. Spoken genre presentation and practice; whole group, pairwork, individual; approx. 60 mins;</li> <li>• Step 4. A vocabulary test;</li> </ul> <p><u>In last class:</u> self-assessment of L2 speaking and genre-based speaking skills;</p>
Learning resources	<p><u>Of instructor's choice:</u> Moodle modules; units from <i>Academic Vocabulary in use</i> (McCarthy &amp; O'Dell, 2008); online content, i.e. YouTube videos, links to websites and blogs;</p> <p><u>Of students' choice:</u> online articles, websites, blogs;</p>	The same;
Feedback	<p><u>In class:</u> from instructor and peers</p> <p><u>Out of class:</u> from instructor—assessment of the submitted podcasts; feedback on L2 (the indication of errors, e.g., mispronounced words, grammar mistakes, inadequate structures) and genre-based speaking, sent to individual ss via Moodle;</p>	<p><u>In class:</u> from instructor and peers</p> <p><u>Out of class:</u> from instructor—assessment of the submitted podcasts; feedback on L2 (the indication of errors, e.g., mispronounced words, grammar mistakes, inadequate structures) and genre-based speaking, in person;</p>
Technology	<p><u>In class:</u> university computer and projector</p> <p><u>Out of class:</u> students' computers and/or smartphones</p> <p><u>Both:</u> SoundCloud application, Students' smartphones, Moodle.</p>	The same; using VoiceThread instead of SoundCloud.

Scaffolding was achieved by capturing the four elements of intersubjectivity, graduated support, ongoing diagnosis, and fading (Puntambekar & Hubscher, 2005). Scaffolding was provided by the instructor, peers, and technology (Belland, 2017), that is, through the Moodle learning management system. Various tool types for in- and out-of-class use were selected to match with the four elements of scaffolding (Table 3).

**Table 3***Overview of Scaffolding with the Use of Tools*

Element of scaffolding	Form of scaffolding	Type of tool	In-class use	Out-of-class use
Inter-subjectivity	Moodle-based	Activities	Staging activities; Cycle 2 only: Introductory module;	Cycle 1 only: Introductory module;
		Resources	YouTube videos, websites, blogs; Cycle 2 only: Links to CEFR level descriptors;	Cycle 1 only: Links to CEFR level descriptors;
Graduated support	Moodle-based	Activities	Staging activities; <i>Academic English Vocabulary in Use</i> (McCarthy & O'Dell, 2008);	Voice recording; Reading for speaking;
		Resources		Online articles, websites;
	Peer-based	Activities	Pair/groupwork;	
		Resources		Peer podcasts;
		Feedback	On voice recording;	
	Instructor-based	Feedback	On in-class genre-based L2 performance;	
Ongoing diagnosis	Moodle-based	Activities	Vocabulary tests; self-assessment of spoken L2 proficiency; reflection on genre-based speaking skills;	
		Resources	Links to CEFR level descriptors;	
	Instructor-based	Feedback		Assessment and comments on voice recording;
		Technology		Cycle 1 only: Moodle messenger;
Fading	Moodle-based	Activities	Genre based instruction;	Script-based or plan-based voice recording activity, decided by the student;
		Resources	Use of reference materials as much and long as needed.	Use of reference materials as much and as long as needed.

With regard to *intersubjectivity*, in order to create a shared understanding of the learning goals vis-à-vis their actual performance, students used Moodle-based activities and curated resources that familiarised them with spoken genres and target L2 quality (B2+ level). At first, students engaged in the activities included in the introductory module that comprised an overview of course aims, assignments, etc., as well as self-assessment of spoken L2 proficiency and reflection on genre-based L2 speaking skills. In class, shared understanding of spoken genres was achieved through staging activities, one text (genre) type per module. These activities introduced students to the following genres: self-presentations, presentations/talks, debates, discussion, interviews, chats/conversations. In each module, following genre-based instruction (Hyland, 2003, 2007, 2008, 2018; Richards & Rodgers, 2014), the activities were organised to help students reflect on their experience with given genres (“Building the context”) and to model the speaking activity (“Modelling and deconstructing the text”). These activities were supplemented with online resources, that is, YouTube videos, websites, and blogs. All these tools were intended to help students grasp the understanding of L2 spoken text quality and structure which they were expected to produce.

As to *graduated support*, students were provided with (1) Moodle-, (2) peer, and (3) instructor-based opportunities to practise speaking and receive continuous assistance. First, Moodle-based staging activities supported the practice of genre-based speaking. In class, students co-created spoken interaction texts with their partners (“Joint construction of the text”), produced texts individually (“Independent construction of the text”) and distinguished text types one from another (“Linking to related texts”) (Hyland, 2003, 2007, 2008, 2018; Richards & Rodgers, 2014). Through voice recording (podcasting) activities, students practised oral production texts (self-presentations and talks). This activity aimed to help students engage in the systematic practice of speaking out-of-class, using suggested resources (websites) to learn about the topics of their talks. All the topics were related to technology and aimed to familiarise students with various aspects of digital literacy. If students felt insecure, they could write the script of the text in L2 and then read it while recording. Additionally, in order to help students note and put to use desirable L2 vocabulary and grammar, students used designated units from *Academic English Vocabulary in Use* (McCarthy & O’Dell, 2008). To enable the acquisition of content for speaking, students read extensively out-of-class. The support included recommended websites to read to be familiar with current affairs (e.g., [www.bbc.com/news](http://www.bbc.com/news)) and to summarise content in class (e.g., websites of *Nature*, *New Scientist*, *Scientific American*). Second, peers provided support through pair-and groupwork activities, in which students had partners and audience to engage with while speaking and to receive immediate feedback on performance. Peer podcasts that were accessible for all course participants through Moodle also served as resources in the form of the models that could be imitated.

Third, instructor-based feedback in class aimed to modify students' genre-based L2 spoken performance. These tools were selected to support diversity in the classroom by accommodating students of different levels of proficiency and backgrounds as they develop mastery in L2 speaking. Through the use of these tools, students were provided with structure and guidance in- and out-of-class whenever they constructed their own spoken texts. Although technology-based support was the same for all students, individual feedback that emerged in the interaction with peers and the instructor was to trigger the use of the affordances of technology-based tools (that were earlier employed to achieve intersubjectivity), according to their shifting needs.

Concerning *ongoing diagnosis*, throughout the course, students' speaking skills were regularly assessed by instructors to provide students with further assistance. This included regular in-class monitoring of student performance and out-of-class assessment of students' voice recordings. Furthermore, students did online vocabulary tests to ensure that they build an appropriate range of L2 vocabulary for academic communication. On course completion, students self-assessed their L2 speaking skills and reflected on genre-based performance. These tools allowed instructors to spot challenges in student speaking and react by adjusting instruction.

*Fading* of support was accomplished by means of two activities: (1) staging genre-based instruction activities with supplementary reference resources and (2) voice recording (podcasting) activities with supplementary reference resources. In staging activities support was faded automatically at the independent construction phase as it was assumed that students would become capable of independent activity by then due to the sequence of instructional activities. At all stages students could use Moodle-based reference materials as much and as long as they needed. In voice recording activities students themselves could fade the support. Specifically, students were allowed to write full scripts of their talks and then to make the recording by reading it. When they gained confidence in performing this activity, they recorded the talks using a plan only. While preparing their scripts or plans, students could also use Moodle-based reference materials when necessary. Through this strategy, students were provided with an opportunity to practise organising the talk and selecting appropriate language.

## Participants

With the view to evaluating the utility of the designed tools in different sociocultural contexts, the participants comprised two distinct groups of EMHE students: a (near) homogenous group of non-native speakers set in a non-Anglophone country (Poland) and a heterogeneous group of non-native

speakers set in an Anglophone country (Australia). The Polish group (PG) included 26 EFL undergraduate English Studies students in their second year of an extramural BA-level programme, participants of a compulsory one-semester (18 hours) “Discussions” course form the first cycle of the DBR project. They were in their 20s and 30s, speakers of Polish as L1, one student’s linguistic context being Ukrainian as L1. Their English language proficiency was varied, around the area of the B2 level, according to the CEFR scales (Council of Europe, 2001, 2018). The Australian group (AG) included 12 ESL students from a variety of nationalities (i.e., Afghanistan (1), China (2), Congo (2), Syria (2), Iraq (2), South Korea (2), and Venezuela (1)) studying at an undergraduate level at an Australian university. They were in their 20s and early 30s. They had been residents of the country from a week to five years before the course commenced. They attended a one-semester in-session language and study skills programme “Academic Speaking and Listening,” 12 hours per week for 10-weeks, within which the speaking content was used for four hours per week. Student level on entry to the course was IELTS 5.0 to 5.5 (B1 equivalent). All the participants provided informed consent in writing.

## **Data Collection**

Data used in this study were gathered by means of a self-report pen-and-paper questionnaire containing closed-ended items and open-ended questions formulated in the English language. As this study was implemented in real classrooms, student involvement was considered essential in the research process. Students’ perceptions regarding the use of tools influence their learning during the course, the understanding of which is important for course designers and practitioners. This knowledge can help better design speaking courses and facilitate student learning.

The current study uses part of a large dataset and considers five groups of items that investigated student tool perceptions in terms of in- and out-of-class activities, learning resources, feedback from peers and the instructor, and technology.

### ***Out-of-class Activities***

With the use of three items, students were asked to evaluate how helpful homework assignments were for developing their speaking skills: “Reading articles to be summarised in class,” “Reading about current affairs to be discussed in class,” “Podcasting about technology-related aspects.” Responses ranged from 1 (“not helpful at all”) to 5 (“very helpful”). Additionally, students were invited to elaborate on their responses (“Why?”).

### ***In-class Activities***

Five closed-ended items were worded: “What I did in class helped me improve my discussion/interview/conversations/debating/presentation skills.” Students’ responses were recorded on a 5-point Likert type response scale (1 = “disagree,” 5 = “agree”).

### ***Learning Resources***

Six closed-ended items were worded: “Course materials provided on Moodle helped me improve my discussion/interview/conversations/debating/presentation skills.” Again, students’ responses were recorded on a five-point scale (1 = “disagree,” 5 = “agree”).

### ***Feedback***

The students were asked to evaluate the feedback for developing their speaking skills through two items: “Feedback from other students,” “Feedback from the course instructor.” Responses ranged from 1 (“not helpful at all”) to 5 (“very helpful”). Additionally, students were asked to elaborate on their ratings (“Why?”).

### ***Technology***

Students evaluated the technology for developing their speaking skills: “Moodle,” as well as audio-sharing platforms: “SoundCloud” (PG) and “VoiceThread” (AG). Students responses were recorded on a scale ranging from 1 (“not helpful at all”) to 5 (“very helpful”) and students were also invited to elaborate on their responses (“Why?”).

The questionnaire was distributed in last class in both groups, students completed it anonymously.

### **Data Analysis**

In order to explore student perceptions of tools used in their speaking course, questionnaire data were subjected to qualitative and quantitative analyses. The open-ended responses from the questionnaire were analysed qualitatively for major themes. Content analysis involving the identification and analysis of the emerging themes within the dataset (Dörnyei, 2011) was adopted to capture students’ experiences with course tools. Student accounts were quantified; the digits provided in the text denote the number of students who reported aspects



within the given theme. We quote student words in an uncorrected form to illustrate points made. With regard to quantitative data analysis, we tallied means (responses ranging from 1 indicating a negative evaluation to 5 indicating a high evaluation) for each survey item and displayed the results to show average ratings in both groups. Given the qualitative nature of the approach adopted in the study (not allowing for the generalisation of the findings), we do not employ inferential statistical analyses and we do not report statistical significance of the results.

## Results

This section presents the results, that is, students' perceptions (PG—Polish group; AG—Australian group) of the tools designed and implemented in both courses in terms of (1) learning activities (i.e., reading to talk about current affairs, reading for summarising in class, podcasting/voice recording, learning and practising specific spoken genres), (2) learning resources (i.e., course materials made available on Moodle), (3) feedback (instructor- and peer-based), and (4) technology (Moodle and audio-sharing platforms).

### Learning Activities

#### *Reading to Talk about Current Affairs*

**PG.** Systematic reading and ensuing in-class conversations on the topics related to current affairs was seen, in students' declarations, advantageous for (1) practising speaking (8), (2) developing knowledge of the world (6), catering for the need of engaging in meaningful spoken interactions (4), developing other competences and attitudes (2) but it was also indicated that this activity can be challenging (5). First, as noted by one of the students, speaking practice is essential to improve speaking skills and one way of practising is to speak about current affairs. Another student emphasised the usefulness of this activity by having to put "different sets of difficult vocabulary" to use. Furthermore, talking about current affairs in English and exchanging opinions creates space that helps "speak more freely in English," allowing the students to produce long turns in speech: "If the topic was interesting I could elaborate on it even more than 5 minutes." Although one student confessed that "I just personally never felt it," they considered it "a great warm-up though." The next category of responses comprises an idea that by reading students have an opportunity

to become and/or remain knowledgeable of the world. This is considered to be important, as expressed by one of the students: "I gained huge knowledge about the world, and what was going on, I think it was my favourite part of the course." The next category contains comments indicating that reading about current affairs fosters students' need for and the ability to engage in spoken interaction. Specifically, student words suggest that engaging in spoken exchanges with peers was sought for: "There were very interesting opinions and topics so I wanted to add something from myself." Another student felt more competent with regard to communicating in speaking: "I know how to cooperate with the partner, in a proper and friendly way." As to other reported competences and attitudes, two students mentioned practising translation skills and assertiveness. According to one of them, "Current affairs that I read about were usually in Polish, so I had a chance to practise translating new information... to English in speech." Yet another student declared that while talking about current affairs, there were often conflicting opinions which helped him/her practice assertiveness in speech. The challenges emerging in students' comments include their struggles related to lack of interest (e.g., "When somebody isn't interested in politics, etc. reading these articles is painful," "I'm not interested in current affairs and it was hard for me to speak about something that I'm not interested in") and insufficient preparation (e.g., "It made me do research about current affairs although I have to confess that I wasn't always prepared," "I didn't like it. It was hard for me to choose what I should read about").

**AG.** The analysis of students' responses reveals three areas: (1) practising due to relevance and interest (7), (2) integration of and connection with the real world (4), and (3) enhancing motivation in learning (6). The freedom of choice of the topic of current affairs helped them participate in class discussions more actively. Most students stated that they enjoyed doing this activity because they could choose the topic they were interested in. Some students explained that the chosen topic was currently reported in news bulletins and newspapers so it was valuable for them to be able to engage in discussions with others outside the classroom (e.g., "I read a lot about corona virus and the conflicts in Hong Kong because I was interested in and people around me talked about them. I wanted to know [them] in English"). One student stated: "Although I often listened to some difficult words from TV or other people's talk, I hardly used them in a conversation. But now I managed to use them in class as well as outside." Another student wanted to have "more time to discuss the topic we brought and have a debate" and yet another one stated that "reading current affairs helped me a lot to learn new words."

### *Reading for Summarising in Class*

**PG.** The students endorsed this activity and they found reading and summarising articles beneficial for the development of their L2 speaking skills. They reported (1) enhanced spoken performance (8), (2) gains in the quality of L2 with regard to the range of vocabulary and accuracy (6), and (3) affective outcomes (6). The improvement of spoken performance is attributed to systematic training based on article content. Owing to reading, students reported an increase in the perceived ability to take longer turns (“I’ve learnt how to talk about something for a couple of minutes”) and to talk in an engaging way (“It’s difficult to present a topic to a partner in a way that will interest them and provoke a discussion and article summaries let me practice that”). One student stated that reading and then summarising article content supported their practice of discussion skills when they are forced to work with a partner who has “a totally different way of thinking and opinions” on the issues presented in the text. With regard to the comments on gains in the range of vocabulary and accuracy, the students explained that this is the result of the need to check unfamiliar words used in the texts. One student reported spending more time studying grammar (past tenses). The comments in the last category address emotions suggesting that reading to summarise articles engages students in a stimulating activity. The students reported “checking significant information,” “finding interesting information,” reading “interesting articles,” “broadening horizons” and “understanding more.”

**AG.** Similarly to the Polish group, the students in the Australian group reported: (1) improved English language skills (7), (2) acquired content knowledge (7), and (3) affective outcomes (5). By preparing this activity on weekly basis, the students made it a habit to read and speak. One student explained that “I prepared a note for a summary because [there were] some words I needed to remember when I shared my story to my classmates.” And “I looked up a dictionary many times while reading articles, which helps my vocabulary.” The student added that this activity was not only enhancing L2 skills but also content-related knowledge. They reported: “I learned a lot about medical terminology and medicine, especially side effects.” When they shared a summary successfully with their classmates, they seemed to feel confident (“Some story was difficult to summarise in English. But I did, which made me so happy”). Alternatively, due to lack of practice and preparation, they felt embarrassed. The student confessed: “I couldn’t remember how to pronounce some words and it was so difficult to memorise... I really wanted to stop summarising my article because I didn’t prepare it well.”

### ***Podcasting (Voice Recording) on Technology-related Topics***

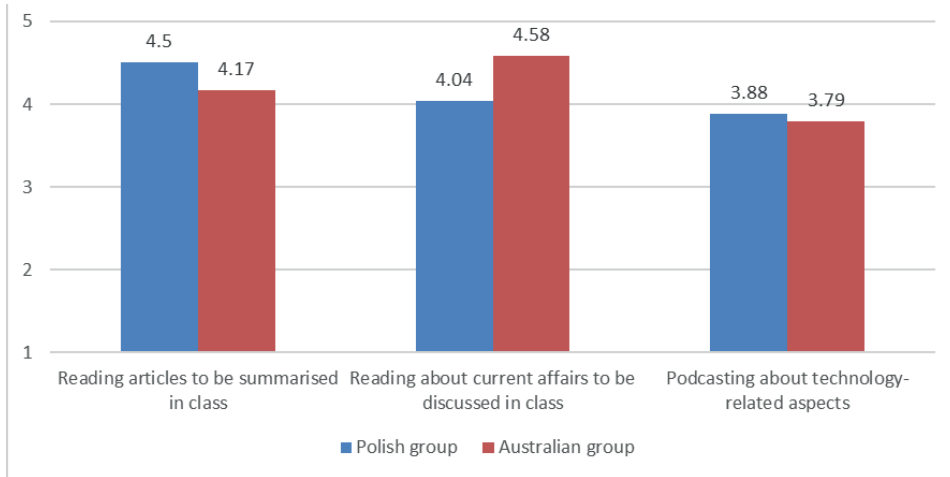
**PG.** Three categories of themes arise in students' responses: content-related (11), topic-related (6), and language-related (6). Content-related comments indicate that students gained and engaged with new knowledge—described as “current/important” by one of the study participants—because they had to do research in order to collect information prior to recording their talks. As reported, students learned, among others, about aspects of modern technology and how it can be used to improve their English. Furthermore, one student confessed that although they do not “like online activity (my own, I tend not to do it),” they found it “interesting to know that there are many things that can help me develop myself.” Topic-related comments revealed student interest in the area (e.g., “I am interested in that topic. It was really helpful to improve and gain a bit more to what I currently know”). Alternatively, some students acknowledged that the topics were interesting but difficult to talk about, and, despite gains in knowledge, the topics were not interesting or sufficiently diverse (e.g., “Not only technology-related topics are needed”). Finally, language-related comments concerned the perceived gains in the range of vocabulary and cohesion (e.g., “it develops also vocabulary and abilities of ‘common speech’ (links between paragraphs..., etc.)”). Voice recording itself helped students get accustomed to speaking and one study participant stated that it supported the development of their communication skills: “I learnt to use my voice as a tool of conveying the message.”

**AG.** The students considered this activity to be helpful in two areas: (1) content knowledge (12) and language (12). Most students felt that they gained knowledge (e.g., “I learned a lot. I made a note about information and my thoughts,” “Learned a lot. I didn't even know, in my tongue”). Beyond this, they emphasised the improvement of language skills by practicing and the exposure in English (e.g., “improved speaking because I practiced a lot,” “I learned many new words because I had to read English texts”).

Overall, these activities (reading for talking about current affairs, reading for summarising in class, and podcasting—voice recording) were favourably evaluated by the students (Figure 1). PG students rated the helpfulness of reading articles to be summarised in class higher ( $M = 4.3$ ) than reading about current affairs ( $M = 4.04$ ) or podcasting ( $M = 3.88$ ). AG students gave reading about current affairs the highest rating ( $M = 4.58$ ), and also highly rated reading articles for summarising ( $M = 4.17$ , and podcasting ( $M = 3.79$ ).

**Figure 1**

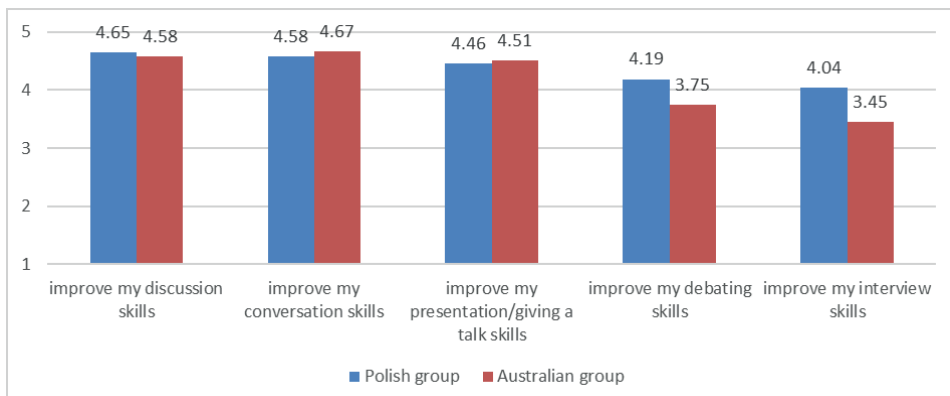
*How Helpful Were Homework Assignments for Developing Your Speaking Skills? Mean Evaluations; 1 = not helpful at all, 2 = rather not helpful, 3 = hard to say, 4 = quite helpful, 5 = very helpful.*



As displayed in Figure 2, in-class activities were reported to have helped the students develop speaking in given genres. AG students stated that course activities mostly helped them improve discussion (M = 4.58), conversation (M = 4.67) and presentation skills (M = 4.551). PG students also highly rated these aspects (M = 4.65, M = 4.58, M = 4.46, respectively). In PG students' opinion, in-class activities helped improve debating (M = 4.19) and interview skills (M = 4.04), while AG students gave these skills moderate ratings (M = 3.75, M = 3.45).

**Figure 2**

*What I Did in Class Helped Me... Mean evaluations; 1 = disagree, 2 = rather disagree, 3 = hard to say, 4 = rather agree, 5 = agree.*

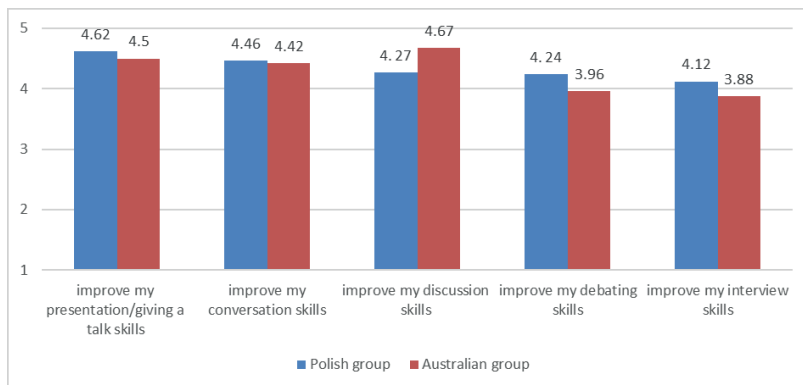


## Learning Resources

Available data show that the learning resources helped students enhance their speaking skills, as evidenced in the mean ratings presented in Figure 3 (no qualitative data available in the dataset). On average, in PG students' view, the resources helped them to improve, first and foremost, their presentation (M = 4.62) and conversation (M = 4.46) skills, the improvement in other skills being also highly rated (discussion skills M = 4.27; debating skills M = 4.24; interview skills M = 4.12). AG students declare that these resources helped them most to improve discussion skills (M = 4.67), while the improvement in other skills was rated slightly lower (interview skills M = 3.88; debating skills M = 3.96).

**Figure 3**

*Course Materials Provided on Moodle Helped Me... Mean evaluations; 1 = disagree, 2 = rather disagree, 3 = hard to say, 4 = rather agree, 5 = agree*



## Instructor and Peer-based Feedback

**PG.** With regard to feedback, students' comments focused on the quality and impact of the feedback received. As to the *feedback from the instructor*, the majority of the comments reflected on impact (16), seven comments concerned the quality and one student voices a limitation. Considering the impact, students' comments indicated that having received feedback from the instructor they better understood what their learning goals should be ("Specially I liked private emails which were very clear to understand and show me as a student what I needed to improve for the next time"). Moreover, instructor feedback was reported to have fostered L2 development, such as pronunciation and grammar, and helped notice weaknesses ("Instructor showed me my mistakes that I didn't know I've done; now I pay special attention to pronunciation"). Instructor feed-

back can also infuse students with a sense of reassurance (“I know whether my skills are good enough”) and boost motivation to work (“Getting each time a message from the teacher/expert, with a relevant, motivating comment,” “I wanted to be better and it was for me a great motivation to learn. I could see that I am not as bad as I thought”). The comments concerning the quality of instructor feedback highlighted the relevance of feedback, pointing out students’ strengths and weaknesses, the objectivity of feedback, its clarity, as well as feedback being “very helpful” and “professional.” One student felt that it was undeservedly positive: “The teacher wasn’t severe and rather moderate so feedback was very often better than I expected and deserve.” One student stated that there were “[t]oo many people on the course,” suggesting that more in-class feedback could have been provided, had there not been so many students in class. As to *peer feedback*, more comments referred to the quality of feedback (15) than to the impact it had (12). With regard to the quality, the students report both positive experiences and scepticism concerning the reliability of feedback. In many accounts, peer feedback was helpful (“Thanks to his or her opinion we could keep an eye on our mistakes”), immediate (“They told us what was wrong or fine immediately after listening so they had a ‘fresh’ overview and could be honest”), specific (“I know where and what mistakes I make,” “gave me concrete information”), as well as sincere, responsible, and trustworthy (e.g., “Fellow students are smart and tolerant. This equals to proper feedback”). In some students’ opinion, peer feedback was not useful when it was not sincere (“I wasn’t sure if the feedback was real [or] maybe my partner didn’t want to make me upset,” “Some people were just trying to be nice, not necessarily told you what they really thought about your speaking skills,” “I don’t think that my partner was 100% honest with me, she wanted to be nice, never said a bad word about my podcasts or other activities”). Concerning the impact of peer feedback, study participants reported its influence on L2 competences (pronunciation, noticing mistakes) and setting the goals for learning (“They told me what they liked and said what I should improve so I knew what to work on”); it also strengthened their efforts to improve own performance (“I could see what other people think about my speeches; different points of views and how could I did it in different or better way”). Although one student found peer feedback reassuring (“It is good to know what others think and have a constructive critic”), another one was disturbed (“It wasn’t appropriate to my skills. Always too low rating what demotivated me”).

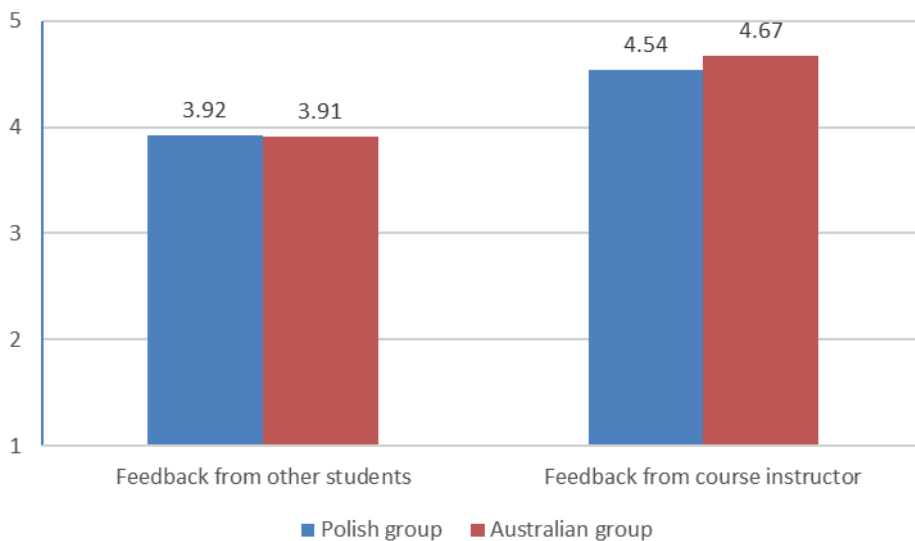
**AG.** The analysis of the data suggest that the students valued both the instructor and peer feedback. In *peer feedback*, they emphasise two areas; (1) learning (7) and (2) quality (4). The students noted that peer feedback was helpful because it supported their own learning (e.g., “I like peer feedback. The point they made was useful to correct my mistake”). However, a few students expressed

concern about the quality of feedback (e.g., “It was good to receive their comments but I was not so sure their comments were right because they were not experts”). Regarding *feedback from the instructor*, the students commented that the quality of feedback was beneficial in three areas: structure (7), language (8), content (5), and method (3). The students understood the difference of structural and functional aspects of a given spoken genre (e.g., “At the beginning, my talk was like daily conversations. Academic presentation has a structure and I learned how to organise my talk”). They also appreciated feedback on language (e.g., “She corrected my pronunciation and wrong words”), as well as content (e.g., “Sometimes I didn’t understand readings so her explanation helped me to understand”). Next, the students indicated that individual feedback was effective to help them understand their problems (e.g., “She gave me feedback in person and it was in detail about my work. So I could ask questions about her feedback and was able to understand my problems”). Overall, instructor feedback was perceived as being more helpful than peer feedback.

Overall, as can be seen from Figure 4, in both groups, feedback from the instructor was rated higher (PG M = 4.45; AG M = 4.67), compared to the feedback from peers (PG M = 3.92; AG M = 3.91).

**Figure 4**

*How Helpful Was Feedback for Developing Your Speaking Skills? Mean evaluations; 1 = not helpful at all, 2 = rather not helpful, 3 = hard to day, 4 = quite helpful, 5 = very helpful.*





## Technology (Moodle and Audio-sharing Platforms)

**PG.** While Moodle is considered a valuable platform containing information (14) that facilitates learning (10), SoundCloud is associated with novelty (6), enabling (13), emotions (3), and tensions (5). The students value Moodle for making the content available and for being a convenient and helpful hub of materials. The materials themselves are described as relevant, interesting, abundant, “clear and straightforward” information (links, tips, etc.) needed for preparing and following the course. Additionally, the resources are believed to foster learning appropriate vocabulary, for example: “Because of the materials posted there we could learn new vocabulary elements at home.” One student reported gaining more familiarity with target genres owing to Moodle-based materials and another one declares that these materials helped them memorise information: “I remember things better when someone comments a video material. When I read something I forget.” In students accounts, the platform, by making the resources available, facilitated their work out of class (e.g., “I downloaded the materials and checked them as often as I had a problem with something”). As to SoundCloud, its use for sharing digital voice recordings was novel for the students. They were not used to this kind of activity but they welcome the new opportunities that the tool affords, that is, being able to hear oneself speak, being “graded by a professional” or being more technology-literate. The tool is also regarded as an enabler, as reported by study participants. Students’ words suggest that it enabled noticing their L2, for example, “Especially when I had to check pronunciation of some words and now I pay attention to pronunciation and I remember my mistakes to this day,” “I started paying more attention to how I speak.” One student realised that their speaking skills were worse than previously imagined. The tool also supports improvements in the organisation of extended spoken utterances. Other participants focused on the opportunity to listen to other students’ podcasts as models to follow and to monitor own production by being able to hear themselves speak, “our voice, mistakes from the side.” Two students emphasised the feedback opportunities that the tool availed: “Feedback from podcasts helped me, I wanted to improve my skills and now I can see I am on a higher level. Podcasts were very good.” Two students also declared that the tool provided them with an audience, described as “theoretically wider” by one student or “limited” by another. Next, three students’ comments referred to the emotions that speaking entails. In students’ words, their experience with SoundCloud helped them reduce anxiety (“I’ve stopped being worried about my sounding and started to focus on content”) and was a source of satisfaction (“Being a little bit of a perfectionist myself I spend some time making sure the podcast is good. And it really turned out to be ☺”). As reported by one student, the experience with SoundCloud has increased their confidence as a speaker. Yet, a number of tensions emerge; two

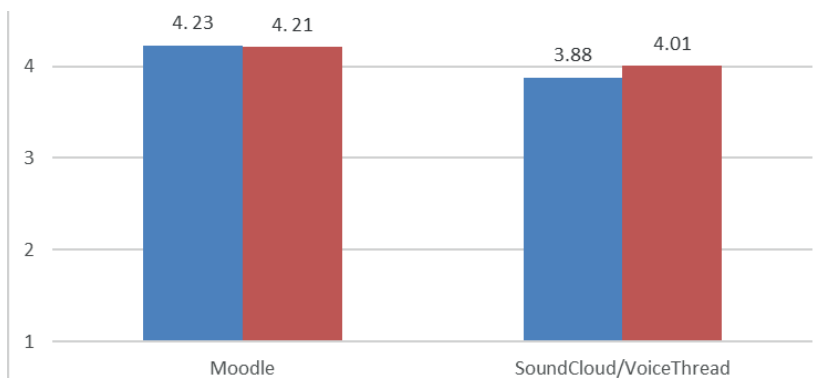
participants revealed concerns related to the way they recorded their podcasts, the usefulness of this activity versus their expectations. As one student stated, “I was reading what I earlier prepared, in the way as I always read so I don’t think it changed anything.” Another student notes that “It wasn’t the same as talking with other people live. I could prepare my presentation earlier. In real life I cannot make notes while talking with someone. That’s why talking in real life is stressful for me.” One student experienced a conflict of values: “I prefer to be honest and true, for me it was just pretending of being quite good at some topics.” Finally, one study participant declared that that they would rather speak more in class, simultaneously recognising that it is not possible because of the course length. One student admitted “combating with my obligations to make podcasts.”

**AG.** While reflecting on how Moodle supports their future study at university, the students feel that being familiar with Moodle will be very useful (e.g., “I learned how to use StudyDesk [that is part of Moodle]”) Recording activities gave the students mixed feeling and experience (e.g., “It was so hard to access VoiceThread by my mobile at the beginning. But it is good to learn how to record, and interesting to hear my voice after recording”).

Student evaluations of how helpful Moodle and audio-sharing platforms (SoundCloud—PG; VoiceThread—AG) were for developing L2 speaking skills are quite similar for both types of technological tools (Figure 5). PG students’ average rating of Moodle is  $M = 4.23$  and the audio-sharing platform is  $M = 3.88$ , whereas AG students’ ratings for Moodle is  $M = 4.21$  and the audio sharing platform is  $M = 4.01$ .

**Figure 5**

*Mean Evaluations of How Helpful Were the Following for Developing Your Speaking Skills? Mean evaluations; 1 = not helpful at all, 2 = rather not helpful, 3 = hard to say, 4 = quite helpful, 5 = very helpful*



## Discussion

The conceptualisation of tools for developing L2 speaking skills, as detailed in the theoretical part of this paper, served as a theoretical foundation to investigate tools for scaffolding skill development among EMHE students in two different contexts. A core premise underlying our approach is that tools mediate cognitive activity and, hence, have the potential to support linguistic development when tools are intentionally organised to scaffold learning (Vygotsky, 1978; Wood et al., 1976). As the concept of tools for developing L2 speaking skills remains under-researched, we need to advance our knowledge by articulating and integrating tools for scaffolding the learning process of diverse learners in modern classrooms. When students are supported in becoming familiar with the features of L2 they are expected to perform, see models of target L2 behaviour, practise the skill employing available tools as long and as much as needed, and when they receive feedback on performance, they are likely to speak with increasing fluency, confidence, and accuracy. The results of this exploratory study thus reflect on student perceptions of the scaffolding tools (i.e., activities, resources, feedback, and technology) that were used by the students in two EMHE contexts.

Considering the research question, the current study found preliminary evidence that, in students' view, the designed tools support the development of L2 speaking skills in both groups of learners (a homogenous group of non-native speakers of English set in Poland—a non-Anglophone country and a heterogeneous group of non-native speakers set in Australia—an Anglophone country) in a comparable fashion. Both in- and out-of-class *activities* are reported to facilitate the development of the genre-based speaking skills targeted in the course, that is, talks/presentations, debates, discussions, chats/conversations. Students' words suggest that, owing to systematic and frequent text production, they grow accustomed to speaking and, by having an opportunity to hear their own speech in voice recordings, they can evaluate their performance. Beyond that, data suggest that out-of-class activities allow students to prepare for speaking by acquiring and consolidating both content and language to be activated in oral text production. Yet, there are individual students who find some out-of-class activities limiting and/or uninteresting, as well as those who are doubtful of the sense of voice recording in the current shape, which makes it more difficult for them to engage in these learning activities. Next, the results of the study suggest that the *resources* applied in the course were believed to support the development of L2 speaking. Described as relevant, abundant, accessible, and easy to use, the resources seem to help students acquire L2 vocabulary and understand genre-based speaking. They also allow students to prepare for class, follow the course and can be referred to whenever reference is needed.

*Feedback* appears to be a valued tool, too. It becomes evident that feedback from the instructor contains information about the weaknesses or mistakes in produced texts, as well as hints concerning genre-based text organisation and target L2. Instructor-based feedback helps students envision and/or revise their learning goals and also provides some students with a sense of relief with regard to their capabilities as L2 speakers, as well as motivation for future work. Peer-based feedback, in turn, can be frequent, immediate, and can also be used to monitor own mistakes, as well as learning goals. However, both instructor and peer feedback is not always considered sincere or in agreement with expectations, which seems to breed conflict and tension on its reception. Finally, *technology* appears to support student learning throughout the course. Moodle grants continuous and unrestricted access to the learning activities and resources in class and referral to the resources out of class whenever students need information or examples to model their own speaking. Online sharing of voice recordings—in this study accomplished by the use of SoundCloud and VoiceThread applications—allows students to use other students' podcasts as examples of target text and to receive feedback from the instructor out of class.

On the whole, these results are consistent with prior research suggesting that scaffolding is beneficial for developing of L2 speaking through the use of learning activities and resources, feedback and technology (Ahmadpour et al., 2016; Azir, 2019; Gerakopoulou, 2016; Ghasedi et al., 2018; Gilead, 2018; Mirahmadi & Alavi, 2016; Nguyen, 2013; Shooshtari et al., 2018; Zarandi & Rahbar, 2016). This study further contributes to the field by advancing a wider use of different types of tools as scaffolds provided in multiple forms (Belland, 2017) to help students enhance their L2 speaking skills in the EMHE context. This study illustrates how tools were used to accommodate the features of scaffolding in tools to help students understand what they need to learn, receive information about their performance, draw on the available support or proceed without it when it is no longer needed, both in class and beyond classroom walls (Puntambekar & Hubscher, 2005). Besides, the results suggest that frequent and regular digital voice recording is particularly well-suited to enhance L2 speaking, which builds on the results obtained in prior research (Bui & Huang, 2018; De Jong & Perfetti, 2011; Qiu, 2019; Tecedor & Campos-Dintrans, 2019; Chang & Windeatt, 2021b) that emphasises the affordances of practice activities and technology to promote confidence while speaking. Through voice recording, students have a chance to structure, rehearse, and hear their own performance, thereby making the process of speaking “visible” (Goh, 2017, p. 248) and hence more manageable for L2 speakers. Also, the use of Moodle to create a flexible learning environment (Liu, 2011) is linked to the development of strategies for monitoring progress in learning progress.

The limitations of this study include, first and foremost, those that pertain to design-based and interventionist research conducted by practitioners in real

classrooms. The existing groups differ in terms of the number of participants and their social-material makeup, and the implementation of the tools in the classroom could have been influenced by the resourcefulness and energy of each instructor-researcher. Next, the students used a set of tools, which may or may not be the only set possible to optimally advance students' L2 speaking skills. Apart from that, our findings may be affected by the fact that researchers taught the participants and were also in charge of the design and implementation of the tools, which may question the credibility of the results. Acknowledging these limitations, the analysis of the dataset was conducted by both researchers aiming to provide thick description of the results. But even so, the findings in our exploratory study should be regarded in terms of preliminary insight that requires further empirical investigation, including other research designs and giving more prominence to quantitative data collection and more sophisticated analytical methods. On the other hand, for the same reason, that is, being practice-based, this study makes it possible to document and analyse the use of tools in real-world classrooms, thereby affording research insight not feasible otherwise and allowing, as Reimann (2011) notes, "teachers' pedagogical practices and students' learning practices... enter into decision making at all levels where educational decisions are made" (p. 43).

## Conclusion

Higher education students need environments that effectively support their L2 learning and use in academic settings. This study aimed to advance the area of L2 learning and teaching by conceptualising and analysing tools for scaffolding EMHE students' L2 speaking through the collaboration of researchers-practitioners in real-world classrooms in two educational contexts. This study illustrates how features of scaffolding were applied to map instructor, peer- and technology-based tools to include in- and out-of-classroom activities, resources, the learning management system (Moodle) and voice recording applications (SoundCloud, and VoiceThread) and peers' and instructors' feedback in L2 speaking courses. Students' accounts suggest that in- and out-of-class activities support the development of L2 speaking, in particular, by allowing the students to hear their own speech while practising. Peer and instructor feedback facilitated their speaking performance, just as the use of technology tools, that is, Moodle and voice recording applications. Overall, the results suggest that these tools can help cater to the multiple levels of student understanding of genre-based L2 speaking in diverse educational settings. Yet, it is necessary to acknowledge that, due to the study design, the findings must be treated with caution.

Despite this, we believe that the tools described in this article are an important first step towards designing instructional scaffolding in EMHE L2 speaking classrooms. Our study uncovered that there is room for further attempts to determine the adequacy of tools for scaffolding L2 speaking. For example, more research is imperative to inform the adaptation and use of the resources in speaking activities. There are also many unanswered questions related to the provision of feedback, that is, how to efficiently provide more of instructor-based feedback on L2 spoken performance to individual students in large classes or how to provide peer feedback of better quality. Finally, researchers can seek to find innovative ways of employing technology to assist L2 learners develop speaking skills for academic communication.

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### **Instrumente zur Förderung der Entwicklung von L2-Kommunikation in der englischsprachigen Hochschulbildung: Unterrichtserfahrungen aus Polen und Australien**

#### Zusammenfassung

Die Teilnahme an mündlicher L2-Kommunikation kann für Studierende an Hochschulen mit Englisch als Unterrichtssprache eine Herausforderung darstellen. Während die Literatur nahelegt, dass die Scaffolding-Methode die Entwicklung der L2-Kommunikation erleichtert, hat sich die Forschung bisher noch nicht mit dem Problem der Hilfsmittel für die Entwicklung des Scaffoldings befasst. Die vorliegende Studie verfolgt zwei Ziele: 1) zu untersuchen, wie das Scaffolding als Hilfsmittel zur Unterstützung der L2-Kommunikation eingesetzt werden kann, sowie 2) das Wahrnehmen der Hilfsmittel durch Studierende zu erfassen und zu analysieren. Sie stützt sich auf Daten, die auf der Grundlage von zwei Befragungen im Rahmen einer größeren designbasierten Forschung erhoben wurden, und zwar in Bezug auf zwei Gruppen: Anglistik-Studierende in Polen ( $N = 26$ ) sowie kulturell und sprachlich differenzierte L2-Lernende in Australien ( $N = 12$ ). Die Studie veranschaulicht, wie die Scaffolding-Methode verwendet wurde, um lehrer-, peer- bzw. technologiebasierte Hilfsmittel in Hinsicht auf Lernaktivitäten, Ressourcen, Technologie und Feedback auszuarbeiten. Die Ergebnisse deuten darauf hin, dass die Hilfsmittel auf verschiedene Ebenen von Verständnis und Fähigkeiten der Lernenden bezüglich der Entwicklung der L2-Kommunikation im modernen L2-Unterricht angewandt werden können.

*Schlüsselwörter:* Scaffolding, L2-Sprechen, Hochschulbildung, Polen, Australien