Towards a New Paradigm for Language Teaching and Learning: Perspectives on Video Conferencing

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Abstract

A fairly large corpus of literature exists on the effectiveness of technology in language teaching and learning but research is sparse on how video-conferencing can be deployed for classroom pedagogy on language. This paper examines the merits and limitations of videoconferencing as a teaching/learning tool in order to determine whether it has a positive outcome to learning. The theoretical framework derives from the Behaviourist model of language acquisition through the process of imitation and practice. Ten scholarly articles which conflate the experiences of researchers on this instructional delivery method were used for this study. It highlights the various video conferencing platforms and discusses inherent challenges such as the necessity for developing new methodologies and pedagogies. The study reveals that video-conferencing is an effective instructional tool for language learning because it allows learners to interact with native speakers of the target language. The paper concludes that video conferencing should be integrated into the classroom because it allows teachers/learners to interact with communities well beyond their environments and this promotes cross-cultural communication. This study extends the perspective on the video conferencing experience of language teachers and broadens our understanding of interactive and collaborative method of online language teaching/learning.

Keywords: new paradigm, technology, language teaching/learning, video-conferencing, behaviourism, pedagogy

1.0 Introduction

Video conferencing is a technological innovation that allows a group of students in one location to communicate with another group at a distant location thereby allowing direct and instant interaction between teachers and students across the world. Krutka and Carano (2016), described video conference technology as a communication medium that allows connected users to share visual and audio facilities in real time. It also allows registered users to transmit files, slides, static images, and text through the platform being used. Video conferencing has been available since the 1950s (Baker, 2002) but until recently its role in public education has been marginal and its traditional home has been in corporate training. As an instructional delivery method, it connects individuals or students through audio/visual communication and enables distant

teaching and learning. Web-based video conferencing systems are becoming a realistic means for delivering online courses (Dudding, 2004). The availability of programmes with high speed networks and inexpensive programmes that use voice and video over internet protocols are enabling a synchronous teaching and learning at a distance (Booth, 2006). This type of network-based communication is now used increasingly in second/foreign language learning environments. Many researchers regard it as a promising tool for language learning because it allows learners to interact with native speakers from the country where their target language is spoken.

Previous research suggests that it increases learners' opportunities to use the target language (Barson, Frommer and Schwartz, 1993); it induces a series of negotiations of meaning (Blake, 2000), and improves the quality of written and spoken language (Sotillo, 2000). (Fiege, 2005) noted that this technological tool is used by teachers and administrators in education for meetings; (Bore, 2005) claimed it is often used for professional development and training. (Mitchell, 2005 and Booth, 2006) observed that the most common and traditional use of video conferencing in education is for full length courses. In addition, some creative uses of videoconferencing include school-based tele-health care (Young & Ireson, 2003), and supervision of student's teaching (Dudding, 2004). Some studies in Nigeria have also confirmed the superiority of video-mediated instruction over conventional teaching method (Bose, 2007).

This paper examines the merits and limitations of video-conferencing as a teaching/learning tool and how it can be effectively deployed for classroom pedagogy on language. The Behaviourist model of language acquisition is the theoretical plank on which the study rests and ten scholarly articles which conflate the experiences of researchers on the subject were used for the research. Additionally, the study highlights the various video conferencing platforms and discusses inherent challenges, limitations and pedagogical merits of video conferencing as an instructional delivery method.

2.0   Video Conferencing Platforms

Web and video conferencing are ways to interact directly with people around the world and they keep us connected while we are apart. In the contemporary business environment, it is possible to work remotely from home without sacrificing teamwork or effective collaboration. According to (Smith College, 2015), web conferencing is used primarily by a small group conversing and working with another small group on the other side of a virtual connection, while video conferencing is often used for full class or large group interactions. Not only can you see and talk to one another but you can share documents, computer screens and video (Smith College, 2015). Interactive videoconferencing aims to bring students and multiple instructors together through a number of communication mediums, such as local area network (LAN) connections, private cabling, wireless and the internet, to provide continuous training and to create a synergy which enhances the quality of the learning (Jones, 2006).

The video conferencing platforms in use are numerous and have triggered a revolution in distance language teaching/ learning by providing interactive and

collaborative environments for online education. There are myriads of options open to educators such as; Zoom, Google Meet, Webex, Skype, Adobe Connect, Marratech and Elluminate. Some of these platforms allow recording so that educational instructions can be archived and viewed later when the teacher or learner deem it necessary. They all have specific advantages in terms of features, audio and video qualities and ease of use. Each system has its own benefits and limitations, so educators need to decide whichever to use based on their students' needs and learning objectives.

Zoom is an application that is used to assist the face-to-face learning process using video (Ganesha, Nandiyanto, & Razon, 2021).Through the use of Zoom, the teacher can communicate directly with the students via video which can also be recorded, downloaded, viewed, or played back. One of the advantages of Zoom application is that it can bridge space and time and is flexible in the learning process (Bawanti & Arifani, 2021).In addition, during a meeting, you can view diagnostic information to determine whether the problem is caused by audio, video, or the network (Sutterlin, 2018; Setiani, 2020). Another notable platform is Google Meet which is an interactive and alternative media for effective online learning. Google meet technology is a tool for information sharing and can be used as a learning resource (Eduwem J.D. et al., 2023).It allows video conferencing to be scheduled using Google Calendar and other Google Workspace services. In order to enable it, a Google account is required and the teacher/ student can join with a link.

Agung Setyawan et al. (2020) observed that the method of lectures assisted by Google Meet media has a significant influence on building knowledge and student learning outcomes. Skype is an internet protocol (IP) telephony service provider that offers free calling between subscribers and low-cost calling to people who don't use the service. In addition to standard telephone calls, Skype enables file transfers, texting, video chat and videoconferencing (Blake, 2000, p.14). The service is available for desktop computers, notebook, tablet computers and other mobile devices, including mobile phones. Skype's benefits include easy set-up and good audio quality which enhances seamless communication. Adobe Connect is another platform which is a highly flexible, comprehensive video conferencing system which works with nearly any electronic device. It is based on the widely available Adobe Flash technology. Adobe Connect software has a new simplified interface featuring better organized controls, accessibility functions and one-click sharing (Jones, 2006). Educational instructions can be recorded, reused and distributed with Adobe Connect. Nearly any type of file can be stored and used for presentations such as; documents, audio, video, animation, presentation software and others (Sotillo, 2000, p.34).

Most presentations are given using slides prepared in PowerPoint, Keynote, Adobe PDF or another application or file format. In addition, a presentation file can be uploaded into the Adobe Connect room (Mitchell, 2005). The slides are incorporated into the meeting room interface making it easy to present and see the chat window at the same time and to see if there are questions (Barson, 1993). Elluminate is a virtual classroom or web conferencing application developed by Elluminate Incorporation. It

presents an interface where learners can view screens, share presentations and communicate through audio and text chat. It is primarily designed for educational purposes and can also be used by training organisations. Several schools and businesses use Elluminate as part of their curriculum and meetings (Blake, 2000, p.56). Elluminate is designed to be used on all computers that have Java application (Bore, 2005). The video conferencing facility of Elluminate provides a variety of online e-learning opportunities to students. This can be linked to educational events or to different teachers in another school and to offer tuition to students outside mainstream school setting (Sotillo, 2000).

Marratech is a propriety system for online audio and video synchronous interaction. The Marratech prototype saw the light of day in 1995 as part of a European Union (EU) project called Multimedia Assisted Tele-engineering (MATES) project (Jones, 2006). With Marratech, a user can conduct a person-to-person and multi-person video conference and also share Powerpoint, Word document, image and text. The Marratech multimodal video conferencing platform features streaming video, voice and text chat as well as collaborative word processing and white board imaging capabilities (Jones, 2006). There are other video conferencing platforms in use but in this study our focus is on the ones that are popularly used. The table below shows the learning opportunities and challenges of the three different forms of video conferencing systems: desktop video conferencing (DVC), interactive video conferencing (IVC), and Web video conferencing (WVC).

LEARNING OPPORTUNITIES			CHALLENGES		
DVC	IVC	WVC	DVC	IVC	WVC
i] Promotes cultural competency. ii] Generates a wider range of student voices iii] Stimulates professional activities and applies theory to practice iv] Provides multiple modalities and pedagogical support. v] Provides socio-cognitive support and structured interfaces.	i] Allows close-up viewing.	i] Provides reliable means to assess individual's role in the discussion. ii]Promotes dynamic collaborative efforts. iii]Allows students to engage in live interaction with the tutor	i] Availability of the system, ease of use, room location and layout, training issues, cost, and compatibility ii] The stability of the Internet connection iii] Requires pre-knowledge to foster collaborative knowledge construction. iv]Learners may face difficulties to transfer support strategies of the learning unit.	i]Creates uncertainty and fear as it lacks regularly scheduled recitation-type sessions. ii] Requires trained instructors and constant modification of teaching techniques	i] Individual may experience technical hitches and machine incompatibility ii] Students may often unintentionally interrupt each other

Source: Hosam Al-Samarraie (2019) *International Review of Research in Open and Distributed Learning* Vol. 20(3)

3.0 Extant Studies

Video conferencing is a technological innovation that has a positive outcome to learning; scholars have therefore conducted their researches on it from various

perspectives. Fetterman, (1998) and Wang (2004) studied videoconferencing as a beneficial tool for learning and they observed that this is particularly true in distance education where students and teachers lack a certain sense of social connection that co-presence provides. Learners have access to vocal and facial cues which are lacking in most text-based distance education environments. Moreover, the ability to see and hear the person one is communicating with increases the sense of social presence that learners feel (Wang, 2004). The use of videoconferencing, therefore, not only enables users to process non-verbal cues but it also engenders a more immediate connection with the person one is communicating with. Coventry (1995) demonstrated how videoconferencing can be put into a learning framework by taking a learner-centered rather than technology-centered approach, while also highlighting that institutions must have a clear understanding of video conferencing capabilities before committing to the use of videoconferencing technology.

Hosam Al-Samarraie (2019) offered a broader consideration of relevant challenges that emerge when using certain video conferencing systems in both learning and teaching situations. A classification of the video conferencing paradigms from the constructivism and cognitivism perspectives was provided. The summary of the results for these videoconferencing systems revealed specific learning opportunities, outcomes and challenges for both learners and instructors. It concluded that current policy and teaching strategies are not ready to provide an accessible and comprehensive learning experience in DVC and IVC. Mark Warschauer (2002) studied a developmental approach to integrating technology in language education, based on consideration of both product and process. It illustrated these concepts through analysis of a large, U.S.-funded English language developmental program in Egypt. Two projects were examined: a teacher education programme on computers in English language teaching and a basic English methodology course taught via video conferencing. The analysis indicated that a developmental approach is critical to successful integration and use of technology in language education programmes.

There has been great concern from some scholars that video conferencing may be inappropriate and ineffective as a tool for classroom pedagogy, particularly because of the distance factor. Knipe and Lee (2002) remarked: "it is naive to assume that merely linking distant groups or individuals at different locations creates an effective learning environment." They are concerned that quality of teaching and learning is not always being considered when video conferencing is introduced to an educational institution. However, some other studies (Baker, 2002; Becta, 2003) found that video conferencing does not compromise the quality of teaching or learning. It does not lead to a significant distraction from effective classroom practices and therefore using video conferencing as a mode for delivery of school courses is appropriate and deserves serious consideration by curriculum planning personnel. Another study, (Carville and Mitchell, 2001) found that video conferencing is an effective way to provide educational access to students in remote and rural locations. Some researchers further investigated the various uses of video conferencing and found it effective for classroom

pedagogy especially for language courses where the accent of the native speaker enhances comprehension (Fetterman, 1998; Wang, 2004; Hosam Al-Samarraie, 2019).

Bose (2007) studied the teacher, school and professional development factors affecting the utilization of video conferencing and found that professional development factors were important to predicting the use of video conferencing. The study concluded by emphasizing its importance and effectiveness as a classroom tool. Another study by Wang (2004) examined the utilisation of video conferencing for professional development for teachers. The study examined school characteristics, professional development characteristics, and teacher characteristics and found that the teacher characteristics were crucial in getting maximum benefit from the use of video conferencing. Saw (2008) studied video conferencing classes by examining the interactions that occur. The focus was on teacher initiated interaction to whole class, teacher initiated interaction to a specific student, student initiated interaction to the teacher, and student initiated interaction to other students all via videoconferencing. The literature on video conferencing is rich and there is a near consensus by researchers on why educators should embrace this technological innovation particularly for language teaching and learning.

4.0   Theoretical Issues

The theoretical concept for this study is behaviourism which is a major tradition in second language acquisition and it emphasizes a mechanical process of habit formation and proceeds by means of the frequent reinforcement of the stimuls-response sequence'(Hutchinson and Waters: 1987:40). The major proponent of the behavioural theory was Burrhus Frederick Skinner (1904-1990) an American psychologist and behaviourist who claimed that language learning occurs in a stimulus-response-reinforcement pattern. Learners of a particular language are exposed to a stimulus and they will in turn produce a response which is then reinforced or corrected by the educator. Through reinforcement, the good responses become habits and the bad ones are discarded. Language is viewed as a set of learned behaviors that are acquired through interactions with one's surroundings. Proponents of this theory claim that the prime focus in learning is change of behaviour through habit formation and the existence of stimuli and response. Behaviorists are opposed to the view that language develops due to innate cognitive or mental mechanisms. They contend that meaning, concepts and grammar emerge by gradual metamorphosis when the learner's linguistic habits become more complex and systematic. According to Reutzel and Cooter, (2004), learners achieve a measure of proficiency in oral language from other human role models through a process involving imitation, rewards, and practice. Crucial to the behaviorist approach is the fact that a learner needs to imitate and practice; avoid 'bad habits' and cultivate 'good habits' in order to achieve proficiency. Imitation and practice are key concepts in behaviourist approach.

However, there are some criticisms of the behaviourist theory and notable is Crystal (1997:236) who reviewed the different theories of language acquisition and

remarked:' Language acquisition has long been thought as a process of imitation and reinforcement.. ..In recent years, it has become clear that this principle will not explain all the facts of language development.' Apparently, behaviorism has its shortcomings, but it cannot be denied that it has some merits especially when we consider the fact that learning process is for the most part a behavioristic process.

5.0   Pedagogical Benefits and Limitations

Many institutions are using video conferencing as a method of extending their classrooms to students at different locations and of all the distance learning technologies; video conferencing is the most similar to classroom instruction (Jones, 2006). According to Campbell (2006), interaction between students-to-students and students-to-instructors in videoconferencing environments have opened new opportunities for advancing the delivery of traditional pedagogies. The delivery mechanisms can broadly be classified into synchronous and asynchronous. Synchronous delivery mechanism involves real-time interaction between participants which requires students and instructors to be online simultaneously. Lectures and presentations occur at a designated time and all students must be online at that specific hour in order to participate. The major advantage of synchronous learning is that students who participate are able to interact with other students and their teachers during the lesson. This enables students to avoid feeling of isolation since they are in communication with their colleagues during the learning process (Blake, 2000). Asynchronous mode of education is the opposite. It can be carried out when the student or teacher is offline. It is possible for a learner to log on to an e- learning environment at any time and download documents or send messages to teachers and peers.   Like all technologies, video conferencing has its share of benefits and limitations. A notable merit is that video conferencing can be conducted at any time of the day. Time differences between countries do not matter when educators use this instructional delivery method and learners do not need to travel to attend lectures.

It also saves time and money since students can access the lectures online and also have interactive session with the instructor and other colleagues. It is very flexible and allows the student a modicum of freedom because tuitions are taken at his own schedule. Educational institutions that offer distant learning programmes will find video conferencing invaluable. Another advantage of video conferencing is permanence which allows the students to listen to the lecture repeatedly by playing it back (Grimshaw, 1982). With each repeated viewing, a student can learn new things he had not seen at the time of previous viewings (Erickson, 1992; Fetterman, 1998). Anything captured on tape can be replayed repeatedly for a thorough analysis so that it can still be studied intensively. Conventional teaching/learning method does not have this advantage (Erickson, 1992). Video conferencing also creates new opportunities for teachers to interact personally, socially and professionally with other fellow teachers with whom they would otherwise not have contact in their working environments. This type of horizontal, peer-to-peer relationship engenders a positive outcome to learning

(Fetterman, 1998). Since video conferencing is a new trend in intercultural communication and language teaching, its implementation and evaluation is still under development.

However, the major limitation of video conferencing is technical problem associated with smooth transmissions that could result from software, hardware or network failure. Remote connections are sometimes known to be hampered by environmental changes. In some instances, the absence of technical support personnel creates difficulty for participants who may be unfamiliar with video conferencing technological concepts (Grimshaw, 1982). Another challenge is the necessity of developing new teaching methodologies, pedagogies and modified syllabi in order to make effective utilization of this novel instructional delivery method.

6.0 Video Conferencing and Language Learning

Technology has a significant impact on education and the teaching-learning process has become more robust under the surge of modernization and technological advancement. Second and foreign language researchers and educators have long recognized the potential of technology to enhance effective teaching and learning of English language. In higher education, videoconferencing, whether it is accessed via the Web or desktop, is considered one of the most commonly used tools for facilitating learners' self-directed use of technology in a synchronous mode (Fischer, Collier-Meek, Bloomfield, Erchul, & Gresham, 2017) The use of video conferencing in education has been embraced in many developed countries of the world and it has a positive implication for language teaching and learning. When students are given the opportunity to communicate with distant native speakers, it will encourage them to improve their oral and socio-cultural skills. Lee (2002) observed: "through videoconferencing interaction, L2 learners can become more confident, motivated in speaking their target language, and interested in the learning content ". When young learners have direct visual interaction with native speakers, they learn faster than they would in a conventional classroom. The visual information in video conferencing also provides education about posture, gesture, clothing and proxemics. All these nonverbal cues are very important features of native speaker norms and the learners are expected to conform to them. This in turn will enhance a quick socialization into the target language community by the learners (Gass and Houck, 1999). Generally, paralinguistic cues such as head nods and facial expressions reduce ambiguity in speech and improve understanding (Bruce, 1996). Sproull and Kiesler (1986) also argued that lack of non-verbal information reduces social cues and impairs interaction. With video conferencing, ambiguity is removed and the participants communicate their thoughts in the clearest possible way.

Video conferencing also compensates for a teacher's lack of experience or deficiency in oral presentation skill. When an instructor teaches English Language with a localized accent, his students will imitate him and possibly make more abysmal errors because he is their model. One possible solution is to bring English speakers into the classroom via videoconferencing and an interaction with actual native speakers by the

students will be a compensation for the teacher's deficiency. They will learn faster through peer-to-peer interaction in the online community and this interaction serves as a motivator for students to engage in active English discussion. Video conferencing does not only enable active learning but also facilitates peer learning and develops the language skills of both the students and teachers.

7.0   Conclusion

One of the challenges learners of English as a second or foreign language face is the lack of face-to-face interaction with native speakers of English. Many of these learners rarely have an opportunity to converse with English speakers in educational and social settings; consequently, they treat English as an academic subject that should be memorized and regurgitated when it is necessary rather than as a tool of daily communication. However, with the use of video conferencing this problem is mitigated when learners have direct visual interaction with native speakers. Additionally, since the World Wide Web has become an important medium of information dissemination in socio-economic and academic affairs, it should also be extended to classroom pedagogy and must become part of English language teaching curricula. It is also important to state that instructors should be competent and update their knowledge in information and communication technology (ICT) and how to make productive use of it. Beyond a basic user competency, the Nigerian society also needs more knowledgeable and capable technical people to deploy, manage and maintain ICT equipment so that they can work well for users. Distance education can be promoted through video conferencing and this will free up students from the constraints of time and place to allow them to have easier access to education no matter where they live. If teachers are to equip students with the skills to be independent and effective learners of language, using technology to enhance this process is a crucial starting point.

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