WEB 2.0 TECHNOLOGIES AND TANDEM LEARNING FOR SECOND LANGUAGE ADULT LEARNERS

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Abstract

The aim of this paper is to offer an overview of Information and Communication Technologies with a specific focus on the use of Web 2.0 technologies in tandem learning for adult students in Australia. The use of Web 2.0 technologies and in-class tandem learning strategies is a new observable actuality that is picking up momentum for SLA in diverse groups of learners from all levels and background across the globe. Within the perspective of tandem learning in Web 2.0 context, participants from two different languages are connected by means of an ICT-based learning environment i.e. tools or applications of communication that comprise radio, TV, portable devices or mobile phones, computers, hardware or software etc. They may also include video teleconferencing and distance learning technologies. The participants learn from each other on these platforms through mutual collaboration by taking turns as a second language student and as a model in the native language.

Through this paper, ways to support the tandem learning in Web 2.0 context is discussed. The prime focus of this paper is to examine the language features the learners adjust to and engage with throughout their learning process. The language aspects vary depending on what classroom activities they are engaged in, text-based or oral activities.

Keywords: ICT, Web 2.0 Technologies, Tandem learning, Adult learners, Second language, Language education, Interaction.

1.1 Information and Communication Technologies (ICTs)

ICTs involve the tools that are centred on information, varied in nature and types, and perform such functions as collating, dispensing, storing and displaying information. Gradually, these functions lead to cooperation and discourse and for this reason, Information Technology has been

viewed as Information and Communication Technologies (Chaston et al., 2001). Generally, ICTs are considered in a specific perspective i.e. learning, medical facilities etc. ICTs can be defined as the technologies for learning, creation, practice, execution, facilitation or administration of computer based processes and tools for storing, managing, using, gathering of data and communications. According to Feridun & Karagiannis (2009), they may also be classified as a sphere of science and technology that deals with the practice of using computers and other devices related to telecommunication for the purpose of saving, recovering, broadcasting, managing information and data. ICTs may also be described as tools or applications of communication that comprise radio, TV, portable devices or mobile phones, computers, hardware or software etc. They may also include video teleconferencing and distance learning technologies.

There is a wide variety of technologies pertinent to ICTs that are specifically catered to fulfil the needs and requirements of second language learners. They offer them the knowledge and help to achieve the desired language outcomes. It is useful to have a review of these technologies prior to the discussion of their specific nature and purposes for second language learning. These technologies are described in Table 3.1 as follows:

Table 1.1
ICTs in language learning (cf. Fitzpatrick, 2004)

Mode	**Instrument**	**Positives**	**Negatives**
Text	Books and Magazines	- easy to carry - longstanding - able to offer complex knowledge in a simple, structured and sequential manner - reader-friendly and cheap to buy	- not conducive for editing information - always need a certain level of competence, intellect and knowledge to process information - incur relatively higher expenditure for preparation and issuance than other tools
	Web page	- characterized by constant change and easy to edit - desired information may also be obtained without having to following any specific string or cycle - cheaper to develop and run - accommodate user-input - provide smooth routing - designed in a way to help in Evaluation	- users may have some difficulties in looking for the desired information on these documents - web pages may not be reader-friendly - require electronic devices that need constant power and internet connection to run
Images	Printed photos, maps and	- offer particular and to-the-point information	- have substandard value as compared to text

	schematic drawing	- suitable for supporting students with visual intelligence - help to stimulate learners for SLA - students are at ease in the exchange, copying and sharing of images - can be data or web based and are suitable for mobile devices	- students are sceptical to reuse images - expensive to reproduce - need computers and the Internet Connection
Audio	Radio	- ease in accessibility - offer modern and topical knowledge hassle free - do not need users to be literate - low cost to buy	- knowledge is not long lasting - inferior demonstration of complicated ideas - lack of visual element - synchronous type needs system
Video	Analog, Broadcast and Digital	- analog videos are highly accessible and have potentially engaging format (no literacy skills required) - their sequential structure guides learner - broadcast videos are the same as analog videos - can present contemporary or topical information easily - digital based videos are easily catalogued and reused by users - can be indexed or catalogued to enable non-sequential access	- analog and broadcast videos entail high production costs; moderate reproduction costs and complex information may be difficult to present effectively - digital videos need robust PC and/or high-speed Internet connection and high storage "overhead" in terms of hard drive capacity
Simulations	Interactive Web and CD	- active-learning characteristics engage learners via several parts to reinforce concepts - quantitative elements are supported - reinforce conceptual learning	- requires robust PC and/or high-speed Internet connection - demand potential additional system requirements (e.g. Java, plug-ins)

It is important to note that when it comes to ICTs in second language teaching settings, they help learners to acquire the target language by means of their technologies in numbers of ways. As per Flowerdew (2018), the use of motion pictures connected with sound expose students to all vital components of oral communication: gestures, proxemics, pronunciation, intonation, all embedded in natural, cultural contexts. Devices like DVD players, videocassettes, web sources, laserdiscs and video cameras readily support these aforementioned language components. Both satellite and terrestrial radio and television programmes offer cheap access to modern, authentic learning content that may well be culture-specific or cover a wide array of domestic and international affairs for the language learner. Serostanova (2014) notes that the adjacency of current affairs programmes make sure that students are exposed to the language which is up-to-date and connected with the real world of authentic language users. Audio exchanges via the

Internet now also offer opportunities for real time verbal interaction and discourse that occur at the same time. The principal uses of the telephone to date have been limited to supplementary tutoring for those engaged in distance education. Nonetheless, as per Fitzpatrick (2004), with the advent of digital quality and lower connection costs, there is now significant potential for its extended use – including the possibility of conference calls.

In addition, computer programs, specifically catered to support the second language teaching and learning process, are also widely used by second language teachers (Leu et al., 2004). These include training programs (game programs, training simulators), monitoring programs, information retrieval, information and reference programs (electronic dictionaries and glossaries), computer-assisted programs. Their main distinctive features are multimedia format and interactivity specific to dialogue relations between a computer and a learner. Furthermore, communication channels supported by a two-way flow of information are computer-based systems that support content, moving pictures, simulations, audio and video games. They offer students the target learning reinforcement, motivate them to undertake learning tasks independently and are conducive for evaluation (Paran, 2012). However, as per Hylén (2015), they may also need a constant power supply, internet connections and computers to run. Some software components that are pivotal for the execution of such programs may also need constant upgrade. Some of the examples are social media, intranet, chatrooms, private and group messaging, discussion forums, internal blogs, video and audio, digital communities, virtual environments, application software.

In addition, use of interactive whiteboard has also become common in ELT. It is like a regular white board; however, it offers possibilities of commenting on-screen photos which could then be published or saved like a document. Røkenes & Krumsvik (2016) note that it affects mastering in several approaches, such as elevating the extent of pupil engagement within the lecture room, motivating students and promoting enthusiasm for mastering. By using interactive whiteboards, second language educators may have greater ease in lesson preparation, and integration of other ICT technologies to make language instruction more conducive and technology oriented.

The practice and implementation of ICTs is extensive in modern second language learning classrooms and have brought significant variations in the models and outlines of the communicating impressions of their users. Paran (2012) highlights that their influence is not restricted to their users' conducts but the industries, organizations as well as administrative authorities across the globe have also experienced a significant and positive change in the way they perform routine tasks and activities to achieve the desired goals. Nonetheless, it is important to consider some disadvantages of ICTs in ELT too. Walton (2018) points out that in ELT settings using ICTs that require communication through voice chat or instant messaging poses problems for educators. It is for the reason that ICTs do not take body language into account. Non-verbal cues are a vital part of the way educators identify the acceptance and acknowledgement of the target language by learners. Røkenes & Krumsvik (2016) argue that there are also security issues that may be encountered by learners while engaged in ICT-assisted language learning. If adequate measures have not been followed, learners' details may be compromised. Additional cost to maintain ICTs in SL setting is also one of the significant issues for educational institutions.

Regardless of the abovementioned issues, Chang (2018) observes that the efficiency and long-lasting positive impact of ICTs within the context of SLA is acknowledged worldwide. Moreover, for the reason that ICTs are constructively influenced by the World Wide Web (WWW), the attainment of the real-life content, access to language repositories and utilization of a comprehensive variety of learning tasks and activities related to SLA have been enabled.

1.1.1 The Emergence of the World Wide Web (WWW) and Web 1.0

World Wide Web may be interpreted as a network of connected computer-based text retrieval documents that enables its users to access specific, desired websites and/or electronic media content by clicking on the link. Aghaei et al. (2012) note that with the help of various software applications to retrieve, demonstrate, exhibit or transverse information on the internet, users can have access to their desired knowledge and resources. It was at the end of the year 1989 when Tim Berners-Lee, a British IT software expert, proposed the outline of the World Wide Web. He worked alongside his colleague Robert Cailliau and their combined efforts and research work resulted in the foundations for the World Wide Web in 1990 (Cookie, 2012). With the initiation

of the World Wide Web, the hypertext documents connected to the Web could only support information in plain text.

At present, these documents or web pages contain animated information alongside text. This was only possible due to the object oriented programming language called "JavaScript", "Cascading Style Sheets" to support the way HTML components could be exhibited on hypertext documents and with the advent of Bulletin Board System (BBS) (Kahney, 2004). BBS was developed as a computer server encompassing software that enabled users to join the system with the help of a video terminal having display architecture, sending and receiving data from remote servers, reviews news feeds, interacting with people by means of electronic messaging and synchronous conferencing.

The era before 1999 may be considered as the age of "Read-Only" Web**.** The first and foremost application of a location connected to the internet that maintained one or more web pages exhibited the initial form of Web 1.0 (Liu, et al. 2016). It is important to note that this initial form of the Web was mainly utilized by language learners to read. The primary objective for second language learners in the Web 1.0 era was to obtain the required language knowledge from the existence of different online language resources and get facilitated with the desired language knowledge that could be accessed anywhere and at any time (Edwards, 2016). Besides, another objective for language learners was to receive the target language information together in a uniform way where they could read the content with no interaction with it.

Web 1.0 focused more on the creation of the language content making it useful for the learners to read with minimal or no interaction with the online language resources. Cookie (2012) observes that learners obtain language knowledge by going directly to the source such as BBC.com for practicing their reading of different news feed and articles to obtain the language learning exercises and there to access the content that could be printed out and worked on. In other words, the use of Web 1.0 in SLA is more like a restricted process of language learning that takes place in one direction only. As per Paran (2012), the practice of Web 1.0 in SLA classrooms is similar to the formal SLA classrooms, where learners were expected to attend the lectures which are centred on teachers, who offer one-way flow of the target language input by means of printed documents, books, recorded, reproduced moving visual images, audio clips. The learners involved

in SLA through Web 1.0 mainly act as receivers of the language knowledge and aid provided to them.

In order to work on the learning tasks offered in Web 1.0, students were not required to work collaboratively, and most of the times, they were expected to process and execute the tasks either working individually or in small clusters. For this reason, very rarely did the outcomes achieved from the learning tasks help the language knowledge sources to become more refined, effective and improved in any way (Liu et al., 2016). Besides, other uses of Web 1.0 involved using visuals or pictures in Microsoft PowerPoint so that learners could use them as writing prompts and produce the required content on paper. As per Halili (2018), in order to improve students' understanding of the reading tasks, learners can be asked to review an article or piece of writing on the internet and based on their comprehension, they may be prompted to answer some questions. Use of voice memo or audio recording facility to record the educational talk and asking learners to send their assignments or answers to the exercises via electronic means are also some of the uses of Web 1.0 in the SLA setting. What follows are some examples of tasks to see what Web 1.0 for ELT was about (Hockly, 2010):

- Use of cartoon images in Microsoft PowerPoint as a prompt for learners to write on paper.
- Use of Microsoft Word to display a list of prepositions/idioms/example sentences in tense x.
- Use of a static web page as a reading blog for learners to respond to the pertaining comprehension questions on paper.
- Use of recorded educational talk to deliver the target knowledge and ask students to listen to at the time of their convenience.
- Use of email as a medium for the students to submit their homework.

It is important to note that the basic purpose of Web 1.0 tasks was to focus on the delivery of the text or content that cannot be produced, improvised, adjusted or adapted (Angus, 2017). Therefore, Web 1.0 fits in well with the language teaching approved by means of conventional methods aiming at the blackboard and presentation by teachers. As per Hylén (2015), with the help of Web 1.0, instead of writing things on the board, teachers can display text/list of prepositions/model sentences/picture prompts in a Word document or PowerPoint. For learners,

listening to recorded audio podcasts at the time of their convenience may help them to utilize their free time effectively. Use of Microsoft Office applications to display the target language areas, online sources where learners can read and undertake the exercises may also be useful in SL (Ajjan & Hartshorne, 2008). On the contrary, Valencia (2017) notes that because of Web 1.0's limited scope in ELT, it was harder for learners to gain the complete functional knowledge of the target language. Due to its static ability, there was limited interaction between teachers and students. Also, Web 1.0 was generally used in ELT classrooms as an information portal where learners received information without being given the chance to posts, review or discuss, which is also one of its biggest disadvantages in ELT.

In short, within the context of the use of Web 1.0 in SLA, the use of computers was limited to those people who were highly specialized and technology geek. At the same time; however, the popularity of Web 1.0 was picking up momentum, yet there was a need of internet users to interact with the websites. This need resulted in the emergence of Web 2.0.

1.1.2 Web 2.0

Despite the problems of workability, unfriendly users' interface, communication restricted to sending and receiving messages and slow processing of data, Bulletin Board System sustained steady recognition up until the 90s when the popularity of the Internet overshadowed its fame and status (Kale, 2016). By the end of the 90s, a need to make social connections online picked up momentum that eventually led to the emergence of the early forms of social network sites. The 1990s saw the initiation of the Read-Write-Publish age coupled with remarkable input from LiveJournal, a social networking service that was primarily formed to keep in contact with school friends (Zittrain, 2012). The emergence of LiveJournal was followed by the creation of Blogger, which was brought into existence by Pyra Lab as the first blog-publishing tool.

To overcome the shortfalls of Web 1.0, the concept of Web 2.0 came into existence when O'Reilly used the term Web 2.0 in 2005 and exhibited how to manage and use the World Wide Web in a completely different way than Web 1.0. As per Reich & Subrahmanyam (2012), Web 2.0 may be referred to as computer programs and services that are innovative and different than their previous counterparts in many ways. They do not only enable users to interact with websites

but they also offer a certain amount of flexibility and ease to the users while they interact with the sites. Reips & Matzat (2007) note that Web 2.0 vehemently encourages involvement, cooperation and content exchange. Presently there are many computer programs that may be classified as examples of Web 2.0. They may include social network sites, blogs, wikis, folksonomies, video sharing sites, hosted services, web applications, collaborative consumption platforms, and mashups (Hylén, 2015).

The key features that differentiate modern Web 2.0 from Web 1.0 can be observed in the table below:

Table 1.2
Key differences between Web 1.0 and Web 2.0 (cf. Aghaei et al. 2012, p.3)

Web 1.0	**Web 2.0**
Reading	Reading/Writing
Companies	Communities
Client-Server	Peer to Peer
HTML Portals	XML, RSS
Taxonomy	Tags
Owning	Sharing
IPOS	Trade sales
Netscape	Google
Web forms	Web applications
Screen Scraping	APIs
Dialup	Broadband
Hardware costs	Bandwidth costs
Lectures	Conversation
Advertising	Word of mouth
Services sold over the web	Web services
Information portals	Platforms

Unlike the Read Only Web 1.0, Web 2.0 offers both reading and writing functionalities, which is helpful in the formation of online communities where the users of similar interests and hobbies can exchange information and knowledge. Sherratt (2013) highlights that Web 1.0 was primarily used by the companies to advertise their products and services on HTML portals while all the information was shared on the client-servers. On the contrary, in Web 2.0 information is exchanged in a peer-to-peer format and the codes for the portals are written in XML and RSS format (Sorapure, 2010). Sharing of and searching for information are also considered pivotal for the expansion of knowledge in Web 2.0 and there are numerous web applications and search engines that cater for the needs of the users.

Web 2.0 includes an array of various implications causing a greater focus on improving the capabilities of the Web to support the users' input. Luo (2013) points out that learners' output can be in the form of written or verbal communication, maintaining the knowledge exchange, encouraging group effort to achieve the target knowledge, sustaining student-to-educator and student-to-student involvement in the sharing and exchange of knowledge with computers. The capabilities to offer conducive environment for second language learning to take place both in formal and informal settings are also the important focus of Web 2.0. As per Chen et al. (2005), within the context of SLA, the importance and practice of Web 2.0 are widely acknowledged. Its most important tools are technologies that support communal communication of learners based on their specific language requirements by means of the internet and mobile devices as well as websites and applications that allow learners to establish and exchange materials in the target language areas. Some specific Web 2.0 tools and applications and their possible uses in language teaching may be illustrated in the following table:

Table 1.3
Web 2.0 technologies, tools and applications (cf. Okello-Obura & Ssekitto, 2015)

Web 2.0 tools	**Description**	**Uses**
Social Network Site	an online platform to build social networks or social relations with other people	- use SNSs to upload learning content - exchange exercises and materials - notify learners of upcoming events and tasks - engage students in the practice of target language in a supervised online environment etc.
Email	a method of exchanging digital messages from an author to one or more recipients	- teachers can send large amounts of information easily and conveniently to students - exchange ideas on English teaching with language experts and academic journals via e-mail - exchange information with learners
Wikis	similar to blogs but allow the text on the website to be edited by others, with the creation of a common document that can be shared between individuals	- teachers may use Wikis to offer authentic writing practice - allow students to be actively engaged in reading and writing - students may correct, edit and update the target language content on Wikis are - useful in teaching students the skills of collaboration alongside language skills

		- present the student writers with a ready audience and critics
Blogs and micro blogs	personal websites that allow rapid updating by the author	- teachers can create class blogs and microblogs to post additional learning materials - offer tasks and exercises to be worked on blogs as homework to students - post links on blogs to sites pertinent to the lesson students have studied in class - importing video clips and incorporating them into blogs may also be helpful to understand the lesson for the students
Podcasts	a digital recording, or podcast, is produced and then played on a digital media player	- use podcasts as learning materials for class by pointing learners to language learning podcasts - enable learners to practice their target authentic language by listening to podcasts - ask students to create their own podcasts projects pertinent to specific language areas
Social bookmarking	a method for Internet users to organize, store, manage and search for bookmarks of resources online	- teachers ask students to tag a website related to the target language area and save it for later studying - bookmarks are online so students can be asked to share them with peers to discuss and practice the language - teachers may have the content e-mailed to a student or fellow staff and sent them a link to a website they thought they might find interesting
Moblogging	a form of blogging to publish blog entries directly to the web from a mobile phone or other mobile device	- teachers may ask students to use Twitter to send and receive the messages either on computer or mobile devices to practice the target language areas - educators may also ask students to practice writing short messages and share on class Twitter account
Vlogging	a form of blogging for which the medium is video and it takes advantage of web syndication to allow for the distribution of video over the Internet	- teachers may record a lesson and share it with students - they may also ask students to do a short pre-lesson video where they may talk about their interests and hobbies - vlogging can be used for sending video announcements - teachers may create a class Instagram page to deliver target learning

Padlet	a virtual notice board enabling learners to post stickies with multimedia elements	- students may be asked to find example sentences related to the newly learned words and paste them to the virtual notice board for other learners to read
Voxopop	a web based audio tool that enables learners to record their speaking on a given topic	- teachers may ask learners to use Voxopop as a discussion tool - it may also be used to develop oral communication skills - teachers may also provide students with written dialogues and ask them to dictate the dialogues
Google Drive	a cloud based storage device to store all types of documents	- educators may use 6D to organize students' assignments - lesson content can be created with multimedia elements and hyperlinks for the target language areas
Blendspace	a content curation tool for creating lessons	- by combining pdf, word documents and multimedia components from the Internet, educators can develop some useful lessons - they may also ask students to create presentations with this tool
Vialogues	a tool for developing video-based discourses	- educators may develop video discussions on target language areas - they may also ask students to watch YouTube videos on specific topics - students may also record their lectures and share it with learners

Web 2.0 technologies, tools and applications help transform language students from passive to active language users. Therefore, on the one hand, Okello-Obura & Ssekitto (2015) point out that educators must tap into this valuable feature of Web 2.0, ought to deliver the language learning content that is suitable for Web 2.0-based learning, and facilitate their students to make their online voice as an integral component of the target discourse. On the other hand, there are certain disadvantages of using Web 2.0 in ELT which must be dealt with before learners are put through Web 2.0-based language instruction. Feryok (2013) notes that Web 2.0-assisted language learning can be severely impeded if the technology devices and Internet connection are not stable and satisfactory. Another main issue with this type of instruction is that there is no guarantee of content quality which in some cases may have low authenticity and preciseness if no proper checks or verifications regarding the Web 2.0-based sources are made. Liu (2017) notes

that security and privacy issues are also one of the significant problems experienced by teachers as well as learners during Web 2.0-based language instruction.

It is important to acknowledge that the way language learners store, retrieve, process and utilize language knowledge has changed significantly. Consequently, educators should use Web 2.0 to meet those challenges in order to deliver effective and hassle-free language instruction. The evolution of the Web is an ongoing process and there is an advanced version of Web 2.0 which is called Web 3.0.

1.1.3 Web 3.0 and Web 4.0

Unlike Web 2.0, which is primarily aimed at bringing the text or materials and the learners together in order to exchange and cooperate knowledge for SLA, as per Al-Kadi (2018), Web 3.0 mainly focuses on bridging the gap by improving the systems that already exist in the Web 2.0 technologies. Web 3.0 involves the computer programs controlled by applications, servers, processing server-side scripts, enabling users to make choices electronically, and facilitating direct communication between devices by using any communication channel, including wired and wireless. Demartini & Benussi (2017) note that computer programs may explicate data and knowledge as people produce and disseminate utilitarian information that is catered to fulfil the wants and requirements of users. The improvement in the set of devices to bring the language content and the learners together in Web 3.0 enables the systems to acquire the capabilities of intellectually processing the knowledge that they work on.

When a learner tries to look up a target language use in Web 2.0, he/she just needs to search for the desired information by merely entering a word or expression and the program searches and identifies items that correspond to the keyword. However, according to Penland (2011), in Web 3.0, if a learner tries to look up information on English for Academic Purposes, the search engine not only finds the text containing information about this specific genre of English but it may also provide additional information that may describe its purpose, scope, functions, nature, and other related information. Within the context of SLA, Web 3.0 technologies translate information by isolating the meanings from data and content files which enable learners to establish comprehension, exchange and reason the target language point with systems (Abdullahi &

Rouyan, 2018). With the help of their capabilities to undertake tasks requiring human intelligence, Web 3.0 technologies may enable learners to have a personalized language learning experience.

As Paechter et al. (2010) highlight that the use of Web as an educator for second language learners has many advantages. The Web may be able to process the target language learning needs and requirements of students and based on the outcomes, it may be able to furnish learners with the required language content. The scope of the use of Web 3.0 may be evaluated by means of the instruments that it offers. Websites or databases created cooperatively by users like wikis offer a free source of knowledge for second language learners (Sheeba et al., 2012). Therefore, with the help of Web 3.0, learners acquire the language knowledge of the wikis content through real-life 3D visual appearances or virtual worlds to gain the visual perspective as well as an expansive understanding of the target language points. The virtual worlds may be brought into the English language classrooms by using Virtual Reality Viewer (Samsung Gear VR, Oculus Rift/ HTC Vive, BeThereBook), Android or iPhones (BeThere, 2016). One of the examples could be where an educator asks students about the desired locations to work. One of the students replies that he wants to work in Paris. The educator can bring him to Paris with virtual reality by asking him to simply go to YouTube and search "Paris 360". The Student finds the video, observes and discusses different parts of the city in his/hers presentation.

The use of Web 3.0 to promote the computer-based online environment may prove to be very useful for language learners. Demartini & Benussi (2017) note that students may be able to offer and exchange the language knowledge with the help of personalized computer graphical illustrations which may stimulate them to take part in different language learning tasks and activities. More importantly, whenever learners need to practice functional language, assume different roles, or want to initiate or express a language point related to the authentic use of the language to other students, they may use Web 3.0 technologies to create the target learning environments. Aydin (2015) points out that educators may also use the digital or computer graphical illustrations to create learning situations pertinent to the target language areas. One of the examples could be where a teacher asks students to use their tabs/ipads, Android or iOS based mobile devices to download the chosen digital illustration app. There are a variety of such apps such as: Artflow, Autodesk, Procreate, Paper, Cosmonaut, Pencil etc. Afterwards, students are required to sketch different situations and share them via Bluetooth with their peers. Next, the

teacher asks students to start commenting and describing those illustrations in the interactive portals of those apps.

Moreover, goal-oriented computer programs offered by Web 3.0 may also be useful in ELT. Ovalina & Adnan (2018) observe that examples of these may include Intelligent Learning Environments (ILE) or the Human Computer Interaction (HCI) components of interactive systems. The goal of teachers using an ILE or HCI may be to facilitate students' language learning of a particular language topic in ELT. Al-Kadi (2018) argues that ILEs work autonomously with no direct supervision, execute learners' search requests for the particular language points in the programs and then look for the information. Some important ILEs tools for SLA are Chatbot, Tutobot, DynaLearn, ARTutor, Itest etc. In an ELT classroom, an example of using an ILE could be when a teacher uses a suitable ILE tool which entails ready-made reference material (dictionaries, authorized conversation material with speaking, and a QA function). The educator uses it to offer synchronous communication with learners and records conversations for analysis so that he/she may assess students' progress. Nedeva & Dineva (2012) assert that a suitable ILE tool may act as an assistant as well as a partner to the student. Since students work harder to understand material when they feel they are interacting with a partner, rather than simply receiving information passively, the use of Tutobot may help them to practice the target language and acquire the desired language competencies.

There is another new type of Web called Web 4.0, which is merely a concept at present. Hu & Hui (2012) point out that Web 4.0 is acknowledged as a type of Web which is Ultra-Intelligent Electronic Agent. One of the main functions of this approach is to offer the applications that identify the users as soon as they log in to the web by means of their mobile or other communication devices. In other words, Web 4.0 lets machines think creatively when it comes to reading and processing the online materials on the web and then respond by implementing and making choices about what to process or function first so that a set of related web pages can be loaded fast with greater excellence as well as a more refined display (Demartini & Benussi, 2017). Students may not need phones and other computing devices' screens to navigate the internet to find the required target knowledge. ELT classrooms may have holograms to communicate the desired language knowledge and students may be able to attend the classrooms remotely by means of their holograms and virtual assistants. As per Nedeva & Dineva (2012), an example of Web 4.0

could be when an educator is teaching vocabulary related to emotions to his or her students. Students may merely log into their computers and by changing their facial features they obtain output from their intelligent computers in the form of emotion-related vocabulary.

The future of Web 4.0 seems to be quite bright for SLA learners. Aghaei et al. (2012) argue that the progression in the fields of creating physical objects from a three-dimensional digital model, a three dimensional pattern of interference, controlling users' cognitive abilities as a base to lead computers to process thoughts and ideas, have been exemplary. Sooner than later, it may well be the case that an SLA educator uses 3D printing in SLA classroom to describe target language objects and with the help of 3D hologram manages to give learners a new perspective of target language situation, where they may not only be able to observe different objects and subjects interacting in the target language but can physically interrelate and participate in the overall process of learning.

1.2 Tandem Learning

Tandem language learning is a way of language learning that consists of the language interaction between the first and second language learners which is either in-person, over the phone, penpal-based or using Web 2.0 technologies. In this method of language learning, ideally one of the participants is a native speaker in the language the other person wants to learn.

According to Cappellini, (2016), within the perspective of the tandem exchanges, the outcome from the learning of the target language is subject to the shared, self-governing and independent interaction between the participants. In other words, the students interested in tandem learning participate in the learning of each others' languages. When it comes to timing, it is uniformly and regularly split for the reason that the interaction between the language partners is comparatively disseminated (Tian & Young, 2010). For instance, a Polish learner involved in tandem learning with a native English learner in an hour-long lesson may divide the lesson into two evenly-timed parts where both language learners, by means of the language interaction with the first or native language speakers, and additional collective and educational observations, become entirely engrossed in the target language culture. The language learning process may be propped up in various ways i.e. by means of worksheets, textbooks or simply informal conversation.

When it comes to Tandem learning, as per Telles, J.A. (2014), it has a long history of supporting the traditional second or third language learners to learn the required language skills. In retrospect, the tandem learning was supported by means of participants becoming pen-pals to practice their writing competencies, and or having an in-person exchange of language knowledge, where the first or native language users help the second language learners in improving their oral skills and competencies in informal learning settings. As per Brick (2010), such activities offer language learning a more instantaneous rationale and assist to stimulate the second language learners. However, with the evolution of the internet technologies, the whole premises for traditional tandem learning have changed significantly. Woodin (2018) notes that the language exchange through becoming pen-pals has been transformed into becoming key-pal where the second language students interact with the first or native language user instantaneously. The modern technological advancements have enabled the development of highly intelligent, user friendly and smart Web 2.0 technologies such as social networking software and virtual worlds where tandem learning participants are able to create profiles and search for tandem language partners to practice their desired language skills.

1.2.1 Collaborator-centered Tandem Learning

The second language may easily be learned by means of tandem learning when the collaborators interact and engage with each other in their own native languages. As per the BP-BLTM (2019), the impact of tandem language learning on collaborators is very visible and in some cases, more effective than language learning in traditional classrooms. Learning with tandem partner allows certain level of freedom in terms of the choice of the learning content too and that helps participants to stay motivated and engaged in the language learning process. As per Rio et al. (2019), the partners in tandem learning may focus on the body of words that they both are interested to learn or they may practice their language skills through a written essay of their choice. They may also use the language or the vernacular that they are more comfortable with as opposed to the traditional classrooms where formal style of communication is heavily encouraged. In order to succeed in the collaborator-based language learning, each participant must ensure that the time of the lesson is equally divided to learn each others' language (Tian & Wang, 2010). Moreover, to achieve the optimum results, it is pivotal to adhere to the fundamental rule of practicing or using your native language at least half of the time. It is also essential to be wary of the other collaborator, his or her

point of views, learning pace and requirements, and especially the way they articulate and communicate their learning wants and expectations.

Some of the useful suggestions to make the most out of collaborator-centered tandem learning may include the following:

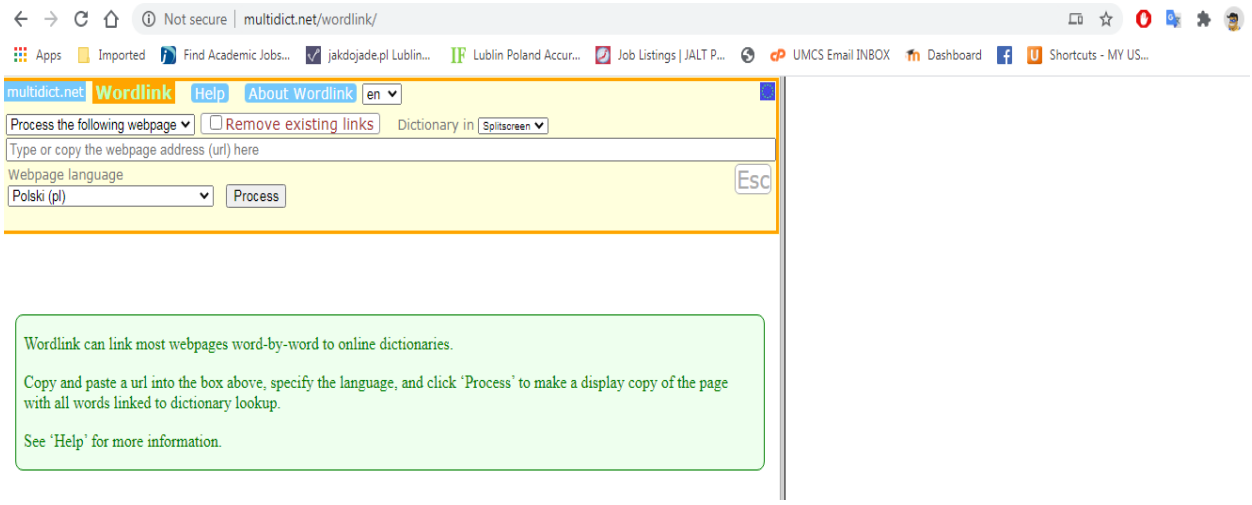
- Use of eTandem learning: the use of emails, instant messaging etc. may help learners to be involved in the language learning process at the time and place of their convenience. They may access the learning content later, save or print it to suit their learning style. They may also record the content and listen as a podcast in their comfort zones.
- While being involved in eTandem learning, it is essential that they notice and make note of all the new words, phrases, idioms, expressions etc. that they come across and are new to them. Once they have developed their notes, they may simply read them over and over unless they are comfortable with their usage or may record them to listen at a later time or practice with their friends or colleagues at the time of their convenience. It is always beneficial to use your individual way to memorize the information including vocabulary lists or cards, mindmaps, and by re-reading texts occasionally, etc.
- With the help of telephone, audio and video conferencing may also be a useful way to support the etandem learning process. There are Nonetheless, it is important to interject or raise a virtual hand when you struggle to understand something. There is no harm to ask to repeat or request further clarification. The biggest disadvantage of this way of learning may be the unstable internet connection, hardware/software glitches or the bad telephone line so one needs to be mindful of the aforementioned issues and have a contingency plan in case things do not go as planned during the lesson. It may be a good idea to record the communication with the approval of your tandem partner. Jotting down the important points while being engaged in eTandem learning may also help to remember important words and expressions.

1.2.2 A Shift from Tandem to eTandem in the Current Era

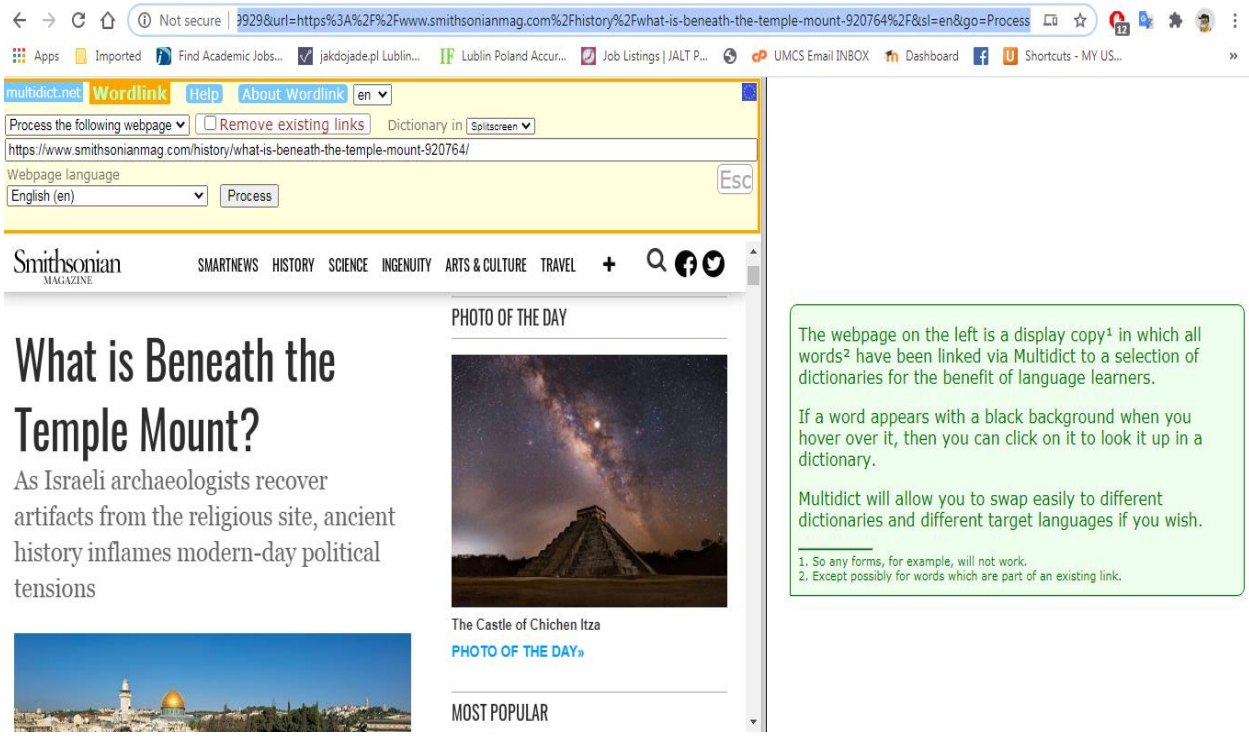
There is no doubt that the first application of tandem in an in-person learning context required the students to be at the same physical place, ideally in a learning setting similar to a traditional classroom. However, the modern scientific, specifically technological advancements have enabled the students to connect with students of difference cultures, backgrounds and residences across the globe (Vinagre & Esteban, 2019). Now, learners may be based in two different locations anywhere in the world yet then can connect, talk, exchange and practice tandem language learning by means of a varied range of Information and Communication Technologies including Web 2.0 applications. When it comes to electronic exchange of language learning by means of etandem, the reason for its resounding success in the current era is because of its capability to enable those second language learners, who reside in the locations or countries where learning from the native speakers may not be possible for various reasons, to have in-person exchange of knowledge with the first-language speakers at the place and time of convenience. As per Cziko (2005), the materialization of eTandem has been instrumental to broaden the scope and impact of tandem language learning in Latin America where in comparison with Europe, there are limited numbers of language spoken over much wide areas, causing in-person tandem less useful and productive.

1. eTandem in Reading Lesson

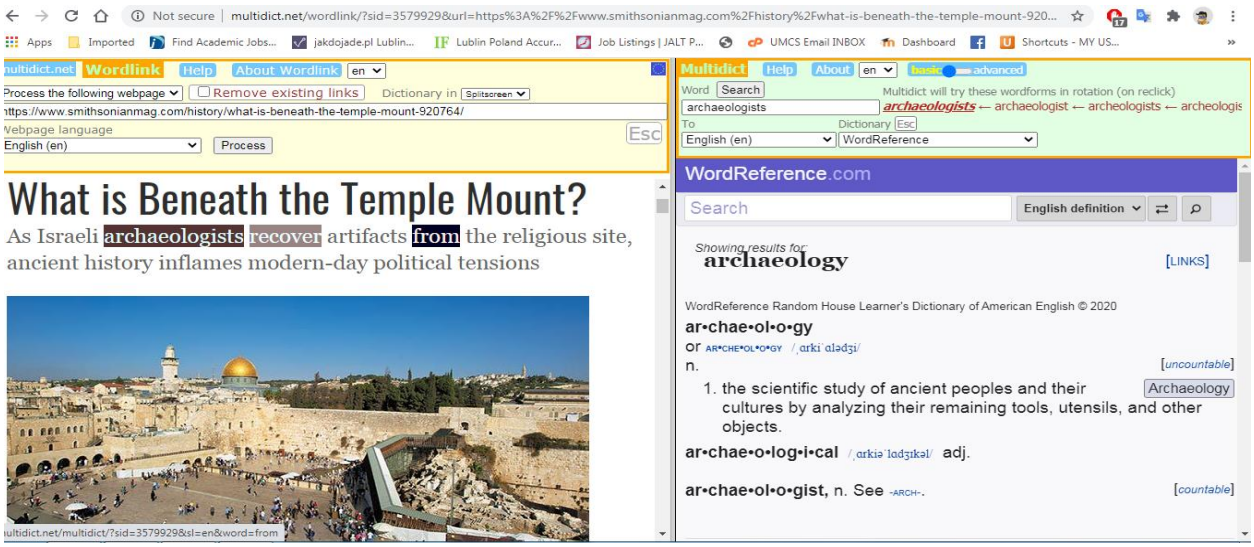
A. Give students a task to read through an English article. They all need to use one of the wordlink websites (http://multidict.net/wordlink/) to undertake this exercise:



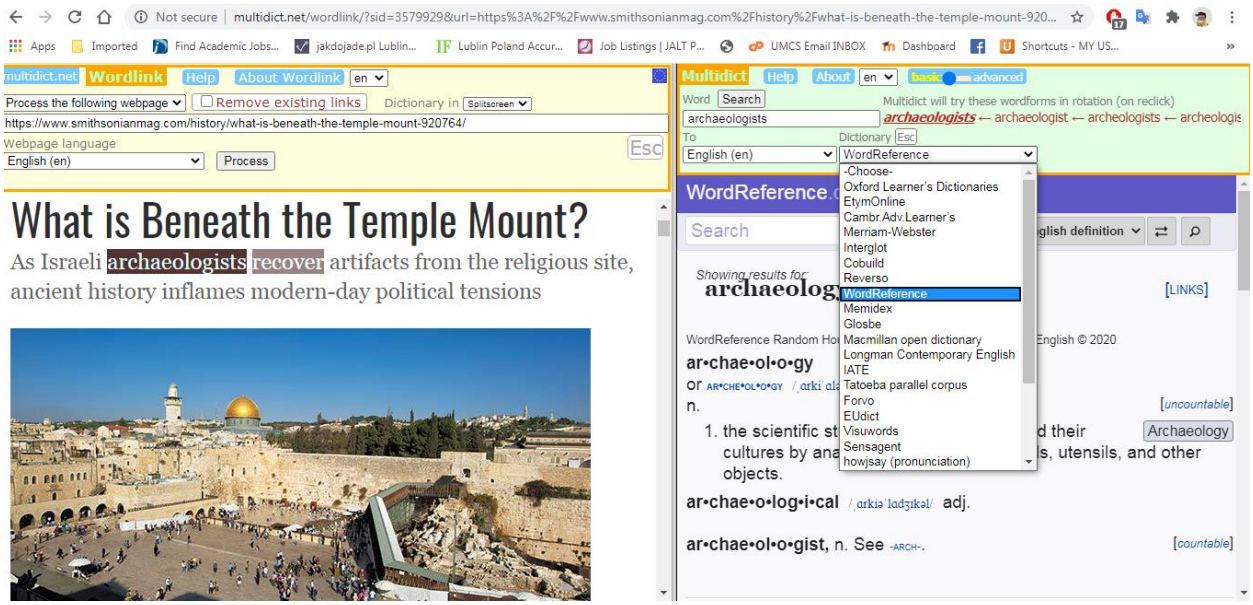
B. Students insert the link and access the page:



C. The students click on any word that they don't understand to see the meaning and the way it can be used in the English language. In the example below, it is the word "Archeologist" that the student has doubled clicked to see its meaning (the window on the left describes the word):



D. Students can choose different dictionaries to look up the word that they need an explanation for as depicted in the example below (the list of the dictionary-related resources can be observed in the right window):

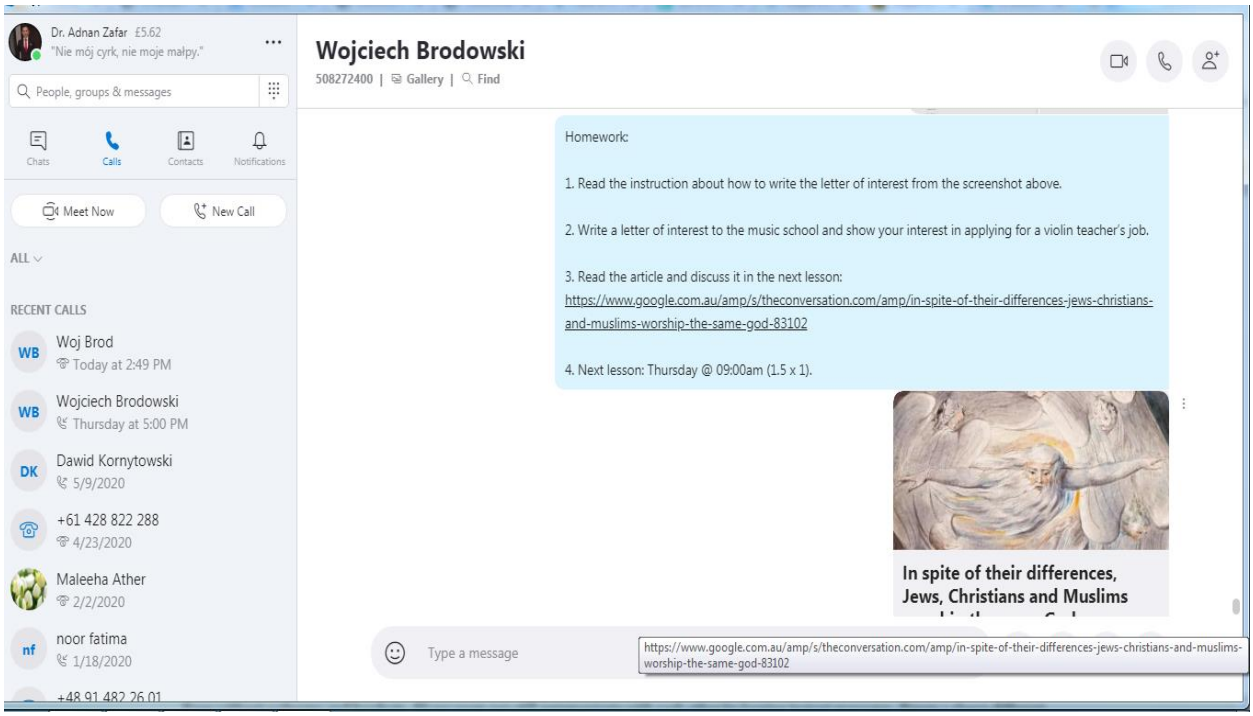


E. Students can continue looking up words and reading through the text. At the end of their reading, teachers may ask them to re-read the article and ask the meaning of those highlighted words without looking up in the dictionary.

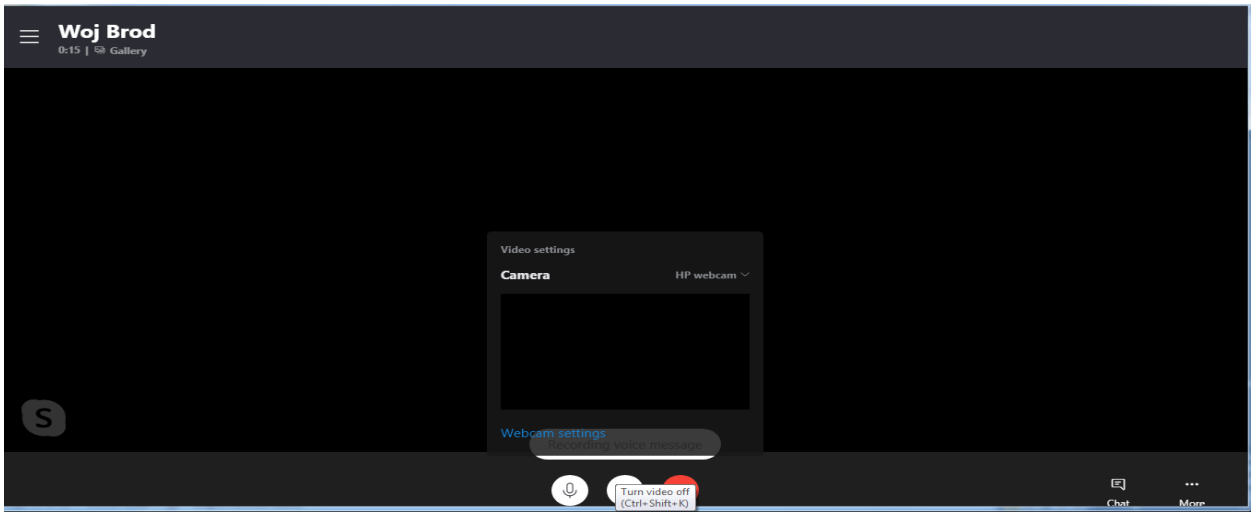
2. eTandem via Skype, Video conferencing, etc.

Always remember to be ready to repeat if your eTandem partner has not heard or understood something correctly. This seems to be a good way to learn something new and simultaneously make sure that you can keep up with the conversation. Ask questions and remember that there is no issue if you do it in your own language. For example: Can you please repeat that?" "What does that mean in English?" "Is that the same as ... in English?" "Can that be used in other contexts?" To give more background on the type of eTandem learning over Skype, following are the series of pictures coupled with instructions that state how Skype-mediate eTandem learning process works:

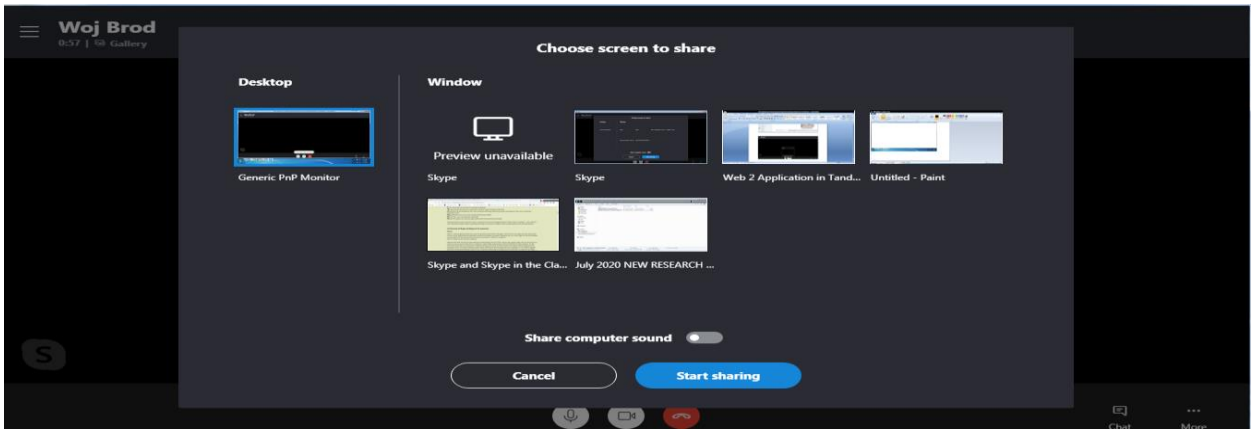
A. Skype interface where you can add your partner. Some of the key features of the interface include: video/audio calling, chat, screen sharing option etc.



B. Video Sharing: Having an in-person learning experience. Learners may focus on the target language by means of body language of their partner, phrasing, gestures etc. If you would like to say something in other than your first language, and do not know how, then you first have to try and somehow make yourself understood. In order to facilitate you to achieve that, you may say it in your own language that your tandem partner is learning. It is always helpful to somehow convey what you want to say in the second language and don't be afraid to risk making mistakes. It is important that you use other learning aids i.e. drawings, gestures, etc. if using video-calling (Tandem, 2015).



C. Sharing Screen Option can be used to display exercises/learning materials and resources or simply observe or monitor the learners while they are undertaking the language learning activity. A few language learning activities in your Skype session may include the use of Smithsonian for Educators, where you may have access to more than a million learning resources, from language labs to educational tidbits from the National Zoo. Ello is another excellent language learning resource where videos, games, news etc. may be used to facilitate the Skype-based language learning. Moreover, the use of FluentU in Skype-based language learning may enable the students to have access to authentic English videos with tools to help them actively build their vocabularies. Students can watch everything from English movie clips to news reports to funny YouTube videos, which come with interactive captions, flashcards and exercises (Seifert, 2020).



D. When it comes to the language exchange via chat, Skype makes this easy with a chat feature that can serve as your virtual whiteboard. Skype-based learning participants may share text and images, or copy and paste paragraphs that they want to understand better:

Conclusion

Modern second language learners exhibit a greater amount of interest and acceptance toward etandem and its application for language learning than ever before. Therefore, enabling learners to establish a thorough understanding of the potential advantages and use of etandem-based language learning may result in their positive stimulation for target language acquisition. Use of Skype and other Web 2.0 tools may also be used as a motivational tool as well as means to gratify students' needs about their desired language knowledge. For this purpose, Web 2.0-based tools including SNSs like Facebook, YouTube, Twitter and others can be effectively utilized to stimulate learners' interest in language acquisition. Considering etandem-based language teaching and learning, there is a need for more of a harmonizing approach instead of acknowledging it as the sole remedy for the purpose of language acquisition. Most of the language learners consider Web 2.0 tools like SNSs as a means to satisfy their social needs, and some of them even use them for acquiring the knowledge in very specific areas of the target language.

When it comes to the implementation of etandem in general, and use of Web 2.0 tools within the context of etandem-based language learning in specific, instead of imposing them arbitrarily on the learners, it is important to shape or sustain motivation that comes from inside. Therefore, it is indispensable to form a methodical propensity for a change in an individual, a group or community. For this reason, it is essential to have a new instead of a loaned approach. This approach can only be materialized by obtaining the competencies and capabilities for engaging in the generation and enhancement of technologies instead of a mere utilization of them (Bouzidi, 2015). The use of Web 2.0-enabled etandem language learning is likely to continue across the globe and its use may continue to attract language learners' attention (Xu & Peng, 2017; Tang & Hew, 2017; Ma, 2017; Stranger-Johannessen & Norton, 2017). However, the significance of traditional language exchanges including language exchange in pairs and parties where the learners of the same first language learn their desired second language from each other cannot be overlooked and the trend of their usage among language students is likely to sustain too.

Signifying the positive impact and benefits of Web 2.0 enabled tandem language learning and the needs for greater protection against the risks and challenges are the areas that continually draw educators and learners' attention. Fuller understanding and awareness of these areas may make them feel more assured, certain and positive about the inclusion of technology into the process of tandem learning. Web 2.0 tools' role in SLA is relatively contained and not all language learners exhibit their willingness to sync their learning methods and strategies with tandem mediated language learning on numerous grounds. One of the reasons of this could be confrontation related to their ideas, customs and social behaviours. Others may well be related with the problems in using Web 2.0 tools, less confidence about the productivity of these tools in language learning or restrictions imposed by their educational establishments. Nonetheless, there is no doubt that second language tandem learners are required to consider the probable benefits of functioning with Web 2.0 tools for learning purposes against the risks and challenges that this addition can encompass.

Having a risk free online learning environment is equally important for learners as well as SL educators and the administrations of educational institutions. Their standing and goodwill may also be at stake in case of any potential breach of learners' identities and information through social network platforms (Kiehne, 2004). On the one hand, for social technologies, there is a need for

them to come together and combine their endeavours in order to provide and facilitate a set of digital rules for data exchange and services for learning purposes that can be publicly available and have various rights to use associated with them. On the other hand, adult educators need to be more creative and focused to find the best way possible to integrate these technologies with the existing tools in order to make significant progress in the way learning can be organized and delivered for adult students.

Reference

Aghaei, S., Nematbakhsh, M. A., & Farsani, H. K. (2012). Evolution of the World Wide Web: From Web 1.0 to Web 4.0. International Journal of Web & Semantic Technology, 3(1), 1-11.

Abdullahi, A., & Rouyan, B. M. (2018). The use of Web 2.0 technologies to determine receptive skills among Malay learners of Arabic language. International Journal of Asian Social Science, 9(8), 651-659.

Aydin, S. (2015). Wikis as a tool for collaborative language learning: Implications for literacy, language education and multilingualism. Sustainable Multilingualism, 7(5), 207-236.

Al-Kadi, A. (2018). Language teaching and educational research. Educational Research, 1(1), 1-12.

Ajjan, H., & Hartshorne, R. (2008). Investigating faculty decisions to adopt Web 2.0 technologies: Theory and empirical tests. The Internet and Higher Education, 11(2), 71-80.

Angus, K. B. (2017). Learning “about” and learning “through” technology: An analysis of syllabi from foreign language teaching methods courses. Calico Journal, 34(3), 317-326.

Brick, B. (2010). A review of tandem learning: from face-to-face to social networking software. Centre for Language Linguistics and Area Studies. Accessed 19th of July, 2020. Retrieved from https://www.llas.ac.uk/video/6126.html

BP-BLTM (2019): eTandem learning autonomous language learning with a partner. Accessed on 21st of August, 2020. Retrieved from
https://www.languages.dk/methods/tandem/eTandem_syllabus_en.pdf

Bouzidi, A. (2015). Exploring the Effectiveness of MALL for enhancing EFL Students' Vocabulary Acquisition (M.A. dissertation). Biskra: Biskra University. Accessed 7th of May, 2014. Retrieved from http://dspace.univ-
biskra.dz:8080/jspui/bitstream/123456789/5786/1/Amina%20BOUZIDI.pdf

Cizko, G.A. (2005). Electronic Tandem Language Learning (eTandem): A Third Approach to
Second Language Learning for the 21st Century. Accessed on 1st of September, 2020. Retrieved from https://journals.equinoxpub.com/CALICO/article/view/23190/19195

Cappellini, M. (2016). "Roles and Scaffolding in Teletandem Interactions: A Study of the Relations between the Sociocultural and the Language Learning Dimensions in a French-Chinese Teletandem". Innovation in Language Learning and Teaching. 10 (1): 6–20. doi:10.1080/17501229.2016.1134859

Chaston, I., Badger, B., Mangles, T., & Sadler-Smith, E. (2001). The internet and e-commerce: an opportunity to examine organisational learning in progress in small manufacturing firms? International Small Business Journal, 19(2), 13-30.

Cookie, W. (2012). What are the major differences among Web 1.0, 2.0 and 3.0? Online blog. Accessed 17th of March, 2013. Retrieved from https://wittycookie.wordpress.com/2012/06/04/what-are-the-major-differences-among-web-1-0-2-0-and-3-0/

Chen, N.-S., Ko, H.-C., Kinshuk, & Lin, T. (2005). A model for synchronous learning using the Internet. Innovations in Education and Teaching International, 42(2), 181-194.

Chang, B. M. (2018). The effects of cross-cultural distance learning model on the linguistic and affective domain of EFL learners in Korea. International Journal of Mobile and Blended Learning (IJMBL), 10(3), 76-89.

Demartini, C., & Benussi, L. (2017). Do Web 4.0 imply Education X.? IT Professional, 19(3), 4-7.

Edwards, B. (2016). The lost civilization of dial-up bulletin board systems. The Atlantic. Accessed 7th of November 2016. *Retrieved from*

https://www.theatlantic.com/technology/archive/2016/11/the-lost-civilization-of-dial-up-bulletin-board-systems/506465/

Feryok, A. (2013). Teaching for learner autonomy: The teacher's role and sociocultural theory. Innovation in Language Learning and Teaching, 7(3), 213-225.

Feridun, M., & Karagiannis, S. (2009). Growth effects of Information and Communication Technologies: Empirical evidence from the enlarged EU. Transformations in Business and Economics. 8(2), 86-99.

Flowerdew, L. (2018). Needs analysis for the second language writing classroom. The TESOL Encyclopedia of English Language Teaching, 11(4), 1-6.

Fitzpatrick, A. (2004). Information and Communication Technologies in the Teaching and Learning of Foreign Languages: State-of-the-Art, Needs and Perspectives. Analytical Survey. Moscow: UNESCO Institute for Information Technologies in Education. Accessed 5th of December. 2017. Retrieved from
http://iite.unesco. org/pics/publications/en/fi les/3214627.pdf

Hylén, J. (2015). Mobile learning and social media in adult learning. European Commission: Vocational Training and Adult Education. Accessed 6th of August, 2015. Retrieved from http://www.janhylen.se/wp-content/uploads/2015/04/Mobile-Learning-and-Social-Media-in-Adult-Learning.pdf

Hu, P. & Hui, W. (2012). Examining the roles of learning engagement in technology-mediated learning and its effects on learning effectiveness and satisfaction. Decision Support Systems, 53(4), 782-792.

Halili, S. H. (2018). Emerging trends of Web 2.0 tools in adult education. The Online Journal of Distance Education and e-Learning, 6(2), 55-66.

Hockly, N. (2010). Teachers & Web 1.0: A beginner's guide to Webs 1,2,3. Online blog eModeration Station. Accessed 24th of December, 2017. Retrieved from http://www.emoderationskills.com/teachers-web-1-0-a-beginner%C2%B4s-guide-to-webs-123-x/

Kale, V. (2016). Agile Network Business: Collaboration, Coordination, and Competitive Advantage. New York: Auerbach Publications.

Kahney, L.(2004). Social nets not making friends. Wired News. Accessed April, 2017. Retrieved from http://www.wired.com/news/culture/0,1284,62070,00.html

Kiehne, T. P. (2004). Social Networking Systems: History, Critique, and Knowledge Management Potentials (Masters dissertation). Austin: University of Texas. Accessed 4th of January, 2015. Retrieved from https://www.ischool.utexas.edu/~i385q/spring2005/archive/kiehne_t/kiehne(2004)-sns.pdf

Luo, T. (2013). Web 2.0 for language learning: Benefits and challenges for educators. International Journal of Computer-Assisted Language Learning and Teaching, 3(3), 1-17.

Liu, B. (2017). Multimedia classroom and innovation of English teaching model based on Web-Based learning platform. Revista de la Facultad de Ingeniería, 32(12), 32-44.

Liu, C. C., Wang, P. C., & Tai, S. J. D. (2016). An analysis of student engagement patterns in language learning facilitated by Web 2.0 technologies. ReCALL, 28(2), 104-122.

Leu, D. J., Kinzer, C. K., Coiro, J. L., & Cammack, D. W. (2004). Toward a theory of new literacies emerging from the Internet and other Information and Communication Technologies. Theoretical Models and Processes of Reading, 5(1), 1570-1613.

Ma, Q. (2017). A multi-case study of university students' language-learning experience mediated by mobile technologies: A socio-cultural perspective. Computer-Assisted Language Learning, 30(4), 183-203.

Nedeva, V., & Dineva, S. (2012). New learning innovations with Web 4.0. The Proceedings of the 7th International Conference on Virtual Learning (pp. 316-321). Bucharest: Meri Pogonariu Publishers.

Okello-Obura, C., & Ssekitto, F. (2015). Web 2.0 technologies applications in teaching and learning by Makerere University academic staff. Library Philosophy and Practice, 12(5), 1248-1256.

Ovalina, S., & Adnan, A. (2018). Teaching listening to junior high school students by using Web based learning resources (WBLR). Journal of English Language Teaching, 7(1), 76-85.

Paran, A (2012) Language skills: Questions for teaching and learning. ELT Journal, 66(4), 450-458.

Penland, D. R. (2011). The Impact of Technology on the Development of Expertise and Teacher Beliefs (Doctoral dissertation). Minneapolis: Walden University. Accessed June, 2017. Retrieved from
http://search.proquest.com/docview/866108072?accountid=45375

Paechter, M., Maier, B., & Macher, D. (2010). Students' expectation of, and experiences in e-learning: Their relation to learning achievements and course satisfaction. Computers and Education, 54(1), 222-229.

Røkenes, F. M., & Krumsvik, R. J. (2016). Prepared to teach ESL with ICT? A study of digital competence in Norwegian teacher education. Computers & Education, 9(7), 1-20.

Reips, U. D., & Matzat, U. (2007). Web 2.0, Internet 2.1? International Journal of Internet Science, 2(1), 1-2.

Reich, S. M., Subrahmanyam, K. (2012). Friending, IMing, and hanging out face-to-face: Overlap in adolescents' online and offline social networks. Developmental Psychology, 48(2), 356-362.

Río, J. I. A., Brudermann, C., & Abendroth-Timmer, D. (2019). Resorting to e-tandem learning in academic language teacher training programmes: evidence from the literature and the field.

Serostanova, N. (2014). Integrating information and communication technologies in the process of foreign language teaching and learning. Journal of Education Culture and Society, 3(1), 12-22.

Sheeba, T., Begum, S. & Bernard, M. (2012). Semantic web to e-learning content. International Journal of Advanced Research in Computer Science and Software Engineering, 10(2), 58-66.

Stranger-Johannessen, E. and Norton, B., (2017). The African storybook and language teacher identity in digital times. The Modern Language Journal, 101(1), 45-60.

Sherratt, T. (2013). From portals to platforms: Building new frameworks for user engagement. *Presented at the LIANZA 2013 Conference, Hamilton, New Zealand. Accessed 4th of December, 2017. Retrieved from* https://www.nla.gov.au/our-publications/staff-papers/from-portal-to-platform

Sorapure, M. (2010). Information visualization, web 2.0, and the teaching of writing. Computers and Composition, 27(1), 59-70.

Seifert, S. (2020). Successfully Teaching English via Skype: 6 Tips to Attract Students, Craft Unique Lessons and More. Accessed on 1st of September, 2020. Retrieved from https://www.fluentu.com/blog/educator-english/teaching-english-via-skype/

Telles, J.A. (2014). Teletandem: Transculturality and identity in webcam interactions in foreign languages. In: Conference Proceedings, International Conference ICT for Language Learning 5th Edition, October, 20-21, 2012, Firenze: Libreria Universitaria. ISBN: 978-88-6292-309-5. Available at: http://conference.pixel-online.net/ICT4LL2012/common/download/Paper_pdf/321-IBT62-FP-Telles-ICT2012.pdf . Retrieved February 18, 2014.

Tang, Y., & Hew, K. F. (2017). Is mobile instant messaging (MIM) useful in education? Examining its technological, pedagogical, and social affordances. Educational Research Review, 21(2), 85-104.

Tandem (2015). How to Correct Mistakes. Accessed on 01/09/2020. Retrieved from https://www.tandem.net/how-to-correct-mistakes-en.

Tian, J., & Wang, Y. (2010). Taking language learning outside the classroom: Learners' perspectives of eTandem learning via Skype. Innovation in Language Learning and Teaching, 4(3), 181-197.

Ushioda, E., (2000). Tandem language learning via e-mail: From motivation to autonomy. ReCALL, 12(2), pp.121-128.

Vinagre, M., & Esteban, A. C. (2019). An Analysis of Evaluative Language in eTandem Exchanges. Redefining Tandem Language and Culture Learning in Higher Education.

Valencia, J. A. Á. (2017). Examining language-learning websites: Discourses about language, learning, and learners. Revista Folios, 5(4), 127-143.

Walton, A. (2018). Advantages and disadvantages of Information and Communication Technology. Chron online blog. Accessed 11th of August, 2018. Retrieved from https://smallbusiness.chron.com/advantages-disadvantages-information-communication-technology-66948.html

Woodin, J. (2018). Interculturality, interaction and language learning: Insights from tandem partnerships. Routledge.

Woodin, J. (2018). Interculturality, interaction and language learning: Insights from tandem partnerships. Routledge.

Xu, Q., & Peng, H. (2017). Investigating mobile-assisted oral feedback in teaching Chinese as a second language. Computer Assisted Language Learning, 30(4), 173-182.

Zittrain, J. (2012). Don't let software patents stop us standing on the shoulders of giants. The Guardian. Accessed 23rd of July, 2016. Retrieved from http://www.guardian.co.uk/commentisfree/2012/apr/18/software-patents-shoulders-of-giants