CALL Applications for the Four Language Skills

While contemporary language teaching increasingly recognizes the integrated nature of language skills, examining how CALL supports each skill area provides valuable insights into its comprehensive impact. Robert Blake notes that "isolating each of the four-skills (listening, speaking, reading, and writing) in practice is no longer as relevant as it was historically, given contemporary views of integrated language development and multi-modal expression". Contemporary approaches increasingly recognize the interconnected nature of language acquisition, reflecting a shift toward integrated, task-based methodologies enhanced by technology. Nevertheless, understanding CALL's specific contributions to each skill area illuminates its multifaceted influence on language acquisition processes.

1. Listening in CALL

Listening remains one of the most fundamental yet challenging skills in language acquisition, with technological advances continually reshaping how it is taught and practiced. This skill, often underemphasized in traditional language learning environments, has found **new potential** through Computer-Assisted Language Learning (CALL) systems that offer unprecedented capabilities for learner **engagement and comprehension development**. The integration of **multimedia elements, interactive features, and authentic materials** has transformed listening instruction from passive consumption to active engagement. Technology enables more **personalized, accessible, and effective** learning experiences than previously possible.

1.1.Technologies for Listening

Podcasts

A **podcast** is a digital file available online that can be played on a mobile device or computer at the listener's convenience. The term "pod" comes from "play on demand." There are various podcast directories, including **Podcast Directory**, **Yahoo Podcasts**, and **Podcast Alley**, where users can search for podcasts. Many podcasts focus on **language learning** and can be found through these platforms or **iTunes**, such as **ESLPod**, which uses strategies to build listening skills.

Vodcasts

A **vodcast** is similar to a podcast but includes video along with audio. The term "vod" stands for "video on demand." Vodcasts are beneficial for English language learners (ELLs) as they connect visuals with audio, aiding comprehension. Major news networks, such as **ABC News**, **CBS News**, and **CNN**, provide free news vodcasts that offer this multimedia experience.

Audioblogs

Audioblogs combine blog technology with audio files, allowing users to post and share audio files online, in addition to or instead of text. Audioblogs are an excellent way for students to share their opinions and ideas. Services like **Audioblog.com** and **Audioblogger.com** provide platforms for these types of blogs.

Video Sharing Libraries

Several **video sharing libraries** have emerged, offering a wide array of user-uploaded video clips. These videos are often categorized by popularity and can be searched for specific topics. Examples include **YouTube**, **Yahoo Video**, and **Metacafe**.

1.2. Emerging Technologies and Future Directions in listening Practice

Below are the key emerging technologies and future directions in listening practice:

a) Artificial Intelligence (AI) and Adaptive Listening Systems

AI-driven systems are making significant strides in personalizing listening practice. These technologies can assess a learner's listening skills, identify areas of difficulty, and adjust the complexity of the listening material accordingly. For example:

- Speech recognition: AI can evaluate how well learners understand spoken language and provide immediate feedback on pronunciation, intonation, and comprehension. Tools like Google Speech-to-Text and Dragon NaturallySpeaking enable learners to practice listening and speaking simultaneously by transcribing spoken input and providing corrective feedback. These technologies are useful for improving both listening comprehension and pronunciation accuracy
- Adaptive learning systems: These systems can adapt listening tasks based on a learner's performance, increasing the difficulty level as their skills improve or revisiting problematic areas for practice.
- AI tutors: Virtual AI-powered tutors can engage in real-time conversations with learners, offering immediate feedback on comprehension and helping students develop listening skills by simulating authentic dialogues.
- b) Virtual Reality (VR) and Augmented Reality (AR) are revolutionizing listening practice by immersing learners in realistic, interactive environments where they can engage with native speakers and diverse accents. These technologies provide a more **immersive** listening experience that is not limited to passive listening but includes interaction with the virtual environment, such as conversations with avatars or real-time simulations of social situations.
- **VR** can simulate real-world environments (e.g., cafes, airports, offices) where learners can practice listening to natural speech in context, improving their ability to understand spoken language in a variety of settings.
- **AR** can overlay listening exercises onto real-world objects and environments, offering a more interactive and engaging way to practice listening skills in context.

c) Interactive Subtitles and Transcriptions

Interactive subtitles and real-time transcriptions are becoming powerful tools for improving listening comprehension. These technologies provide **text-based support** that allows learners to read along with spoken content, improving their ability to match written and spoken language.

- **Dynamic subtitles**: In the future, subtitles may not just be static text but dynamic, providing **synonyms**, **definitions**, or **contextual explanations** as learners encounter unfamiliar vocabulary.
- **Real-time transcription**: AI-powered systems can transcribe real-world spoken interactions, such as dialogues or interviews, providing learners with immediate access to the text of spoken content, allowing for detailed analysis of pronunciation, tone, and speech patterns.

d) Neurotechnology and Brain-Computer Interfaces

The cutting-edge area of **neurotechnology** has the potential to revolutionize language learning, including listening practice. **Brain-Computer Interfaces (BCIs)** and wearable devices that monitor

brain activity can help optimize the learning process by assessing the learner's cognitive engagement and adjusting the listening exercises accordingly.

- **BCIs** could monitor listening comprehension levels and adjust the difficulty of content based on a learner's focus and engagement levels, providing more personalized learning experiences.
- Neurofeedback systems might also help learners train their brains for better auditory processing and improved comprehension.

2. Speaking in CALL

Recent technological advances have significantly transformed how learners develop **speaking skills**, creating unprecedented opportunities for practice outside the traditional classroom. **Speaking** has often been one of the most challenging skills to practice, especially in foreign language contexts with limited exposure to native speakers. The digital revolution has expanded both **synchronous** and **asynchronous speaking opportunities**, offering diverse tools and platforms for practice that cater to various learning styles, schedules, and anxiety levels.

2.1.Speaking Technologies

a) Synchronous Speaking Technologies: Real-Time Interaction

Synchronous speaking technologies enable real-time verbal exchanges across distances, creating virtual environments for learners to engage in authentic conversations with native speakers, teachers, or peers. These platforms facilitate **Voice over Internet Protocol (VoIP)** technologies, which enable cross-cultural communication and make speaking practice accessible to learners who otherwise lack opportunities for authentic interaction. Research indicates that **synchronous voice-enabled environments** offer psychological benefits by reducing anxiety, particularly for beginners and intermediate learners, thus encouraging greater participation and risk-taking in language practice. Technology creates a **protective barrier** that allows learners to practice without fear of embarrassment, increasing overall speaking opportunities and accelerating development.

Applications like **WhatsApp**, **Skype**, and **Facebook Messenger** provide free voice calling across international boundaries, with features that allow users to control their conversation, such as muting microphones or switching between voice and video. These platforms have created a **robust ecosystem** of tools for synchronous speaking practice, making it easier for learners to engage in real-time interaction.

• Voice-Enabled Language Exchange Platforms

Language exchange platforms, such as **MyLanguageExchange.com**, are valuable applications of synchronous speaking technology. These platforms connect learners with complementary language goals to engage in mutual language practice via tools like **Skype**. These exchanges foster authentic communication contexts, where language serves a genuine purpose beyond classroom exercises. The reciprocal nature of these exchanges helps balance the power dynamics, with learners alternating between novice and expert roles. Additionally, **Duolingo** has integrated **partner-finding functionality**, reinforcing the idea that interaction with **human conversation partners** is crucial for developing speaking proficiency. These platforms democratize access to native speaker interaction, previously available mainly to those with resources to travel or study abroad.

Virtual classrooms that incorporate engaging, relevant content motivate learners to interact verbally. As learners' comfort levels increase, they engage with both teachers and peers, marking significant progress in language development. This collaborative learning often leads to **community building** across cultures, which enhances motivation and provides more opportunities for authentic language use.

b) Asynchronous Speaking Opportunities: Flexibility and Preparation

Asynchronous speaking practice offers distinct advantages by allowing learners to engage in speech without the pressure of immediate response. Platforms like **VoiceThread** and messaging applications let learners record and exchange voice contributions on their own time, creating opportunities for **reflection** and **revision**. This flexibility enables learners to practice speaking at their own pace, potentially increasing overall practice time compared to synchronous sessions.

Asynchronous speaking fosters **speech planning**, allowing learners to craft longer, more thoughtful responses, which can be challenging in real-time conversations. This method promotes the development of **extended discourse skills**, complementing the more rapid interaction required in synchronous exchanges. While asynchronous practice cannot fully replace the immediacy of synchronous communication, it offers valuable practice for building different aspects of speaking proficiency.

2.2. Psychological and Pedagogical Advantages of Technology-Mediated Speaking

The **psychological benefits** of **technology-mediated speaking** are one of its most significant advantages in **language development**. Speaking tends to cause higher **anxiety** than other language skills because of its **immediacy** and **public nature**, where errors are instantly noticeable. Both **synchronous** and **asynchronous** technologies help reduce this anxiety in different ways. **Online environments** create a sense of **psychological distance**, making learners feel more protected, while **asynchronous recording** allows time for preparation and revision, which in turn boosts confidence. This reduction in anxiety often results in greater willingness to communicate, an important factor in **speaking development**, often predicting **proficiency** more reliably than **aptitude** or other factors.

Technology-mediated speaking practices also promote more **equitable participation** than traditional classroom settings. In face-to-face classrooms, more **confident or dominant students** tend to take up most speaking opportunities, while quieter learners may participate less despite having similar learning needs. Online platforms, with features like **"raising hand"** functions in synchronous settings or **equal time allocation** in asynchronous forums, disrupt these patterns and ensure that all students receive **equal speaking practice**. This balance in participation contributes to more **equitable learning outcomes**, offering opportunities for all students to practice speaking, not just the more dominant ones.

2.3. Emerging Technologies and Future Directions in Speaking Practice

Artificial Intelligence Assistants are a promising frontier for innovative speaking practice. Although systems like Siri, Alexa, and Google Assistant were not specifically designed for language learning, they offer valuable opportunities for pronunciation practice and functional language use in authentic contexts. The effectiveness of these interactions depends on the system's ability to recognize accented speech, a capability that is continuously improving as speech recognition algorithms advance. These technologies enable learners to practice speaking commands and questions that elicit immediate responses, simulating conversation and bridging the gap between pre-programmed dialogues and real human interaction. As these systems improve, they will likely play an increasingly important role in independent speaking practice.

Participatory drama approaches, delivered through technology, present exciting possibilities for **emotionally engaging speaking practice**. Programs like **TRACITalk: The Mystery** demonstrate how combining **speech recognition** with **branching dialogues** creates interactive **narrative experiences** that respond to learner input. This approach shifts speaking practice from isolated exercises to meaningful participation in evolving scenarios, boosting **engagement** and enriching the **context** of language use. The **theatrical nature** of these activities also enables exploration of pragmatic communication aspects, such as **register**, **politeness conventions**, and **nonverbal communication**, which are often difficult to address in traditional speaking exercises. As **speech recognition technology** continues to advance, these interactive approaches will likely become more sophisticated and impactful.

Language learning chatbots are another emerging technology with significant potential for speaking development. Unlike general-purpose conversational agents, these chatbots are designed with specific pedagogical goals in mind, focusing on particular vocabulary, grammar, or communicative functions. While simpler chatbots use keyword analysis to simulate conversations, more advanced systems incorporate natural language processing (NLP) to enable flexible and responsive interactions. Though still underdeveloped compared to other language technologies, language-specific chatbots offer a valuable middle ground between programmed dialogues and human conversation partners, providing immediate feedback and unlimited practice opportunities without requiring the presence of another person.

3. Reading in CALL

CALL has significantly transformed **reading instruction**, evolving from basic skill-building applications to sophisticated digital environments that revolutionize how learners interact with texts. As **reading** increasingly moves from **traditional print** to **digital formats**, this shift mirrors broader technological advances across both educational and recreational contexts. Research consistently shows that when properly implemented, CALL approaches can greatly enhance **reading comprehension**, **vocabulary acquisition**, and overall **literacy development**, compared to traditional methods. The integration of **multimedia elements**, **interactive features**, and **adaptive technologies** has created unparalleled opportunities for personalized reading experiences that cater to individual learner needs and preferences. As digital platforms evolve, the distinction between **reading instruction** and **authentic reading experiences** becomes more blurred, enriching language acquisition through meaningful engagement with texts.

3.1. The Evolution of CALL for Reading Development

The rise of **electronic readers** like **Amazon's Kindle** has normalized digital reading across both educational and recreational contexts, creating new opportunities for integrated learning supports. Modern e-readers enhance the reading experience with features like **integrated dictionaries**, **adjustable text sizes**, and **synchronized audio**, transforming reading into an interactive activity. These platforms allow learners to access just-in-time support for **vocabulary**, **pronunciation**, or **background knowledge** without interrupting the flow of reading. This evolution redefines reading technology from being a preparation tool to an enhanced reading environment, offering benefits that traditional print materials cannot.

3.2. Technologies to Teach Reading

Commercial Courseware

Several commercially available courseware options have been studied for their effectiveness in L2 learning of listening and reading. Longman English Online and its newer version, Longman English Interactive (LEI), have been compared to Quartet Online by Dincer and Parmaksız (2013). Other popular technology-mediated self-study packages include Rosetta Stone and Auralog's TELL ME MORE.

• Dictionaries, Glosses, and Annotations

Digital dictionaries such as **Cambridge**, **Oxford**, and **Macmillan**, along with others like **WordReference.com**, offer millions of definitions, audio pronunciations, and example sentences. These resources are updated regularly by professional lexicographers. For instance, **SmartReader** by Oflazer, Kemal, and Mitamura (2013) allows users to create intelligent e-books by selecting texts or uploading their own. **MyVLS-Reader** by Hsu and Ou Yang (2013) was developed specifically for university students and offers multiple learning choices for vocabulary acquisition.

• WebQuests

A webquest is an inquiry-based activity designed to engage learners with content on the World Wide Web. It provides links to relevant resources, allowing students to complete tasks without spending excessive time searching for information. Teachers can create webquests to help learners develop research skills through guided inquiry. Tools like Zunal and Questgarden are used to create webquests for classroom use.

• Hypertext and Hypermedia

Hypertext refers to links among textual items, typically used on websites or computer programs. By clicking on **hyperlinks**, learners are directed to additional content or resources. **Hypermedia** expands on this concept, linking not just text but also **images**, **audio**, **animation**, or **video**. For example, a word might link to a pronunciation file, or a shopping scenario in a video might link to an animation reviewing different denominations of money.

3.3. Future Directions in CALL Reading Technology

The evolution of **CALL reading technology** is advancing rapidly, with emerging trends likely to shape future developments. **Artificial intelligence (AI)** and **machine learning** are enabling **adaptive reading environments** that adjust content difficulty, support features, and learning pathways based on individual performance patterns. These personalized experiences address the challenge of catering to diverse **proficiency levels** within a single instructional setting. **Natural language processing (NLP)** advancements are improving the sophistication of **comprehension assessments**, moving beyond simple multiple-choice questions to analyse learner-generated responses for deeper conceptual understanding. **Speech recognition technologies** are supporting **bidirectional interactions** between readers and texts, allowing spoken questions and responses, enhancing **conversational engagement** with content.

The growing sophistication of **eye-tracking** and **reading behavior analytics** is another promising advancement. These technologies enable detailed analysis of **reading processes**, identifying patterns like excessive regressions, long fixations, or skipped segments, which may signal comprehension difficulties. This data provides insights into reading challenges that are not visible through outcome-based assessments. When combined with **adaptive content delivery**, these analytics offer tailored interventions for specific **processing difficulties**, creating highly personalized reading instruction. This shift from assessing outcomes to addressing specific reading process difficulties marks a significant improvement in reading instruction methodology.

4. Writing in CALL

CALL has significantly transformed **writing instruction** in **language education**, creating unparalleled opportunities for learners to enhance their written communication skills through technological tools. From the early revolution introduced by **word processing** to the advanced capabilities of **collaborative platforms** that allow **real-time co-creation**, technology continues to expand the methods and effectiveness of writing instruction. Research consistently shows significant benefits from **well-implemented CALL** approaches, including improvements in **student motivation**, **writing quality**, and **academic skill development**.

Benefits of CALL for Writing Development

The benefits of **CALL** for writing development arise from several interconnected factors. Technology creates engaging learning environments through **multimodal content** and **interactive features** that keep students interested. **Digital platforms** also provide more **immediate feedback** on writing through

automated systems and **peer reviews**, allowing learners to revise their work based on fresh insights. The **reduced cognitive load** due to tools like **spell-check** and **easy editing** enables students to focus more on higher-order tasks such as **content development** and **rhetorical structure**. Furthermore, the availability of online **resources** and **reference materials** gives students just-in-time support, enabling them to tackle writing challenges independently and fostering greater **autonomy** in their writing process.

4.1. Technologies for L2 Writing

Technologies for second language (L2) writing are commonly divided into three categories (Chapelle & Sauro, 2017):

1. **Web 2.0 Applications**: These involve tools that enable multiple users to contribute material to a popular web repository. They facilitate collaborative writing and communication among language learners.

Web 2.0 tools include social media platforms like Facebook and Twitter, and blogs. These tools offer communication opportunities, but also foster collaborative writing. An example is Lang-8, a social networking site that connects L2 learners with native speakers. It allows learners to receive written corrections and provides integrated Skype functionality for international live communication. Google Docs is another key tool, offering a free word processor within Google Drive. Users can create, edit, and share documents, with a record of their entire writing process automatically saved for review.

- 2. Automated Writing Evaluation (AWE): These systems are designed to evaluate and provide feedback on writing, assisting learners throughout the writing process.
- Criterion, developed by Educational Testing Service (ETS), is a web-based commercial tool that provides a holistic score. It can be used at different stages of writing instruction for both in-class and out-of-class activities, such as essay planning or peer feedback.
- **Turnitin**, initially launched as an originality-checking tool in 1997, has evolved into a comprehensive platform that now includes **automated grading** and **peer review** functionalities, transforming it into a robust tool for both plagiarism prevention and writing development.
- Writing Pal (W-Pal) is an intelligent tutoring system (ITS) developed by the Science of Learning and Educational Technology (SoLET) Lab at Arizona State University. Although primarily designed for native English speakers, it has also been used with English language learners in high school and college, providing tailored feedback and guidance for writing.
- 3. **Corpus-Based Tools**: These tools analyse language used in collections of existing texts, guiding L2 writers by providing contextually relevant examples and data to support their writing.

Corpus-based pedagogies, or **data-driven learning**, suggest that students need access to examples of language when writing, and these examples should meet their specific writing needs at the time. **Corpus tools** consist of collections of texts and software for searching and displaying examples that help **L2 writers** improve their writing by examining language used in existing electronic texts. One such example is the **Corpus of Contemporary American English** (**COCA**), a widely-used, freely available corpus of over 450 million words from various genres (spoken, fiction, magazines, newspapers, and academic texts). Users can search for specific words, phrases, parts of speech, and collocations to guide their writing.

• Writeboard

Writeboard is an online process writing e-tool where multiple users can collaborate on writing tasks, allowing students to edit and revise their work without losing previous versions. It is a space that fosters collaboration and peer revision, helping English language learners (ELLs) feel more comfortable

sharing ideas and making mistakes. Writeboard also supports **differentiated learning** by allowing tasks to be organized for students of varying levels. This tool promotes self-evaluation by giving students access to previous drafts and encouraging collaboration.

• Wikis

Wikis are collaborative websites where users can add or modify content. This idea was introduced by Ward Cunningham in 1994, with the term "wiki" meaning "quick" in Hawaiian. Wikis are used for shared writing projects, allowing for continuous updates and contributions from multiple participants. This fosters social mediation, as peers help each other solve problems, which is an example of Vygotsky's Zone of Proximal Development (ZPD) in action. Wikis promote peer learning and collaboration, where participants, even at similar levels, mediate each other's learning.

• Blogs

Blogs are online journals or logs that allow individuals to post their thoughts and reflections on a website. Unlike wikis, blogs are typically not editable by others unless a comment feature is enabled. Blogs offer an opportunity for **L2 learners** to **practice** writing and reflect on language learning, with the added feature of inviting responses from readers. **Blogger** (and similar platforms like **WordPress** and **LiveJournal**) allows users to post content, either through a web interface or mobile phone. Blogs can integrate multimedia elements, including **audio files**, to further enrich the learning experience.

• Listservs

Listservs are moderated email discussion groups where individuals with shared interests can exchange messages. Teachers can create a **listserv** for their students or use existing ones like "**Correct My English**" for practice. This allows learners to ask questions about writing, grammar, and vocabulary while receiving feedback from peers. Listservs help provide a space for **language learners** to practice writing, engage in discussions, and receive constructive feedback.

• Discussion Boards

Discussion boards are online platforms where individuals post comments on a specific topic, and others can respond. The discussions create **threads**, which can continue as long as participants engage with the topic. These boards can be **password-protected**, ensuring that only class participants can access the discussions. Teachers can use platforms like **Boards2Go** or virtual learning environments (VLEs) such as **Blackboard**, **Nicenet**, or **Sakai** to create **discussion boards** for their students. Discussion boards provide a structured space for collaborative writing and reflection.

4.2. Future Directions of CALL in Writing

The integration of **artificial intelligence** (**AI**) into writing tools marks a significant emerging trend in **CALL writing instruction**. Current grammar and style checkers offer limited utility, but rapid advancements in **natural language processing** are giving rise to more sophisticated writing assistance tools. These AI-powered tools may eventually provide more contextually appropriate feedback on both mechanical and rhetorical aspects of writing. However, this raises important questions about the balance between **automated assistance** and **authentic language production**. Educators will need to develop frameworks to integrate AI tools in ways that enhance, rather than replace, the cognitive processes involved in writing development.

Mobile writing applications are further expanding access to writing practice beyond traditional classroom settings. Platforms like **Zoho Writer** emphasize cross-device compatibility, allowing users

to access their work on any device. This accessibility transforms writing from a classroom-bound activity into a more integrated part of daily life. With mobile devices, learners can capture ideas, draft content, and receive feedback throughout the day, which promotes **distributed practice** and accommodates diverse learning schedules and preferences. This flexibility can increase engagement with writing and provide opportunities for continuous improvement.

The growing focus on **multimodal composition** is another important trend in **CALL writing instruction**. Traditional writing focused primarily on alphabetic text, but this view is expanding to include the integration of **visual, audio, and interactive elements** in communication. This shift reflects evolving professional and academic communication practices, where text-based documents are often supplemented or replaced by multimedia presentations. **CALL writing instruction** is uniquely positioned to support this change by offering technologies that facilitate the creation and integration of diverse media. This shift also requires a corresponding evolution in **assessment practices**, where multimodal compositions are evaluated according to criteria suited to multimedia, rather than traditional text-based writing standards.

5. CALL Classroom Vs. Traditional Classroom

The **CALL** (**Computer-Assisted Language Learning**) classroom and the **traditional classroom** differ in several key aspects, ranging from the use of technology to the approach to instruction, learning activities, and assessment. Here are the main differences:

1) Technology Integration

- CALL Classroom:
 - Uses **computers**, **tablets**, **smartphones**, and **online platforms** to deliver lessons, provide resources, and support language learning. Students interact with **digital tools** such as interactive software, apps, websites, and digital media (e.g., podcasts, videos).
 - Common tools include **speech recognition**, **AI-driven feedback**, **interactive exercises**, and **multimedia resources** (audio, video, animations) for a more engaging and personalized experience.
- Traditional Classroom:
 - Primarily relies on **print-based** materials (e.g., textbooks, worksheets, handouts) and face-to-face instruction. Technology, if used, is typically **minimal** (e.g., a whiteboard or projector).
 - The focus is usually on teacher-centered methods, with limited digital interaction and fewer opportunities for self-paced or interactive learning.

2) Learning Environment

- CALL Classroom:
 - Provides a **blended learning environment** where students can engage in **individualized learning** outside of class time (e.g., via homework apps or language learning platforms) and interact with peers through online discussion forums, video calls, and collaborative digital platforms.
 - Often involves **self-paced learning**, allowing students to revisit lessons, practice repeatedly, and receive instant feedback.
- Traditional Classroom:
 - Focuses on **face-to-face interactions** in a physical space, where learning occurs within a structured environment during scheduled class times. **Group dynamics** and teacher-student interactions are central, and lessons tend to be taught in a fixed time frame.
 - The emphasis is often on direct teacher instruction, group work, and **oral discussions**.

3) Access to Resources

- CALL Classroom:
 - Learners have **instant access to a wealth of online resources**, including **online dictionaries**, **corpora**, **language learning apps**, **multimedia content**, and **real-world materials** such as news websites, blogs, and social media.
 - **Digital tools** such as **language corpora** (e.g., concordancers) allow students to explore language use in authentic contexts, offering exposure to a variety of dialects and registers of the target language.
- Traditional Classroom:
 - Resources are often limited to textbooks, handouts, and the teacher's knowledge. While **physical libraries** and other materials might be available, students typically do not have **immediate access** to the vast array of online resources available in a CALL classroom.
 - Students may have limited exposure to **real-world language usage** outside the classroom.

4) Student-Centred vs. Teacher-Centred

• CALL Classroom:

- Tends to be **student-centred**, with a focus on **self-directed learning**. Learners can progress at their own pace, engage in interactive tasks, and receive **instant feedback**.
- The role of the teacher is often that of a **facilitator**, guiding students through the learning process and providing support where necessary, rather than being the sole source of knowledge.
- Traditional Classroom:
 - Tends to be **teacher-centred**, with the teacher delivering content through lectures or demonstrations. Students are typically passive recipients of information, engaging in exercises designed by the teacher.
 - There is less emphasis on **individualized learning**, and students may not have the flexibility to work at their own pace.

5) Feedback and Assessment

- CALL Classroom:
 - Automated feedback is a key feature, with learners receiving immediate correction on tasks, quizzes, and exercises. For example, language learning platforms like **Duolingo** or **Quizlet** provide real-time assessments and can adapt the difficulty level based on learner performance.
 - **Performance analytics** are often available, allowing both students and teachers to track progress and identify areas that need improvement.

• Traditional Classroom:

- Feedback is often **delayed**, with assessments typically occurring in the form of graded assignments or exams. Teachers provide feedback **in person** during or after class.
- **Formative assessments** may occur through informal interactions, but students do not usually have access to **instant feedback** during activities.

6) Collaboration and Interaction

- CALL Classroom:
 - Collaboration often occurs through **digital platforms** (e.g., shared documents, discussion forums, video conferences) where students can work together regardless of time or location.

• Communication may include **written exchanges** in online chat rooms, **audio/video calls**, and participation in **virtual language communities**, allowing students to interact with speakers of the target language from around the world.

• Traditional Classroom:

- Interaction occurs in **real-time**, with students collaborating through face-to-face discussions, group work, and oral presentations. While interaction is generally limited to the classroom, there are more **spontaneous** exchanges during live lessons.
- While **peer interaction** is emphasized, students may have limited opportunities to interact with native speakers or engage in cross-cultural exchanges beyond the classroom.

7) Customization and Personalization

• CALL Classroom:

- Allows for **personalized learning** experiences where students can select content, practice specific skills, and receive tailored feedback based on their progress.
- Adaptive systems can adjust difficulty levels, content delivery methods, and even the types of exercises based on individual learner needs.

• Traditional Classroom:

- Personalization is more challenging, as the teacher must manage a class of learners at various proficiency levels. While differentiation can occur, it is often more limited in scope and relies on the teacher's ability to adjust content on the fly.
- There is generally a **one-size-fits-all** approach to content delivery, and students may not have the opportunity to focus on specific areas of interest or weakness.

8) Cost and Accessibility

- CALL Classroom:
 - Access to learning materials and tools is often more cost-effective, with many resources available for free or at a low cost (e.g., apps, online resources).
 - **Global accessibility** allows learners from diverse locations to access language learning tools, levelling the playing field for students who may not have the resources to attend traditional language schools.

• Traditional Classroom:

- Typically involves higher costs, particularly in terms of **classroom materials**, **instructors' fees**, and **location-based expenses** (e.g., transportation, accommodation).
- Accessibility can be limited, especially in areas where resources (e.g., language instructors or learning materials) are scarce or costly.