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Exploring shared repertoire in virtual communities of practice: Integration of artificial intelligence in English language teaching

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This study explores how English language teachers use shared repertoire in virtual communities of practice (VCoPs) when integrating artificial intelligence (AI) tools into teaching. Using a qualitative analysis of discussions from three open Facebook groups, this study identifies how teachers actively collaborate online to share practical strategies and resources related to AI. The findings indicate that shared repertoire in these groups serves four main purposes: supporting teaching activities, assessing students, sharing relevant resources, and suggesting improvements to AI tools. Teachers also discuss common challenges, including excessive reliance on AI, privacy issues, limited access to AI resources, and the risk of reduced teacher–student interactions. The study highlights that teachers’ collective experiences within these online communities can help institutions develop more relevant training programs for teachers. Overall, this research confirms that while AI can support language education, its successful integration relies on teachers sharing experiences and guiding each other on how to best use this technology to enhance their teaching.

Keywords: Facebook, artificial intelligence, shared repertoire, virtual communities of practice

Introduction

Recent studies have highlighted the various benefits of artificial intelligence (AI) in education, including its application in English language teaching (ELT). Sharadgah and Sa’di (2022) conducted a systematic review of literature on AI in ELT, concluding that AI has a promising future in this field, with positive outcomes in optimizing English language skills, translation, assessment, and student satisfaction. Similarly, Celik et al. (2022) emphasized that AI supports

teachers by enabling more tailored and effective lesson planning, providing immediate feedback, automating essay scoring, and involving teachers in AI development. Tlili et al. (2023) believe that AI tools such as ChatGPT provide new ways to engage with content and support educational activities. Expanding on these findings, Ziaja (2024) outlined the specific benefits of using ChatGPT in language lessons, such as improving language skills through realistic dialogues, functioning as a virtual dictionary and translator, and providing personalized communication by adapting to the context of conversations. AI's ability to generate text, offer written feedback, and create exercises for vocabulary reinforcement further enhances language learning.

More recent studies from Western contexts also show that AI is becoming more important in higher education and language learning. Minnillo et al. (2024) studied AI use at the Davis Language Center, University of California, where teachers, students, and instructional technologists shared their experiences with AI in language education. They found that AI tools help with writing by improving grammar, creating better essay outlines, and boosting students' confidence in using a second language. Another study by Klimova and de Campos (2024) of 90 university students in the Czech Republic showed that more than two-thirds of students felt that ChatGPT had improved their learning experience. Furthermore, about 62% said it helped them perform better academically, especially by generating ideas for assignments and understanding complex concepts.

However, integrating AI into ELT also presents several challenges. Yan et al. (2023), in a review of 118 papers, noted that many AI technologies, especially large language models (LLMs), are not yet sufficiently reliable for widespread use. Limited teacher involvement in developing AI systems also means these tools may not fully meet classroom needs (Celik et al., 2022). Tlili et al. (2023) also added that AI-generated content can sometimes be inaccurate. Minnillo et al. (2024) revealed that participants found AI-generated feedback to sometimes be too long, overly complex, or inaccurate, which caused confusion and frustration. They also noted that AI tools did not always follow instructions correctly, leading to unexpected or incorrect responses.

Privacy concerns also arise, as interactions with AI can expose personal information (Tlili et al., 2023; Yan et al., 2023). Ziaja (2024) echoed these concerns, highlighting risks of fabricated content, data privacy, and ethical issues in manipulating AI responses. Klimova and de Campos (2024) found that almost 40% of students were unaware of any ethical guidelines for using AI tools like ChatGPT. More than half of the students said they would not admit to using AI for academic work, possibly because they worried about academic integrity or saw AI as a shortcut rather than a learning tool.

Another major issue is access, with concerns about limited availability for teachers and students from low-income backgrounds (Yan et al., 2023). In addition, Celik et al. (2022) noticed that teachers often lack the technological knowledge to effectively use AI tools, and schools may lack the infrastructure needed for AI's integration.

Given these benefits and challenges, teachers' insights are essential. Their

first-hand experiences help them understand AI's strengths and limitations, making their role critical in effectively integrating AI into education. Supporting teachers as leaders in the classroom is important, as it enables them to ensure that students benefit from technology and to address any challenges that arise in digital learning (Chounta et al., 2022).

Despite the growing interest in AI's integration within ELT, there are still gaps in understanding how AI tools are used in diverse educational contexts. Existing studies have focused on crisis situations, such as the COVID-19 pandemic, leaving a need to extend the findings to more varied and everyday educational settings (Ito, 2023; Schwartzman, 2020). This study aimed to fill this gap by examining how ELT teachers share and develop their practices regarding AI integration in non-crisis contexts. It builds on previous findings, such as Selvi's (2021) study on the everyday use of Facebook groups for professional development, and extends these insights to understand how AI tools are integrated in broader educational settings. Understanding how teachers use AI tools and share knowledge in virtual communities of practice (VCoPs), which refer to networks of individuals who interact through digital platforms to share knowledge and learn from each other about a particular domain or practice (Wenger et al., 2002), is important for developing long-term strategies for professional development and technology use in language education (Chen et al., 2023; Monea et al., 2022)

Building on the discussions of AI's integration and the importance of teachers' insights, this study examined the functions of shared repertoire within VCoPs among ELT teachers. In the digital age, open Facebook groups have become key spaces for these communities, where ELT professionals exchange ideas and experiences about AI tools in teaching. These online discussions represent a shared repertoire shaped by the collective contributions of the community members. To summarize, this study addresses a research gap by focusing on identifying the functions of shared repertoire in VCoPs in the context of integrating AI tools in non-crisis educational settings.

Literature review

VCoPs and Facebook groups

In the evolving landscape of education, especially in ELT, the concept of communities of practice (CoPs) has shifted with the rise of digital technology, transforming into VCoPs. Originally introduced by Lave and Wenger (1991), CoPs were traditionally characterized by face-to-face interactions among members with a shared field of interest or practice. However, digital platforms have reshaped these communities, moving them online.

Despite this shift from physical to virtual spaces, the core elements of a CoP – shared repertoire, mutual engagement, and joint enterprise – remain vital to the function of VCoPs (Wenger, 1998; Wenger et al., 2002). Shared repertoire consists of the collective resources and experiences exchanged within the group, mutual engagement refers to the active collaboration and interaction

among group members, while joint enterprise represents their shared objectives. These components continue to support collaborative learning and knowledge exchange, even in digital settings (Lantz-Andersson et al., 2018; Lave & Wenger, 1991; Wenger et al., 2002).

A key aspect of the transformation into VCoPs is the rise of open Facebook groups as platforms for professional development among teachers. Unlike closed or private groups, open groups allow anyone to join and view discussions, creating an accessible space where teachers from different backgrounds can share ideas and resources (Facebook Help Centre, n.d.). The public nature of posts in these groups, as outlined by Facebook's privacy policy, means that information shared is considered to be public data and is accessible to anyone who discovers the group (Facebook, 2018; Kosinski et al., 2015). This openness encourages diverse perspectives and experiences, fostering wider collaboration and resource sharing. The global participation in these groups significantly enriches the shared repertoire within VCoPs, offering real-time exchanges of ideas, resources, and practices related to AI in ELT. Teachers can access and contribute to a collective pool of knowledge, helping them understand how AI tools are used in different educational settings and identify best practices and challenges (Trust et al., 2016).

Some recent studies have highlighted the role of Facebook groups within VCoPs. Liljekvist et al. (2020) examined teacher interactions in Facebook groups dedicated to mathematics and Swedish language education, revealing frequent "questions" and "offers" focused on pedagogical content. This suggests that Facebook groups are valuable resources for professional development across subjects, though the broad scope of the study indicates a need for more focused research. Schwartzman (2020) studied the 'Pandemic Pedagogy Facebook' group, which became a global community where teachers shared experiences and strategies for remote teaching during the COVID-19 pandemic. The group provided a platform for sharing resources and emotional support. However, the study's focus on the pandemic limits its relevance for understanding the use of VCoPs in non-crisis contexts.

Selvi's (2021) study of ELT professionals in Türkiye shows how Facebook groups function as virtual teachers' lounges, facilitating resource sharing and interactive dialogues. This study differs from those focused on crisis situations, highlighting everyday professional development in a non-crisis setting. However, its focus on Türkiye raises questions about whether these findings can be extended to broader contexts. Complementing these studies, Ito (2023) examined how language teachers used online communities on Facebook during the COVID-19 pandemic. The study found that these communities provided significant support in navigating the shift to online teaching, offering both resources and emotional support. While valuable, the study's focus on the pandemic and a single community of technology-focused teachers suggests the need for research on broader types of communities.

These studies suggest that the nature of professional development in Facebook groups might vary depending on the context. During crises, such as the COVID-19 pandemic, discussions were largely reactive, focusing on

urgent challenges like adapting to online teaching, troubleshooting digital tools, and maintaining student engagement (Schwartzman, 2020). In non-crisis settings, Facebook groups, such as the ones studied by Selvi (2021), seem to facilitate more reflective discussions centred on improving teaching methodologies and exchanging best practices or resources. Instead of responding to urgent disruptions, teachers use these groups to explore long-term pedagogical improvements.

Despite their benefits, Facebook groups also have some limitations as professional development platforms. Facebook's algorithm influences what members see because it promotes certain posts while making others almost invisible, potentially reducing the variety of ideas or resources shared (Nelimarkka et al., 2021; Peeters & Pretorius, 2020). This can create echo chambers, where discussions mostly reinforce the same perspectives, and few or no counter-opinions or alternative views are shared. Nevertheless, the presence of teachers from different backgrounds fosters a broader exchange of ideas. While algorithms shape the content's visibility, the discussions remain dynamic, as the members introduce varying perspectives and critically assess different viewpoints.

Another limitation is that discussions in Facebook groups often remain at a superficial level. Teachers actively share resources and seek advice, but these conversations often focus on immediate solutions rather than in-depth pedagogical reflection or critical discussions about teaching methodologies (Lund, 2023). However, these Facebook groups often serve as a starting point for teachers to explore issues in ELT before engaging in more structured discussions in formal professional development settings. Continuous interaction within these communities enables members to refine their understanding, as the initial inquiries evolve into more in-depth discussions over time.

Despite these limitations, Facebook groups continue to serve as valuable spaces for teachers' professional development. In non-crisis settings, they allow teachers to discuss teaching methods, share resources, and exchange ideas in a more thoughtful and long-term way. Unlike crisis-driven discussions that focus on quick solutions, non-crisis discussions encourage deeper conversations about teaching practices and ongoing improvement. Therefore, studying Facebook groups remains relevant, as they provide accessible spaces for ongoing discussions, resource sharing, and collaborative learning. While previous research has explored these groups as general platforms for professional development, there is still a need to examine their role in facilitating discussions on emerging technologies, such as AI in ELT.

The current study also differs from previous research by extending the examination of Facebook groups beyond crisis situations, focusing on the everyday professional development and integration of AI in ELT. While Schwartzman (2020) and Ito (2023) concentrated on the role of VCoPs during times of crisis, such as the COVID-19 pandemic, Selvi's (2021) study explored the use of Facebook groups for ongoing professional development in non-crisis settings. This study expands on Selvi's (2021) findings by examining how these communities support the integration of AI in ELT. Furthermore, unlike the study by Liljekvist et al. (2020), which provided a general overview of teachers'

interactions, this research delves deeper into specific discussions on AI tools, thus offering a more focused understanding of the use of AI in ELT.

Shared repertoire

The core of a VCoP is its shared repertoire, a concept critical to the functioning and effectiveness of such communities. Wenger (1998) states that this repertoire includes common resources, experiences, stories, tools, and ways of addressing recurring problems. It represents collective knowledge that is built over time. For teachers, this includes tangible resources such as lesson plans and pedagogical strategies, as well as intangible elements such as shared language, symbols, and rituals. This shared repertoire not only serves as a medium for effective communication but also lays the foundation for building a communal identity and facilitating learning among members.

The evolution of digital technologies has significantly influenced the dynamics of shared repertoires within VCoPs. These technologies allow for a wider range of contributions to the knowledge pool, making shared resources more inclusive and comprehensive compared with traditional settings. Platforms such as forums, wikis, and social networking sites like Facebook play a crucial role in fostering professional learning and knowledge exchange (Greenhow & Robelia, 2009).

The impact of these platforms on teaching practices has been demonstrated by Monea et al. (2022), who used practitioner inquiry methods over multiple years and locations to explore how English language arts teachers adapted their methods, particularly for leading discussions about texts in online settings during the COVID-19 pandemic. The study found that teachers in digital inquiry groups developed adaptive teaching practices by sharing experiences and strategies, responding more effectively to online teaching challenges. Key relational practices included cultivating empathy, actively listening to students' and colleagues' needs, and creating inclusive and collaborative learning environments. The continuous cycle of reflecting on practices, discussing them with peers, and applying new strategies led to improved teaching methods and professional growth. The study's focus on long-term, broad data collection provides a comprehensive view of shared repertoire in diverse contexts, highlighting the power of collective learning and adaptation. This study's emphasis on English language arts teachers suggests the need for similar research in ELT to fully understand these dynamics.

Chen et al. (2023) used netnography to explore the social, cultural, and professional practices within a VCoP for novice researchers in teaching English to speakers of other languages/applied linguistics. The study collected data from various digital sources, including webinar recordings, Facebook group posts, reflective journal entries, and one-on-one interviews. The collected data provided a comprehensive understanding of the participants' experiences and interactions. The VCoP allowed members to create and share resources such as virtual conference announcements, newly published books, and journal articles. Such actions foster a shared repertoire of communal resources. However,

the study's focus on a specific community of novice teachers indicates a gap in understanding how these practices translate into broader and more varied teaching contexts within ELT.

In summary, examining the shared repertoire within VCoPs is crucial for understanding how members share knowledge, tools, and resources, which is essential for effective collaboration and learning within the community. The studies by Monea et al. (2022) and Chen et al. (2023) provide valuable insights into how shared repertoire functions within VCoPs. However, this study expands on their findings by focusing specifically on the role of shared repertoire in supporting AI's integration within ELT, thus offering a unique perspective on how VCoPs contribute to the practical application of emerging technologies in language education.

Method

Design

This study employed a qualitative case study design to investigate discussions related to the use of AI tools in ELT within three open Facebook groups. This approach is in line with the guidelines set forth by Baxter and Jack (2008) and Creswell and Poth (2017) for conducting in-depth examinations within a bounded system.

The open Facebook groups selected for this study are Teaching & Learning with ChatGPT (and AI), Emerging Technologies in Language Education, and ChatGPT for Teachers. These groups were systematically identified through a Facebook search using keywords namely *artificial intelligence*, *AI*, *teaching*, *English*, *language*, *education*, and *open groups*. This search helped locate groups where discussions about AI in ELT were actively taking place. The final selection of these groups was based on three key factors. First, they bring together people from different backgrounds, including teachers from various countries and education levels. Second, the groups are highly active, with frequent discussions about AI and its role in teaching and learning process, providing rich data for analysis. Third, their discussions are up to date, as shown by recent posts and conversations about new developments, challenges, and applications of AI in ELT. Although this study is limited to three Facebook groups, their large membership base, international reach, and diverse participation suggest that the themes identified reflect broader trends in AI discussions within the ELT community.

While these Facebook groups provide useful insights into how teachers discuss AI in ELT, there is a risk of selection bias. The data come only from those who speak up or actively participate in discussions, meaning it may not fully represent the views of those who are more passive group members. To reduce this bias, the study included groups with a diverse mix of users and focused on posts with high engagement to capture a range of perspectives. The findings are interpreted with this limitation in mind, recognizing that they reflect the views of teachers who actively discuss AI in public online spaces.

In line with the nonintrusive lurking methodology described by Nonnecke and Preece (2000), the researcher observed the interactions within these groups without actively joining the discussions. This approach was chosen to maintain the authenticity of the data and to respect the public nature of these groups, as per Facebook's privacy policy (Facebook, 2018) and the guidelines by Kosinski et al. (2015).

Data collection

The study collected 150 posts related to the use of AI in ELT from the three Facebook groups, distributed as follows: 48 posts from Teaching & Learning with ChatGPT (and AI), 22 posts from Emerging Technologies in Language Education, and 80 posts from ChatGPT for Teachers. The study focused on posts that had comments, because interaction is an important part of online communities. According to VCoP principles (Wenger et al., 2002), people learn and build knowledge through discussions and collaboration. Posts with comments show how teachers exchange ideas about AI tools in ELT, sharing their experiences and insights.

Data collection continued until data saturation was reached, ensuring a thorough understanding of the discussions. According to Fusch and Ness (2015), data saturation occurs when no new themes or insights emerge, indicating that the data are sufficiently rich and detailed. This approach ensured consistency in the identified themes and confirmed that additional data collection would not yield significant new information. The dataset covers posts from the inception of each selected Facebook group until 19 May 2023.

The selected Facebook groups are public and open to anyone, meaning their discussions were already visible to nonmembers at the time of data collection. Anyone on Facebook can join these groups without needing an invitation or approval from administrators (Facebook Help Centre, n.d.). According to Facebook's privacy policy (Facebook, 2018), users control what they share and who can see their posts, and they can delete their posts at any time. Since posts in these groups are shared publicly, they are considered public data (Kosinski et al., 2015). While this reduces concerns about privacy, it is still important to handle the data ethically and with respect for the people who posted it.

In line with ethical research practices, no direct interactions with group members took place, and no private or restricted content was accessed. To protect the participants' privacy, all collected data was anonymized by replacing usernames with initials. For example, a user named Rick Soe would be anonymized as RS in the research records. This ensured that personal identities remained protected while keeping the integrity of the data for analysis. To further ensure the accuracy and relevance of the collected data, four experienced university teachers reviewed the anonymized dataset before analysis.

The thematic analysis of the data was conducted within the CoP concept initially introduced by Lave and Wenger (1991), with a specific focus on the element of shared repertoire. This component of CoP is vital in understanding how knowledge, practices, and resources are collectively developed and shared within a community. This analysis involved coding the data to identify the themes that emerged around the collective development and sharing of knowledge, practices, and resources within the community. It specifically aimed to uncover insights into how AI tools are discussed and utilized in ELT, as discussed by teachers in the selected open Facebook groups.

Findings and discussion

Table 1 summarizes the key findings of this study on the functions of shared repertoire in VCoPs as ELT teachers discuss AI’s integration in their educational settings. A detailed discussion of each theme follows.

Table 1. Functions of shared repertoire in VCoPs.

No.	Theme	Description	Concerns
1	For supporting teaching activities	Teachers are sharing practical advice and lesson plans on implementing AI tools like ChatGPT in their classrooms.	Using AI in teaching might reduce direct interaction between teachers and students and discourage teachers from trying different teaching methods.
2.	For assessing students	Teachers are sharing AI tools that they use to support assessment, including automated rubrics, plagiarism detection, and alternative evaluation methods.	Using AI for grading and feedback may weaken personal connections with students and limit opportunities for critical thinking.
3.	For sharing resources	(a) Sharing AI tools Teachers are sharing AI tools to enhance teaching practices, such as resources for writing support and curated lists of digital tools for language teachers.	Limited access to AI tools may prevent some teachers from fully utilizing these technologies in their classrooms.
		(b) Sharing AI advancements: Teachers are discussing the latest advancements in AI, such as new language models and custom features of the AI tools.	The rapid pace of AI’s development makes it challenging for teachers to stay updated.
		(c) Sharing event invitations: Teachers are sharing invitations to AI-related workshops and seminars.	Teachers might find it difficult to access AI-related events and materials due to cost barriers.
4.	For improving AI tools’ performance	Teachers are discussing ways to improve AI tools to enhance students’ engagement and learning experiences.	Using AI in education might raise concerns about data privacy and ethical issues.

For supporting teaching activities

In all groups observed in this study, members frequently shared their insights about the application of AI tools in teaching practices. Through the exchange of practical advice and lesson plans, teachers provided valuable examples of how they implemented AI tools such as ChatGPT in their classroom activities.

For instance, in the Emerging Technologies group, KRY shared a prompt designed for use with a ChatGPT speaking extension, to aid in language teaching:

Please pretend to be Bob, an expert XXXXXX teacher, personal tutor and conversation partner. We'll have a conversation in beginner-level XXXXXX.

KRY planned to introduce ChatGPT into eight classes, requiring the students to create short readings on their topics using ChatGPT, demonstrated in both Japanese (their native language) and English (their target language).

Continuing with their innovative approach, KRY aimed to introduce ChatGPT to eight classes, integrating it into a workflow where students develop materials to teach each other on a chosen topic. This involved a requirement for students to create a short reading on their topic using ChatGPT. To assist students, KRY demonstrated the process in Japanese (the students' native language) and in English (the students' target language). KRY shared:

I will present ChatGPT in 8 classes next week... I'm adding a requirement to create a short "reading" on their topic using ChatGPT... They will then have to create a reading in THEIR target language, English.

In the ChatGPT for Teachers group, PB gave comprehensive advice on how to effectively utilize AI tools in language teaching, discussing various possible tasks for the AI.

Reflect on the types of lesson you teach and the activities you usually do, then write concise and targeted prompts for the AI to assist you...

Another member named LAK shared their innovative use of AI in teaching persuasive speech techniques, by asking AI to write a short fun persuasive speech using all 14 techniques, which saved them valuable preparation time:

Took me longer to write the prompt than the work to generate. I copied it into canva, made a nice title with a pic of some chocolate, uploaded onto our class notebook and boom – a lesson in 10mins!!

Another member, ALK, shared his/her approach to discussing AI tools with undergraduates, emphasizing the importance of students expressing their thoughts and perspectives authentically. ALK balanced this by incorporating AI tool usage in an in-class assignment, where students created essay exam questions, input them into OpenAI, and compared the answers with peers for quality. ALK reflected:

I speak with my undergrads about this... I'm a proponent of the art of writing... that being said, we have one in-class assignment in all my courses that students make up essay exam questions from one class, input to OpenAI,

and compare answers with peers for the best quality answers. Trying to prepare future teachers during this time is both exhilarating and a bit of the wild Wild West!!

In the same group, AH shared a detailed lesson plan for introducing eighth-grade students to ChatGPT, offering a structured layout for objectives and activities, including interaction opportunities and critical evaluation of ChatGPT's responses:

I asked ChatGPT to create five lesson plans explaining the app and providing opportunities/activities for an 8th grade level.

In the same group, JMc emphasized the importance of individualizing lesson plans while offering an example of how ChatGPT could be utilized to create tailored activities:

Teachers need to individualise their lesson plans...when you have your plan chat gpt is great for creating the activities... writing scripts for speaking tasks or sets of questions at a range of levels for reading or scaffolding for writing tasks...

In the Teaching & Learning with ChatGPT (and AI) group, PR experimented with ChatGPT by asking it to write a report from the perspective of a Japanese student living in Vancouver, incorporating typical non-native English speaker errors. PR suggested the following:

While this kind of thing could be used as a learning activity (spot and fix the mistakes) it might also be quite tricky to tell that a student had not written it themselves".

PR's experiment underlined the creative usage of AI tools, not only as problem-solving utilities but also as a means to generate learning activities.

FSR, a member of the Teaching & Learning with ChatGPT (and AI) group, shared a practical lesson plan on cultural immersion that incorporated the use of ChatGPT. They engaged EFL students preparing to study abroad in a comparative exercise with AI, leading to a discussion on culture shock:

I used ChatGPT for Cultural Immersion (#6 on the list), telling students to make a list of what to do/prepare before going to the country of their choice and comparing it to what ChatGPT suggested. I also asked them to choose 3–5 suggestions (to let them feel/know that their ideas are more important than that of AI's) from ChatGPT that they find useful.

However, several concerns were raised about over-reliance on AI tools. LAK, in the ChatGPT for Teachers group, commented on the potential negative implications of using AI tools in creating student reports:

How will your students feel if they know you had an AI write their reports though? I thought the point of a report was that it was your personal thoughts about an individual student and an AI can't do that for you.

This comment highlights a key concern about AI tools potentially undermining the personal and reflective aspects of teaching.

Another member, PST, also pointed out a broader risk of relying too heavily on AI tools, stating the following:

The more recent AI products, by being an even more efficient route to your stated goal, distracts you from the possibility that there might be other ways of looking at your goal, or that your goal might in itself be wrong.

This criticism underlines how AI efficiency might limit teachers' professional judgment and hinder alternative approaches to achieving educational objectives.

These examples highlight how teachers in the open Facebook groups utilized AI tools like ChatGPT in various ways to improve language education. AI was used to generate conversation prompts for real-life practice, support content creation such as readings for peer teaching, and aid in lesson planning. AI was also used to compare students' ideas with AI suggestions, promoting cultural awareness. These uses demonstrate how AI can support interactive, individualized, and effective learning experiences. However, concerns remain about AI's potential to undermine the personal and reflective aspects of teaching. Using AI for student reports, for instance, could weaken the teacher-student connection. There is also the risk that AI's efficiency might discourage teachers from exploring different approaches or rethinking their educational goals, limiting professional creativity.

Overall, these discussions show that members of Facebook groups actively build a shared repertoire. Wenger (1998) defines a shared repertoire as the communal resources that a community develops over time through its interactions and contributions. This shared repertoire is crucial in VCoPs, as it allows the members to learn from each other's experiences and apply this collective knowledge in practical ways. The knowledge shared in the selected Facebook groups contributes to this shared repertoire, enhancing the community's collective understanding and practical application of AI in language education.

The findings align with prior research, such as Liljekvist et al. (2020), who found that by sharing knowledge, teachers create a community of practice where they collaboratively solve problems, share experiences, and develop professionally. This is similar to Prenger et al. (2020), who found that teachers in a professional learning network (PLN) gained new knowledge and skills by exchanging ideas with colleagues. Since a PLN can be considered a form of CoP, these exchanges encouraged innovative thinking and led to changes in classroom practices. Similarly, Boada (2021) found that participation in online CoPs improved both pedagogical and content knowledge, with teachers learning instructional strategies by interacting with peers and accessing high-quality resources.

In this study, the sharing of AI tools and its teaching strategies also reflects how virtual communities contribute to a shared repertoire, helping teachers enhance their teaching methods. Through continuous exchange, teachers not

only gain new skills but also adopt innovative approaches that enrich their classroom experiences. This aligns with research by Liljekvist et al. (2020) and Selvi (2021), which highlighted the role of Facebook groups as valuable platforms for resource sharing and collaborative problem-solving.

Concerns about AI's effect on teacher-student interactions and creativity are a key part of the shared repertoire in these VCoPs. Teachers in this study feared that AI could weaken personal connections with students and limit creative teaching. Lee (2023) supports this, stating that AI lacks the emotional depth needed to build strong teacher-student relationships. Cao (2024) explains that AI tools, such as intelligent agents and emotion computing, can create more distance between teachers and students. Without direct emotional connection, students may feel less supported and struggle to express themselves. Such concern has real implications for classroom dynamics. When AI takes over certain teaching tasks, students may rely more on automated responses rather than meaningful conversations with their teachers.

Teachers in these open Facebook groups also worried that AI could limit creativity in the classroom. Lee (2023) notes that AI's focus on efficiency and standardization may restrict teachers' ability to explore more creative and individualized teaching methods. A more recent study by Lin and Chen (2024) found that both teachers and students worry that AI could make learning too structured, reducing opportunities for creativity and exploration. Over-reliance on AI might discourage adaptive teaching practices and reduce students' ability to engage in critical thinking and problem-solving.

These concerns shape the shared repertoire within the VCoPs, as teachers must navigate not only the potential benefits but also the limitations of AI. The discussions within the Facebook groups reflect a broader recognition that while AI can support teaching, it should not replace the essential human elements of education.

For assessing students

In the field of education, teachers are increasingly turning to AI tools to enhance their assessment practices. A teacher, DAL, in the ChatGPT for Teachers group shared a comprehensive strategy using ChatGPT to build a four-point rubric, focusing on written responses to complex problems and providing flexibility to suit various grades, subjects, and standards. DAL's contribution is as follows:

Here is a rubric prompt that helps teachers... Create a four-point rubric table with 3–4 standards to assess students' written responses... Define each proficiency level and provide examples... Write the rubric in student-friendly 'I can' statements... Use the Common Core State Standards and Smarter Balanced assessment item specifications for rigor... Grade: 7, Subject: Math, Standards: NS.1, NS.2, NS.3... Adjust as needed for other subjects... Hope this helps!

In the same group, other teachers shared their experiences with using AI

detection tools for plagiarism. LA pointed out that he/she uses both Google Classroom and Turnitin to monitor for potential plagiarism and AI-generated content:

I have my students turn in through Google classroom and Turnitin.com (our school gets licenses) and both look for plagiarism and AI.

NMc mused on the potential shifts in assessment methods prompted by AI:

Maybe there will be no more essay writing. We will have to find new ways to assess learning...

However, another member named VKO critiqued the approach of trying to detect the use of AI in student work, suggesting instead a redesign of assessments to incorporate AI use productively:

Detecting AI use is counterproductive [so] redesign your assessments so that use of AI is encouraged and productive.

Similarly, DK highlighted the need for a shift in assessment methods, focusing more on interactive and reflective learning processes rather than traditional paper-based assignments:

I believe that the way we assess what the students learn needs to change away from essays and papers and more towards debate, analysis, collaboration, reflection on learning. Good teaching has always been ‘process over product’.

Concerns were also raised about the impact of AI on the teacher–student connection. AP, a member of the ChatGPT for Teachers group, wrote:

I saw a post yesterday asking how to use chatGPT for marking students’ work, and also giving feedback... Doesn’t this erode the fundamental touch points between student and teacher?... Isn’t it imperative that the teacher does the marking to fully understand how the student is performing, to see how they’re getting it right or wrong, which in turn informs their tailored and human feedback?... If AI is doing marking and feedback, then perhaps we’re unwittingly paving the way for not needing teachers at all.

His critique highlights the risk of relying too heavily on AI in assessments, potentially diminishing the personal feedback that is essential for student growth.

These discussions show that English teachers have explored various ways to integrate AI into assessments. One approach involved using flexible four-point rubrics that could be adapted to different subjects and grade levels. Other conversations focused on AI detection tools for plagiarism, with some teachers suggesting assessments should incorporate the use of AI productively rather than just detect it. Teachers also discussed moving beyond traditional essay-based assessments, choosing more interactive methods such as debates, analysis, and reflection. Concerns remained about AI’s potential to reduce personal aspects

of teaching, with members warning that relying too much on AI for evaluations could limit personalized feedback.

The integration of AI tools in student assessments, as discussed by the teachers, shows how a shared repertoire can improve educational practices. By sharing insights, teachers contribute to a collective knowledge base that helps refine assessment methods. This collaboration strengthens the educational community and ensures that assessment practices stay relevant in a changing technological environment.

The findings align with Liljekvist et al. (2020), who highlighted the value of Facebook groups for professional development, and Selvi (2021), who observed that ELT professionals in Türkiye used Facebook groups to share various assessment materials, including revision tests, online quizzes, and standardized test updates. These posts contributed to a collective understanding of assessment practices among group members, enriching the shared repertoire. Similarly, Janke et al. (2012) found that CoPs, such as The Committee on Institutional Cooperation-Pharmacy Assessment Collaborative, encouraged collaboration in developing assessment tools and criteria. This collaboration provided members with shared resources, which helped improve student learning and assessment practices across institutions.

While the shared repertoire supports the integration of AI, teachers expressed concerns about its potential to diminish personalized teaching. Lee (2023) emphasizes that AI's feedback mechanisms often lack the emotional depth and nuance that human teachers provide. Likewise, Yang et al. (2023) found that AI tools like Pigai offer feedback without enough context, making it harder for students to apply the suggestions effectively. Further highlighting these concerns, Minnillo et al. (2024) found that AI-generated feedback can sometimes be overly lengthy, use complex language, or provide comments that are irrelevant or inaccurate. This suggests that AI feedback may not always align with the nuanced and empathetic responses that human teachers can offer, potentially leading to confusion rather than clarity for students.

These limitations are an important part of the shared repertoire, as teachers within VCoPs reflect not only on AI's benefits but also on its shortcomings. The discussions in Facebook groups indicate that teachers recognize the need to balance AI's efficiency with meaningful human interaction to ensure that feedback remains accessible, relevant, and supportive of student learning.

For sharing resources

Teachers in the Facebook groups actively share AI-related resources to support language teaching. They also discuss the latest AI advancements and share event invitations. The following sections explore these discussions in more detail.

Sharing AI tools. In the Teaching & Learning with ChatGPT (and AI) and related groups, the members actively share a variety of AI-enabled resources designed

to enhance educational practices. This collaborative effort helps teachers find innovative tools to improve their teaching methods and classroom experiences.

In the Teaching & Learning with ChatGPT (and AI) group, NVT offered a resource for enhancing writing skills for Grade 4–6 students.

Besides ChatGPT, there are many other generative AI enabled products that are built for education. Check out this <https://www.joinpressto.com/> for example.

Similarly, in the same group, AEL suggested another AI tool for the teachers to explore:

[C]heck this out www.teachai.io, it is an AI tool built with the same technology as ChatGPT but designed by teachers for teachers.

KC also offered a practical resource for making AI interactions citable in academic contexts:

Platforms like aiarchives.org can generate a URL for these interactions, making them citable in MLA or APA format.

In the Emerging Technologies group, PR emphasized the wide array of AI tools available for language teachers. PR shared a comprehensive list of 185 resources, which he curated over the years, with the group via an AirTable link. PR said the following, reflecting the diversity of digital tools available for teachers to integrate into their practice:

Teachers love nothing more than sharing a link to a cool app, tool, or site they have used successfully in their classrooms. Over the years, I have curated a list of over 185 such resources for (English) language teachers.

However, not all teachers have equal access to these resources. SMC, from the Emerging Technologies group, noted:

It would be amazing to have access to this for our classes, but it might be outside our budget, which is 0.

Similarly, SSM commented:

I think dedicated VR headsets are great, provided you have the money!

These comments highlight a significant challenge: the disparity in access to technology and resources, which can limit some teachers' ability to benefit from AI advancements. Addressing this digital divide is crucial to ensure that all educators, regardless of their financial constraints, have opportunities to enhance their teaching with AI tools.

The sharing of AI tools in these groups reflects the cooperative efforts among English teachers to improve teaching practices using new technologies. The resources shared include, among others, AI tools for enhancing writing skills, platforms to make AI interactions citable in academic formats, and curated lists of digital tools for language teachers. However, not all teachers have equal

access to these resources due to financial limitations. Comments about the cost of tools, such as VR headsets, highlight the issue of unequal access to technology.

Sharing AI advancements. In the selected open Facebook groups, members are actively engaged in discussing the latest advancements and applications of AI tools in education. These groups have become a hub for sharing updates on new language models, AI-based tools for language learning, and the development of custom features to enhance teaching practices.

In the Emerging Technologies group, PR announced the release of a new, refined language model by OpenAI, optimized for dialogue, noting its ability to remember the preceding conversation. On the 2 December 2022, PR stated,

OpenAI have just released a more refined language model based on GPT3 called “ChatGPT” which is optimized for dialogue. One of the features is that it remembers what was previously said in the conversation. Very cool!

Following this, PR promoted SpeechCoach.io, an AI-based tool developed as part of a PhD research project, describing how SpeechCoach.io is designed to “help English learners practice speaking about a range of randomly selected topics, and leverages OpenAI’s GPT to provide useful feedback.”

Meanwhile, within the “ChatGPT for Teachers” group, EBE provided an update on the capabilities of ChatGPT in handling non-English languages. According to EBE, ChatGPT currently translates non-English prompts into English, responds in English, and then translates back into the original language. EBE also mentioned ongoing efforts to adapt ChatGPT to work with Spanish and Arabic.

ChatGPT does not work with languages other than English... Currently there is work trying to get it to work in Spanish – about half a billion speakers – and Arabic – about 100 million speakers – but there is not enough online text to train it.

Additionally, AJ, the founder of briskteaching.com, responded to a query about custom rubrics by promoting the work of their team on a related feature:

I’m the founder of briskteaching.com and we’re currently working on an ability to do this (including custom rubric) – may not make this academic year, but will definitely be ready for next.

In the same group, II promoted a resource created to assist with prompt engineering, specifically for teachers. II offered a simplified video tutorial and expressed openness to creating additional teacher-specific content:

Here is a super simplified video that teaches the basics of prompts engineering to help create your own/targeted prompts. in the next few weeks, we will be adding more videos about prompt engineering with specific examples.

However, some members have highlighted challenges in keeping up with the rapid pace of AI advancements. KRY, from the Emerging Technologies group, commented, “This stuff is moving so fast that I’m forgetting as much as I learn.”



This reflects a significant challenge faced by educators: keeping pace with the constant evolution of AI technologies, which can lead to difficulties in effectively integrating these tools into their teaching practices. AKO, also from the Emerging Technologies group, admitted feeling overwhelmed by the vast amount of information available:

I need to know where to start. I feel like a thirsty individual needing a drink of water and being led to a fire hydrant to quench my thirst.

This highlights another layer of the challenge: navigating through the overwhelming amount of information and resources available, which can make it difficult for educators to identify a clear starting point for incorporating AI effectively into their teaching.

The discussions in these Facebook groups reveal that teachers are actively engaging with the latest AI advancements and their applications in education. Members share updates on new language models optimized for dialogue, custom rubrics, and tutorials for prompt engineering to help teachers use AI effectively. However, many teachers find it difficult to keep up with the rapid pace of AI advancements and feel overwhelmed by the sheer volume of information available. This makes it challenging to effectively integrate these tools into their teaching practices.

Sharing event invitations. In the selected Facebook groups, members actively share invitations to events such as webinars and seminars focused on the integration of AI in teaching. These events offer valuable opportunities for teachers to learn about the latest advancements and best practices for using AI tools in the classroom. These invitations highlight the collaborative spirit and commitment to professional development within these groups.

Within the Teaching & Learning with ChatGPT (and AI) group, DOM shared information about a seminar organized by UNESCO:

There's also a seminar by UNESCO [related to UNESCO's Quick Start Guide to ChatGPT and AI in Higher Education]. You can register for it, too.....

In the Emerging Technologies group, JD invited language teachers to a webinar on AI in the language classroom:

Are you ready to learn about the exciting world of AI and how it can revolutionize your language teaching? Join us for another FREE JD webinar on 'AI in the Language Classroom'.

In the ChatGPT for Teachers group, GY extended a personal invitation to a Zoom meeting where he/she was planning to explain how to use ChatGPT in primary English language teaching:

I'm explaining about it [how to use ChatGPT for primary schools in teaching English language] every Monday at 21.00 on Zoom, I would like to see you on my Zoom meetings.

However, some members expressed concerns about the commercial aspect of

these resources. SDE, from the ChatGPT for Teachers group, remarked, “And then for sale,” highlighting frustration about paid access to certain resources. BTB added:

You really expect us to pay for this product? Fine by me, but I can find these kinds of worksheets all over the internet, for free. So count me out.

Additionally, CDA from the Emerging Technologies group shared, “I can’t even convince our school to use our distance learning classrooms,” pointing to institutional barriers that prevent the adoption of such technologies.

The sharing of event invitations in the Facebook groups highlights the collaborative efforts among teachers to stay informed about AI advancements and best practices in education. These events, such as webinars and seminars, provide valuable learning opportunities. However, concerns about the commercialization of resources and institutional barriers to adopting AI technologies suggest that accessibility remains a challenge for some teachers.

Overall, the function of sharing resources in these Facebook groups means that teachers actively exchange AI tools, updates on new developments, and invitations to AI-related events. By sharing resources such as writing tools or digital tool lists, teachers support each other in integrating AI into their teaching. Furthermore, discussions about AI advancements, including new language models and custom features, help them stay informed and adapt to emerging technologies.

These findings align with Wenger’s (1998) concept of CoPs, where members build a shared repertoire through continuous interaction and contribution. In this case, the Facebook groups serve as VCoPs, where teachers collaboratively share tools, advancements, and professional development opportunities. The exchange of ideas in these groups fosters collective learning and mutual support, similar to the knowledge-sharing processes observed in PLNs, as studied by Kearney and Maher (2019). Their research highlighted how pre-service teachers exchanged information on technological tools and provided peer feedback, mirroring the way teachers in this study share AI tools, updates, and event invitations.

While these Facebook groups play a role in building a shared repertoire, challenges related to AI’s integration still remain. One major challenge is the limited access to AI tools due to costs. This mirrors the findings of Yan et al. (2023), who highlighted the issue of limited availability of AI tools in low-income settings, further restricting the shared repertoire in VCoPs. Saar et al. (2024) also found that teachers without access to AI may feel left out from discussions with their peers who do, which can lower their motivation and professional growth.

Teachers in the studied Facebook groups also expressed concerns about the rapid pace of AI developments, as they struggle to keep up with evolving technologies. Similarly, Celik et al. (2022) found that many teachers lack the necessary technological skills, which can limit their ability to engage fully in VCoPs. Fakhar (2024) further highlights this issue, reporting that 43% of public school teachers in Morocco had inadequate knowledge of AI-based tools, making it



difficult for them to integrate AI effectively into their teaching. This lack of familiarity not only limits AI's adoption but also affects teachers' confidence in using these tools, preventing them from fully engaging in discussions and knowledge-sharing within VCoPs.

Another concern raised by teachers in the selected open Facebook groups is that some schools are hesitant to adopt AI technologies. Pham and Sampson (2022) suggested that this reluctance may be due to a mismatch between AI initiatives and schools' educational goals, which do not always prioritize technology-driven solutions. Shamsuddinova et al. (2024) added that cultural and institutional resistance also plays a role. Many teachers and administrators might prefer traditional teaching methods or are uncertain about using new technology, making them less willing to adopt AI. Celik et al. (2022) also pointed out that some schools lack the necessary infrastructure to support AI integration.

Despite these challenges, teachers in the Facebook groups continue to share resources. The ongoing dialogue in these communities highlights the role of shared repertoire in helping teachers navigate AI integration.

For improving AI tools' performance

Teachers in the Emerging Technologies and ChatGPT for Teachers groups actively discuss potential enhancements to AI tools to improve students' engagement and learning experiences.

In the Emerging Technologies group, DRA suggested a feature that could be added to the Zengengo tool, which could enable students to practice speaking on their own:

Why won't Zengengo add a feature of scripted dialogues with the computer as in my <https://audiodrill.com?game=1&url=/en/game/pr-perfect1.txt> (works only in Chrome). This would allow students to practise speaking on their own. And my students say it's fun.

This suggestion illustrates a proactive approach to enhance AI tools' functionality based on first-hand classroom experience.

In the ChatGPT for Teachers group, FA voiced the desire for AI tools, specifically LLMs, to facilitate more human-like interactions:

YES! Human interaction is the next level for human knowledge construction. I hope AI/LLM will enforce all of us to step on that level at last!

FA's comment underscores the aspiration for AI tools to achieve a more advanced level of interaction, fostering a more human-like communication that could potentially enrich the learning experience.

However, several concerns have been raised about data privacy and ethical use when improving AI tools. SJO, from the ChatGPT for Teachers group, pointed out privacy issues:

It has privacy issues around sharing with AI. It's not a secure private space.

Similarly, SSM, from the Emerging Technologies group, emphasized ethical concerns:

Quite a lot already has gone wrong – there are real ethical concerns about how OpenAI got its data (including paying English speakers in 3rd world countries pennies to help train the bot) and what Duolingo does with its students' data. It's the same business model that Turnitin use – take people's data, repackage it and sell it back to them. It's shiny and new, but that doesn't justify unethical practices.

ESI, from the ChatGPT for Teachers group, also highlighted concerns about data use:

AI makes up the assignment. Students use AI to write assignment. Teachers use AI to mark it. Data being thrown around and achieving nothing.

The findings indicate that teachers in the selected open Facebook groups actively discuss ways to improve AI tools to enhance students' engagement and learning experiences. Suggestions included adding features like independent speaking practice and fostering human-like interactions. However, concerns about privacy, ethics, and over-reliance on AI remain significant issues. Teachers are wary of the potential for AI to diminish meaningful learning experiences if not carefully integrated into teaching practices.

The findings reflect the role of Facebook groups as active VCoPs where teachers collaborate to improve AI tools for student engagement and learning. According to Wenger's (1998) theory of CoPs, the development of a shared repertoire is central to community learning. In these groups, teachers actively contribute to this repertoire by sharing experiences and ideas to improve AI's functionality, helping to create a growing pool of resources that enrich teaching practices. This collaborative effort to improve AI tools is consistent with the dynamics of VCoPs, where peer reflection and knowledge-sharing contribute to professional growth, as observed by Monea et al. (2022). Teachers in these Facebook groups participate in similar processes, enhancing their classroom use of AI tools by learning from each other's experiences.

This collaboration mirrors trends seen in other studies. For example, Yang et al. (2023) found that teachers using AI tools like Pigai suggested improvements to make feedback more contextualized, while Wang's (2023) study of teachers in translator education highlighted the need for user-friendly and adaptable AI tools. These studies align with the teachers' discussions in this study, reflecting a broader desire for AI tools that enhance linguistic and communicative competencies.

Discussions in the Facebook groups highlighted data privacy as a key concern when using AI in education. This concern aligns with broader discussions in the literature on AI-related ethics and privacy risks. Tlili et al. (2023), for example, noted that AI tools collect and process large amounts of personal data, raising concerns about how this information is stored and used. Yan et al. (2023) also highlighted ethical concerns regarding how companies gather and use AI training data, raising broader questions about fairness and the

potential exploitation of vulnerable groups. Nguyen et al. (2023) emphasized that AI in education involves the collection and analysis of extensive personal data, making privacy protection a critical issue for both teachers and students. These concerns contribute to the overall shared knowledge within the VCoPs by informing teachers of potential challenges when integrating AI into education.

Conclusion

This study identified the functions of shared repertoire in VCoPs in the context of integrating AI tools into English classrooms. The findings show that open Facebook groups enable ELT teachers to exchange experiences, resources, and practical ideas related to AI. The shared repertoire developed within these communities primarily serves four purposes: (1) supporting teaching activities, (2) assessing students, (3) sharing resources, and (4) improving AI tools. Teachers also use these VCoPs to discuss common challenges such as over-reliance on AI, reduced teacher–student interaction, data privacy concerns, and unequal access to AI tools.

An important implication of this study is that the insights from teachers' discussions in VCoPs can guide institutions in creating relevant training programs and clear guidelines for effective integration of AI. By using teachers' real experiences, institutions can better support teachers in addressing practical issues. Such programs can ensure AI tools genuinely enhance teaching rather than replacing teachers.

This study has several limitations. It analyzed discussions from only three open Facebook groups and considered only active contributors. It also did not explore risks such as misinformation or the influence of fake accounts. Future research could address these limitations by exploring AI discussions on other platforms, examining the views of passive participants, and investigating how teachers assess the credibility of online information. Long-term studies focusing on how shared repertoire evolves over time and its direct effects on student learning would also be valuable.

Despite its limitations, this study reinforces the crucial role of VCoPs in the AI era. These communities provide spaces where teachers exchange knowledge, ideas, and experiences to better understand and integrate AI into their teaching. The shared repertoire developed within these communities helps teachers use AI effectively, ensuring that technology enhances learning while preserving meaningful human interaction. In the end, AI is just a tool, and its impact still relies on teachers – those who, in Sydney Hook's words, serve as “the heart of the educational system” (as cited in Blass, 2018, p. 130).

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