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KNOWLEDGE MANAGEMENT APPLIED TO LEARNING ENGLISH AS A SECOND LANGUAGE THROUGH ASYNCHRONOUS ONLINE INSTRUCTIONAL VIDEOS

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ABSTRACT

Aim/Purpose	The purpose of this research is to determine whether ESL teaching videos as a form of asynchronous online knowledge sharing can act as an aid to ESL learners internalizing knowledge in language acquisition. In this context, internalizing knowledge carries the meaning of being able to remember language, and purposefully and accurately use it context, including appropriacy of language, and aspects of correct pronunciation, intonation, stress patterns and connected speech, these being the elements of teaching and practice that are very often lacking in asynchronous, online, instructional video.
Background	Knowledge Management is the field of study, and the practice, of discovering, capturing, sharing, and applying knowledge, typically with a view to translating individuals' knowledge into organizational knowledge. In the field of education, it is the sharing of instructors' knowledge for students to be able to learn and usefully apply that knowledge. In recent pandemic times, however, the mode of instruction has, of necessity, transitioned from face-to-face learning to an online environment, transforming the face of education as we know it. While this mode of instruction and knowledge sharing has many advantages for the online learner, in both synchronous and asynchronous learning environments, it presents certain challenges for language learners due to the absence of interaction and corrective feedback that needs to take place for learners of English as a Second Language (ESL) to master language acquisition. Unlike other subjects where the learner has recourse to online resources to reinforce learning through

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	referencing external information, such as facts, figures, or theories, to be successful in learning a second language, the ESL learner needs to be able to learn to process thought and speech in that language; essentially, they need to learn to think in another language, which takes time and practice.
Methodology	The research employs a systematic literature review (SLR) to determine the scope and extent to which the subject is covered by existing research in this field, and the findings thereof.
Contribution	Whilst inconclusive in relation to internalizing language through online, asynchronous instructional video, through its exploratory nature, the research contributes towards the body of knowledge in online learning through the drawing together of various studies in the field of learning through asynchronous video through improving video and instructional quality.
Findings	The findings of the systematic literature review revealed that there is negligible research in this area, and while information exists on blended and flipped modes of online learning, and ways to improve the quality and delivery of instructional video generally, no prior research on the exclusive use of asynchronous videos as an aid to internalizing English as a second language were found.
Recommendations for Practitioners	From this research, it is apparent that there is considerably more that practitioners can do to improve the quality of instructional videos that can help students engage with the learning, from which students stand a much better chance of internalizing the learning.
Recommendations for Researchers	For researchers, the absence of existing research is an exciting opportunity to further explore this field.
Impact on Society	Online learning is now globally endemic, but it poses specific challenges in the field of second language learning, so the development of instructional videos that can facilitate this represents a clear benefit to all ESL learners in society as a whole.
Future Research	Clearly the absence of existing research into whether online asynchronous instructional videos can act as an aid to internalizing the acquisition of English as a second language would indicate that this very specific field is one that merits future research. Indeed, it is one that the author intends to exploit through primary data collection from the production of a series of asynchronous, online, instructional videos.
Keywords	knowledge management, English as a second language, asynchronous online instructional videos, internalizing language

INTRODUCTION

"*Knowledge is an essential investment in your intellectual well-being; it provides you a deeper understanding of a subject.*" (Tiongson, 2020). There exist many types of knowledge, and different means by which that knowledge can be applied. Students often report that they learn fifty or a hundred words a day, but the reality is that they have merely read these words in a dictionary or textbook and looked up the definition, while the ability to recall and use these words at will and naturally in conversation is lacking. In language acquisition, it could be said that a word is not truly known until it can be recalled at will and used appropriately in context; learning words in isolation is not language acquisition, which is concerned with far more than a mere knowledge of words.

Knowledge management (KM) is the way in which we apply and share knowledge, with perhaps the most useful definition of KM for the purpose of this study being provided by Dei and van der Walt

(2020), in their research into the role of Communities of Practice (CoPs) within KM practices in universities:

> *"The management of processes that govern the collection, creation, storage, dissemination, and utilization of knowledge by merging the appropriate technologies, organizational structures and people to create the most effective and efficient learning, problem-solving, and decision-making in an organization". (Dei & van der Walt, 2020),*

KM is, therefore, effectively discovering, capturing, sharing, and applying knowledge which, in the context of this research, is through asynchronous instructional videos.

This study was conducted in the light of the trend towards asynchronous online learning, proliferating during the recent pandemic where institutions transitioned to open and distance learning and learning on demand through various online platforms. Once considered a choice, online learning became the only option for most, but this has a potentially detrimental effect on language learning, particularly for those learning English as a second language (ESL). With the gradual return to face-to-face (F2F) classrooms, many learners are still electing to study online through asynchronous learning on demand, and institutes of higher learning (IHL) are keen to promote this trend as it is efficient and cost-saving. However, when it comes to learning ESL, it may not be effective as a means of learners internalizing the language due to the lack of human interaction and all the benefits that result therefrom. This study is important, therefore, as it focuses on the ability of ESL learners to internalize language through asynchronous online instructional videos, and to determine the effectiveness of such teaching videos as a tool for non-native speakers learning how to think and speak more naturally and instinctively in English.

The main problem with asynchronous online ESL learning is that it lacks the dynamics of interaction associated with successful language acquisition that are present in the F2F classroom environment. Specifically, therefore, the research problem to be addressed is thus: Can ESL learners effectively learn English as a second language to the extent of internalizing the language using asynchronous, online instructional videos alone?

To answer the research problem, this research employs a systematic literature review to probe the existing body of knowledge to determine how other research addresses the issues of teaching language through asynchronous video learning, how effective it is to learn through asynchronous video and how teaching and learning through such videos can be made more effective. This information can be of significant benefit to both academia and industry as the insights provided can enable IHLs and businesses alike to adopt improved practices when training through asynchronous video, and not just in teaching ESL but in other subjects and training areas where asynchronous videos are employed, leading to more engaged learners, reduced scrap learning and better learning outcomes. To guide the reader through the research, following the Introduction is the Literature Review, which explores KM in the context of ESL and learning through asynchronous online instructional video. Thereafter follows the Research Methodology, which outlines the process of the research. The Result briefly summarizes the findings, while the Discussion reviews the findings of the systematic literature review in greater depth. Finally, the Conclusion draws together the respective threads of the systematic literature review and highlights potential areas for future research.

Research Objective

This research seeks to determine whether colloquial and informal patterns of speech, affective intonation, collocations, connected speech and stress patterns can be effectively communicated using asynchronous online instructional video as a medium of teaching in learning ESL, and whether doing so helps learners better internalize the language. The research objective, therefore, is:

RO: To determine through a systematic literature review (SLR) whether ESL teaching videos as an exclusive form of asynchronous online knowledge sharing can lead to ESL learners internalizing knowledge in language acquisition.

The pre-recorded videos are a form of knowledge capture in which the instructor attempts to capture in recorded format, not only the explicit teachings of the written language, but the tacit knowledge that comes from years of experience of using the language in context as a native speaker. In order to help learners successfully internalize knowledge relating to the use of language, it is helpful to tell stories about our own experiences of the point we are trying to teach (Kelly et al., 2002; Khaleel, 2017; Salli-Çopur, 2008). So, for example, if we want learners to discuss a topic using a particular target language (grammar or vocabulary), we can share our own story about that topic, this knowledge capture being a form of externalization, taking our own tacit knowledge and externalizing it for the benefit of the learners. The videos, as the mechanism for capturing that knowledge in the form of our anecdotal stories, also make the learning more memorable as learners can perhaps relate to them or can recall them when trying to relate those experiences to language use.

LITERATURE REVIEW

KNOWLEDGE MANAGEMENT SOLUTIONS

KM solutions relates to the practical application of knowledge and is divided into 'processes' and 'systems', with processes being the way in which we achieve KM and being further divided into seven sub-processes, and systems which support the respective processes. The processes are supported by a theoretical framework, principally based on the models provided by Nonaka and Takeuchi (1996), Grant (1996), and Nahapiet and Ghoshal (1998), which were developed in the mid to late 1990s, corresponding to the era of the increasing popularity of the personal computer (PC) and availability of the Internet. What has become known as The Nonaka SECI model (Figure 1), provides the basis for the sub-processes of socialization, externalization, combination, and internalization (Faith & Seeam, 2018), the remaining three processes of exchange, direction and routines principally finding their origin in Grant (1996), and Nahapiet and Ghoshal (1998).

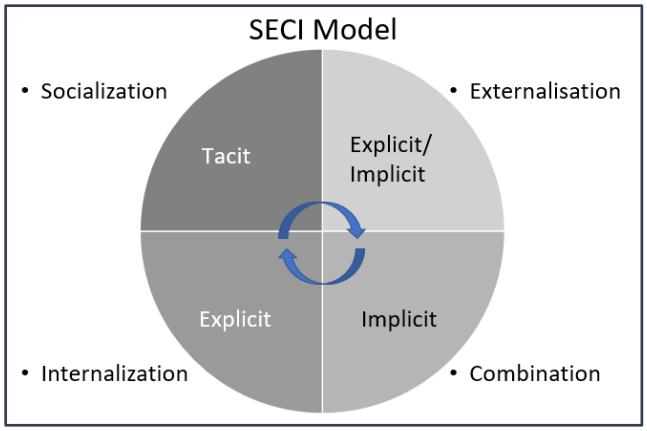

Figure 1: The SECI Model
(Adapted from Nonaka and Takeuchi, 1996, as cited in Faith & Seeam, 2018)

SECI is an acronym for Socialization, Externalization, Combination, and Internalization, which refer to different means of sharing, imparting, absorbing, and retaining knowledge. Socialization is the knowledge exchange or transfer that takes place through physical or F2F interaction, externalization occurs when we transfer tacit knowledge, that which we implicitly or experientially know, and share with others through formal means, such as transcribing or writing books, documents, manuals or online. Exchange by combination is external knowledge transferred externally by taking existing knowledge, combining and re-compiling it to present it as different knowledge in the desired format.

Finally, internalization is the process by which external knowledge becomes tacit knowledge through learning, absorbing, and applying what is learned and internalizing it, thus becoming a part of our own knowledge and experience. It is principally the elements of internalization and socialization that contribute in any significant capacity in influencing tacit KM in organizational performance (Muthuveloo et al., 2017; Torabi & El-Den, 2017), and also the principle means of learners internalizing language during the process of language acquisition, and it is this aspect of KM with which this study is principally concerned.

Knowledge Management in Higher Education

Knowledge sharing is innate in academic institutions where knowledge is a primary asset, universities being in the business of creating, capturing, applying and disseminating knowledge (Dei & van der Walt, 2020; Faith & Seeam, 2018; Ismail, 2017; Jemal & Zewdie, 2021). That said, there are fewer contributions towards KM from the higher education sector than from other commercial sectors (Jemal & Zewdie, 2021). However, KM is equally applicable in IHLs as it is in business, and particularly so among private universities, where competition between universities is forcing many IHLs to adopt more commercial practices (Dei & van der Walt, 2020). A fundamental issue with IHLs and universities in particular is that the culture of knowledge sharing is lacking due to academicians' inherent unwillingness to share (Jemal & Zewdie, 2021), a view supported by Faith & Seeam (2018) who claim that, in academic institutions, there exists a high degree of knowledge 'hoarding' among academics who are reluctant to share their knowledge among each other, something that is essential for curriculum reform.

Where universities do excel in sharing knowledge, however, is through publication of research (Jemal & Zewdie, 2021) and through CoPs, which perform a vital function in the sharing and exchange of both tacit and explicit knowledge (Dei & van der Walt, 2020) and where the learning environment is highly conducive, with collaboration and dialogue through teaching, lectures, research, training and course planning (Jemal & Zewdie, 2021). According to Masa'deh et al. (2019), the multitudinous and oppressive responsibilities within universities are giving rise to among the highest reported levels of job dissatisfaction among academics in university, and where teaching staff are dissatisfied, they will become less invested in the culture of knowledge sharing and management. Instructional information on knowledge management and knowledge sharing is even more scarce when it comes to teaching English online due to a lack of scientific understanding concerning teachers' professional knowledge for teaching ESL (Ismail, 2017).

English Language Learning

In the context of KM, learning a language involves the transmission of knowledge through the process of sharing and exchange, and this can take many forms. Teachers introduce language concepts, vocabulary, and rules such that the learner gains sufficient theoretical knowledge, which is then traditionally put into practice through conversation in a F2F environment (Bailey & Hammett, 2021). An additional factor to consider in the F2F classroom is the group dynamics and the opportunities that exist as participation and collaboration take place among the students who can practice conversation together, those interactions enabling knowledge sharing through socialization (Faith & Seeam, 2018).

Teaching language is a complex process because the knowledge the teacher has is a combination of both explicit, involving language rules and principles and theories of how to teach, and tacit, gained through a lifetime of instinctively using the language and all that this entails. This includes the use of colloquialism and idiomatic speech, dialect, stress patterns, intimation, and nuance, which are more readily communicated F2F through speech, tone of voice, facial expression, and body language (Paranduk & Karisi, 2020). The processes taking place here involve both capture and sharing; the teacher is attempting to impart both their tacit knowledge to the student through socialization and their explicit knowledge through exchange, while the student is trying to receive and interpret the knowledge that is being transmitted as external knowledge and internalize it to eventually become

tacit knowledge. Internalization is an essential component in language acquisition in a way that is different to other subjects. As an example, we can potentially learn algebra or history by learning formulae and dates, and some information we can look up as required if we cannot recall it when needed. In contrast, we must aim to imbibe language for it to become tacit knowledge, a part of how we process and verbalize thought, so it is an immersive process and this is hard to achieve through learning videos alone without that essential element of spontaneous human interaction.

English Language Learning Through Asynchronous Online Instructional Video

Despite the challenges presented by teaching language through video, many IHLs have resorted to this means of delivering education as one of the ways to combat falling numbers among international university students in Malaysia resulting from COVID-19, and the consequential loss of revenue. Various mechanisms were established and implemented as alternative means for enabling students to continue learning without necessitating international or cross-border travel, among which are the 'micro-credential certification' (MCC) and massive open online courses (MOOC), which facilitate large scale online course enrolment. The delivery of many of these courses is through asynchronous teaching videos that students watch as an alternative to or substitute for attending a synchronous class, either F2F or online via video conferencing. The original aim of the IHL to which the researcher is attached and the inspiration for this study was to set up an online course for English language acquisition in which students learn through asynchronous online instructional videos, the objective being to offer a convenient mode of online learning to a wider audience with more international appeal. In the proposed program, students self-enroll and study remotely and entirely independently of instructor input through self-directed learning (SDL) by accessing pre-recorded videos and other uploaded materials, for which a degree of motivation and engagement must exist as students take full responsibility for their own learning (Ismail, 2017; Rashid & Asghar, 2016). According to Faith & Seeam (2018), institutions can count on learners' willingness to embrace the knowledge that is being shared, but eagerness to learn does not necessarily equate to successful learning.

However, while watching videos may be appropriate or even beneficial for certain subjects, learning through video may present problems for language learners as it is potentially a more passive form of learning through which language learners fail to interact experientially, in consequence of which, they fail to learn to use the language appropriately. Thus, passive, asynchronous online language learning can be problematic. Language acquisition is a two-way interaction and communication exchange, in which the instructor shares tacit and explicit knowledge, the learner responds, and in practicing communication, the instructor provides essential feedback. Recognizing students' efforts through feedback promotes trust, motivates students towards greater participation, and is in itself a form of knowledge sharing (Faith & Seeam, 2018). After all, one can know a word, but that does not mean that one inherently knows how to use that word appropriately in context, which is achieved through that two-way interaction; the learner uses the language, makes a mistake, and is corrected. Self-directed, online learning through video, however, which is essentially passive or one-way learning, is marked by the absence of the instantaneous, transactional feedback that ordinarily would take place, and which facilitates language acquisition (Caruso et al., 2019; Papi et al., 2019).

Thus, one of the key issues facing online learning through watching videos is the absence of feedback. In this one-way learning process, the learner is left to make assumptions about how to use language based on what he understands from the teaching videos, but it is easy to make mistakes that go uncorrected. Thus, the learner believes they are learning accurately and internalizing language, but when they practice speaking in the real world, they lack confidence and make mistakes that, in a traditional F2F environment, would otherwise have been corrected. When one learns a language through conversation and practice, one learns colloquial and informal patterns of speech, affective intonation, collocations, connected speech and stress patterns. Without the feedback that comes from this interaction, when the learning is essentially theoretical, many of these natural skills that we take for

granted as native speakers are lacking; the learning remains essentially explicit knowledge, but is never really internalized, and herein lies the problem. There exists a gap in the current literature, which does not satisfactorily answer the question of whether ESL teaching videos alone as a form of asynchronous online knowledge sharing can effectively lead to ESL learners internalizing knowledge in second language acquisition, the answer to which may be key to the success of any asynchronous language course.

RESEARCH METHODOLOGY

Traditional literature reviews aim to compile research from existing literature on a topic of specific relevance to the research, often by way of an introduction to the study. In contrast, an SLR is a structured review, which typically forms the basis of the research itself through following a prescribed methodology, and is defined by Kraus et al. (2020) as "*a review of an existing body of literature that follows a transparent and reproducible methodology in searching, assessing its quality and synthesizing it, with a high level of objectivity.*" The objective of an SLR is to consolidate existing literature to provide more definitive insight on a subject, providing sufficient literature exists so to do, or where a topic is new, to methodically analyze what literature is available to provide greater insight or theory. The reason the SLR was chosen as a methodology was to use very selective criteria for the review to find only articles directly relevant to the research objective of understanding whether ESL teaching videos alone as a form of asynchronous online knowledge sharing can lead to ESL learners internalizing knowledge in language acquisition. Without the adoption of strict criteria, it is easy to be distracted from the main objective or to succumb to the temptation to search for literature to support or justify beliefs held.

The process for conducting an SLR follows four steps of planning the review, identifying and evaluating studies, extracting and synthesizing data, and disseminating the review findings (Tranfield et al., 2003, 2004, as cited in Kraus et al., 2020). Applying the above guided the methodology throughout this research, resulting in the following processes being adopted (Table 1).

Table 1: Process for SLR applied
(adapted from Tranfield et al., 2003, 2004, as cited in Kraus et al., 2020)

STAGE	MAIN PROCESS	SUB-PROCESSES
Stage 1	Planning the review	- ***Identify the need***: What literature already exists; what can be learned from it; is it sufficient; does it answer the research question; can any theory be identified, or insight gained in relation to the current research?
		- ***Develop protocol***: Determine search criteria, such as titles and search strings (to ensure replicability so someone else searching using the same criteria will find the same publications).
Stage 2	Identifying and evaluating studies	Search for research papers using specified criteria; draw up guidelines/criteria for evaluating content; map in Excel.
Stage 3	Extracting and synthesizing data	- ***Conducting data extraction***: Record research objectives, methodologies and findings.
		- ***Conducting data synthesis***: Review and compare findings to identify themes relevant to current research.
Stage 4	Disseminate the review findings	What conclusions can be drawn from the data? How do these conclusions support or refute the current research objective?

The first stage of planning the SLR in this research was to establish the need for further research into the current field of study to determine whether any theory or insights could be gained from existing publications, or if they could offer any insight into the current study. This was done by carrying out an initial search for relevant literature, which revealed a marked absence of published information on the topic of learning ESL through online asynchronous video alone, most literature found

relating to learning language through blended or flipped learning. Blended learning is the technique of combining classroom learning with online learning activities that the student undertakes independently, and flipped learning, or the flipped classroom, is an extension of blended learning whereby learners undertake specific learning tasks in readiness for classroom learning (Capone et al., 2017). Thus, the need for further research on this subject became apparent and was justified. This stage continued by developing the protocol and defining the search criteria, which included the full title of this paper, plus various search strings which included references to ESL, asynchronous learning, teaching through video, and teaching ESL online through asynchronous video. It was necessary to be quite strict in applying the search criteria to avoid a potentially overwhelming number of articles that might otherwise be found were a search to be carried out using individual keywords only (Tian et al., 2018).

The second stage of identifying and evaluating studies consisted of searching for journal papers using the defined protocol, and categorizing the articles returned within a spreadsheet according to their relevance and the search criteria used to source them. Of the 140 results initially returned, there were 27 duplicates, which were removed, leaving 113 articles, the abstracts of which were carefully reviewed to determine relevance. This resulted in the exclusion of a further 79 articles unrelated to the current research, resulting in a total of 34 articles for detailed review (Table 2). The systematic process of elimination followed was as per the guided instruction of Tian et al. (2018). Additionally, all potentially unreliable research papers, such as students' theses and dissertations, and conference proceedings that may not have been subject to rigorous review were excluded (Kraus et al, 2020). The search string resulting in the highest number of related publications was the title of the current research. However, the majority of articles returned related to other forms of online learning, such as the use of learning management systems (LMS), blended learning, which employs a mix of synchronous and asynchronous teaching combining both directed and self-directed learning, and flipped learning, in which students are asked to do some preparatory learning before class, such as watch online videos, for further discussion in class.

Table 2: Process of journal selection and elimination

SEARCH PROTOCOL	ARTICLES	
	REMOVED	REMAINING
Original search	NA	140
Remove duplicates found using different search criteria	27	113
Found to be unrelated to current research	79	34

After filtering publications, the third stage of extracting and synthesizing data continued with the resulting articles being carefully reviewed to identify topics or themes to determine the degree of synergy with the current research. This was important to ascertain to what degree the findings answered the research question of what an SLR reveals about the effectiveness of ESL teaching videos as a form of asynchronous online knowledge sharing leading to ESL learners internalizing knowledge in language acquisition. Subsequent to this detailed review, a further nine articles provided no insight into the current research and were excluded.

RESULT

Dissemination of the review findings through the Result and Discussion forms the fourth and final stage of the systematic review process. As previously referred, none of the articles identified and reviewed involved research into the study of knowledge sharing by internalizing ESL exclusively through instructional videos in a purely asynchronous online environment. Considering the recent increase in online learning due to COVID-19, and the surge of research articles relating to online

learning during the pandemic, this was indeed surprising. Instead, many of the articles within the systematic literature review focused on the merits of a blended learning approach, or on the advantages of a mix of asynchronous and synchronous delivery due to the interactive nature of language learning. From the apparent lack of relevant literature, it might potentially be inferred that asynchronous online instructional video alone is inadequate to lead to the effective internalization of language, but it could also indicate that there simply has been insufficient research conducted into this area to determine a satisfactory method of using asynchronous video to achieve this.

Despite the lack of directly related literature, the systematic review did reveal several factors that can act as either a general aid or a deterrent to student engagement and to students learning from instructional videos. While these are not in the context of knowledge management, knowledge sharing or internalizing language, they are nonetheless useful in guiding instructors who are considering creating asynchronous videos for online instruction. As such, even if this or future research determines that internalization of language from asynchronous online instructional videos alone is unlikely, there are still ways and means of improving the chances of students engaging and learning from videos if they are correctly and purposefully produced with the right platform and audience in mind. The Discussion section outlines the detailed findings from the systematic literature review, but a summary of the main literature, that which was found to be most informative in the context of this research, is summarized in Table 3.

Table 3: Summary of Authors and Articles

Focus	Summary of Research	Author
Online Instructional Video	Passive video watching results in students disengaging, but effectiveness is increased through incorporating interactive elements.	Geri et al. (2017)
	Engagement dependent on teacher quality and the sense of 'social partnership' learners have with the instructor, with a less formal style increasing engagement.	Harrison (2020)
	Focuses on using YouTube for learning Arabic through online video with learners reporting marked improvement, particularly in their listening skills.	Mearaj et al. (2021)
Video Production and Instructional Quality	The research looks at 5 problem areas of media delivery: pace, intelligibility, quality, media diversity, and congruence.	Lange and Costley (2020)
	Four ways to create interactive course videos: instant feedback, quiz and repeat; change the instructor's angle and vary activities frequently.	Negrea (2017)
	Strategies for improving the delivery of videos in online, asynchronous courses, such as humor, talking about oneself, showing emotion and informality.	West et al. (2017)
	A comparative study of students' perceptions of synchronous and F2F blended learning approaches, students finding F2F classes more motivational.	Wright (2017)
Interaction And Feedback	The delay in providing appropriate feedback in asynchronous learning is problematic and the longer that delay, the less effective that feedback becomes.	Canals et al. (2020)
	Two groups, one blended learning (BL) and one asynchronous. In BL learners could improve pronunciation through interaction and feedback.	Gunes (2019)

	To improve engagement, activities should encourage self-assessment, self-reflection, problem solving activities and social interaction.	Lin et al. (2019)
	Stresses the importance of interaction in learning language. The exchange that takes place doesn't just involve language but intercultural awareness.	Marull and Kumar (2020)
	Compares the effects on pronunciation of F2F and asynchronous teaching with F2F interaction allowing for the monitoring of students' use of language.	Nejad et al. (2021)
Synchronous and Asynchronous Learning	Video-synchronous learning (video-conferencing) and students' motivation for and satisfaction in learning in an online/blended learning environment.	Bailey et al. (2021)
	Focuses on the right mix of synchronous and asynchronous learning in blended learning.	Barnhardt et al. (2021)
	ESL through asynchronous videos cannot provide effective interaction, so a multiple-approach of synchronous and asynchronous should be adopted.	Dziubata (2020)
	This research supports the findings that a combination of synchronous and asynchronous (blended) learning is the optimum online instructional approach.	Moorhouse and Wong (2022)
	Compares asynchronous and synchronous learning with learners preferring synchronous as it promotes the development of fluency and pronunciation.	Özdal et al. (2021)
	Virtual synchronous lessons cause anxiety and fear of making mistakes; typically, the time available for speaking practice is insufficient so learners remain passive.	Ying et al. (2021)
	Students choose courses with asynchronous video instruction for convenience and prefer passive learning as are often anxious about class interactions.	Yung (2022)

DISCUSSION

ONLINE INSTRUCTIONAL VIDEOS

There have been many drivers to use instructional videos in IHLs, such as improved LMS, reduced costs, heightened student expectations and the advantages of mobility, flexibility and adaptability in learning, but these factors should not be accepted blindly (Harrison, 2020). One of the concerns with video is that it may not develop the learner's metacognitive ability because, as a more passive form of learning it fails to stimulate critical thinking skills; all too often, instructors merely record PowerPoint presentations in the same way that they might present a F2F lecture, but creating and delivering effective instructional videos requires a different skill set from that required in a physical classroom, and may require a different pedagogical approach, and even teachers with different qualifications or experience (Harrison, 2020).

Despite this, video remains a great instructional medium as it incorporates multiple content types that appeal to our different senses and fits well with the use of technology now prevalent in online learning (Mearaj et al., 2021). In online learning, video is a core component that stimulates auditory

and visual senses for the learner, and processing information through our senses facilitates the transfer of knowledge from working to long-term memory, thereby internalizing it and giving the learner a clearer understanding of the material (Lange & Costley, 2020). However, learning by passively watching videos, particularly long videos, is challenging as short attention spans result in students disengaging, but attention spans can be extended by the inclusion of interactive elements, which increase the effectiveness of video lectures, interactivity having long been shown to be important in learning (Geri et al., 2017). Research shows that it is often the features embedded within those videos rather than the videos themselves that act as an aid to students' learning, such as a visible instructor or voice-over when presenting slides (Harrison, 2020), thereby rendering the video less passive. The addition of interactive elements, such as MCQs or quizzes in the video significantly increase viewing time and the number of participants who might complete the videos, even when the videos are longer (Geri et al., 2017). This is reinforced by Negrea (2017) who states that creating videos with interactive content, such as polls, quizzes, and questions, reinforces the process of learning through media.

Other factors to consider are the language level of the learners, how much scaffolding may be required for students to perform tasks at each level (Barnhardt et al., 2021) and the alignment of material, assessment, and activities to provide a combination of learning activities and interactions which engage learners (Marull & Kumar, 2020), scaffolding being the instructional support and modelling that learners need to become independent in a task (Doo et al., 2020). Research has shown that learners who use video improve their speaking skills more than students who do not, because the element of technology increases student engagement, YouTube in particular being seen as relevant, accessible and interesting with learners reporting marked improvement, particularly in their listening skills (Mearaj et al., 2021). Additionally, teaching videos which evoke a positive emotional response within learners have an influence on cognitive mechanisms that enhance learning (Harrison, 2020). Further research carried out by West et al. (2017) showed that instructional videos are more engaging when the instructor's personality is evident through the use of such features as humor, talking about oneself, showing emotion and occasional use of informal language. The 'personalization effect' means that learners establish a sense of 'social partnership' with the instructor if the presentation is in a less formal style, thereby leading to increased engagement (Harrison, 2020).

Video Production and Instructional Quality

Teaching videos take all formats, but in the drive to use teaching videos more and more in teaching and learning, insufficient attention is given to the perceptions of the students who watch them, or the teachers who make them (Harrison, 2020). To create good asynchronous instructional videos requires a skill set that many instructors simply do not possess, which can have a direct and detrimental impact on students' perceptions of asynchronous instructional video learning (West et al., 2017). How teachers teach is as important as what they teach (Wright, 2017). Attrition rates are high and student interest in online learning is waning, primarily due to the way teachers teach online, which leads to a disconnect between teachers, students and learning objectives, but good quality instructional video can improve our virtual interaction with students (West et al., 2017). Satisfaction is related to overall quality of course production and perceived teaching effectiveness, and where video quality is poor, the teaching is perceived as less credible and, therefore, its effectiveness is impaired (Bailey et al., 2021). This is echoed by Harrison (2020) who found that video quality was linked to the credibility of the content by many students, poor video quality often resulting in students disengaging or not watching to the end, but even more important than video quality was the quality of the teacher. According to Lange and Costley (2020), video quality has the greatest impact on the learner as if sound, image or overall production quality are poor, it affects the entire duration of the video creating an often-intolerable distraction for the learner who may have to repeat viewing sections of the lesson.

Engaging learners is a vital element in online learning and instructor presence and both video and instructional quality are the two key elements in engaging learners through asynchronous instructional online video (West et al., 2017). Lin et al. (2019) also found that student engagement was an important factor in a cyber-flipped class and that to improve engagement, videos must be designed in such a way as to encourage self-assessment, self-reflection and problem-solving activities. Instructional technology should be used creatively to plan and implement engaging and productive activities that are fun for learners and instructors alike (Bailey et al., 2021).

Video length is another factor with different students stating preferences for different lengths with no overall consensus, but in general, shorter videos are best, although overall, the length of the video is still perceived as less important than the quality of the teacher (Harrison, 2020). Periods of video longer than 10 minutes cause students' attention to wander, so there should be some form of interactive feature at least every 10 minutes (Negrea, 2017). Lange and Costley (2020) agree, proposing segmentation where videos are divided into segments utilizing natural breaks where the learner can pause the video to assimilate the knowledge before moving on.

Further factors to consider in relation to video production include pace, with speaking or knowledge sharing that is either too fast or too slow causing learners to disengage, although ideal pace can be different for different learners; but while judging the correct pace is not easy, learners can increase or decrease the playback speed (Lange & Costley, 2020).

Some suggestions for improving the production, instructional and interactive quality of videos include: Offer quizzes throughout the video, or certainly at the end to give students a chance to respond to their learning; vary the style of video, recording or instructor angle to provide variety, and being visibly present so that learners can see and get to know their instructor, matching voice to body language or facial expression as this builds rapport; change activities frequently to break up longer videos to keep students engaged, heighten anticipation and reduce the element of predictability (Negrea, 2017).

Intelligibility, understandability, clear voice, appropriate recording volume, readable font size on slides and lack of diversity of video style and content are all additional production quality issues that can lead to a reduced learning experience and student disengagement (Lange and Costley, 2020).

Interaction and Feedback

Without doubt, F2F interaction allows for the monitoring of students' use of language (Nejad et al., 2021), with learner-to-learner interaction being one of the most significant factors in developing learners' speaking skills, and one of the factors most likely to increase students' satisfaction with a course (Bailey, et al., 2021). In a study by Gunes (2019), the main advantage of the blended learning mode was that learners could improve their pronunciation through interaction and immediate feedback. Marull and Kumar (2020) support this, commenting on the importance of engaging with authentic experiences, participating in reflective activities, and receiving quality feedback, further adding that the interactive exchange that takes place in class involves not only language but intercultural awareness and experiential learning. Learning a language is so much more than just mastering vocabulary or grammar rules, and too little consideration is given to pronunciation these days, but it can have a detrimental effect on others' understanding of a learner's speech, even when the learner uses good grammar and vocabulary (Nejad et al., 2021). Synchronous language learning promotes better language learning and encourages the development of fluency and pronunciation, even in an online class, where interactivity can be achieved using chat, webcams, voice and microphone to replicate as far as is possible a F2F environment (Özdal et al., 2021).

In a study by Bailey et al. (2021), computer-mediated communication aided learning through video, but the results were demonstrably better when using synchronous videoconferencing through which students could model language and pronunciation and receive instantaneous feedback.

Where students learn asynchronously, however, the delay in providing appropriate feedback is problematic and the longer the delay in providing feedback, the less effective that feedback becomes (Canals et al., 2020). Additionally, less able or motivated learners may not receive the guidance or instructor input they need to remain engaged, and asynchronous learning may lead to a sense of isolation (Dziubata, 2020). In one study, in weeks five and eight when students were required to upload self-reflection reports, the number of those who watched the videos increased, indicating that students responded to lecturers' prompting and that there was still a heavy reliance upon lecturers' input rather than being self-motivated (Lin et al., 2019). Despite students appreciating the flexibility of asynchronous distance learning enabling students to learn anywhere with few limitations, the majority are not in favor of learning with zero F2F input, primarily due to the inability to ask questions to clarify understanding or to easily contact an instructor, the consequence of which was to reduce their motivation to learn (Gunes, 2019).

Synchronous and Asynchronous Learning

Despite the many perceived benefits of synchronous learning, asynchronous video lessons are a popular choice among many schools because they are cost effective, and they are a popular choice among students because of flexibility (Yung, 2022). In fact, asynchronous communication is the most prominent form of computer-mediated instruction (Nejad et al., 2021). Asynchronous learning has some specific advantages, such as the ability for learners to learn in their own time and at their own pace in an environment where students may perceive less pressure because there is no requirement to provide immediate response in class with the accompanying fear of being judged by peers; learners have more time to formulate their ideas and assimilate learning into their experience (Dziubata, 2020). This is confirmed by Bailey et al. (2021) who found that synchronous videoconferencing may place undue pressures on language students who may be unable to understand the target language and respond in real-time. Learners effectively have more time to understand, review content and assimilate the learning, thereby developing their critical thinking and autonomous learning skills, without the need for formulating instant responses, which can cause anxiety among students and potentially expose them to shame when their answers are incorrect (Özdal et al., 2021). Virtual synchronous lessons give rise to anxiety and fear of being judged for making mistakes by peers, so learners often do not respond in class, the time available for speaking practice typically being insufficient, so learners remain passive in class (Ying et al., 2021). As such, it could even be said that asynchronous learning is more student-centered with learners developing at their own pace, the increased input required from students increasing their intrinsic motivation to study (Özdal et al., 2021). Therefore, asynchronous learning is eminently suited to highly motivated learners (Dziubata, 2020). However, in the language learning context, asynchronous learning tends to increase learners' reading and writing skills more than speaking skills as assignments are typically in written form, often requiring considerable reading (Özdal et al., 2021).

The Right Balance

A blend of synchronous and asynchronous learning bears resemblance to the classwork and homework system that has worked well for generations, but which is now mostly taking place all online through blended or flipped learning (Barnhardt et al., 2021). Blended learning continues to work well, and a comparative study between blended learning and asynchronous only, student satisfaction was higher in the blended learning environment where there was a mix of synchronous and asynchronous learning with videoconferencing via Zoom enabling the class interaction, but during asynchronous learning only, satisfaction levels fell (Bailey et al., 2021).

There would appear to be considerable merit to both synchronous and asynchronous teaching and learning, but all too often, blended learning is thought of as a mode of course delivery, instead of which, it should be regarded as a mode of course design (Barnhardt et al., 2021). Moorhouse and

Wong (2022) propose a new model of online learning called the 'Blended Online Instructional Sequence", integrating both synchronous and asynchronous learning, asserting that neither synchronous nor asynchronous alone is sufficient nowadays to meet the needs of a comprehensive online learning program, a theory very much supported by Dziubata (2020), who claims that asynchronous learning must complement synchronous learning and cannot be used alone to teach ESL.

CONCLUSION

This research outlined the meaning of knowledge and the various components of KM within knowledge solutions, focusing on the KM processes of capture and sharing, and the KM systems that support those processes. The study looked at how instructors capture and share language knowledge through video and examined how feasible it is for learners to internalize this knowledge in the form of tacit language acquisition through asynchronous online instructional videos. The problem of learning language in this way is that language is traditionally learned interactively, rendering it more problematic to teach exclusively through video, leading to the research objective of determining through a SLR whether ESL teaching videos as a form of asynchronous online knowledge sharing can lead to ESL learners internalizing knowledge in language acquisition.

The literature review revealed little in relation to students being able to internalize language acquisition exclusively through asynchronous online instructional video, which would indicate that this is a field that has been little researched, or possibly that internalizing language acquisition through this form of knowledge transfer and exchange is something that language learners are potentially unable to do. However, while it could be inferred that the apparent absence of such research, or potentially the researcher's inability to find it, makes internalizing English as a second language exclusively through online instructional videos less likely, it does not of necessity disprove that such language internalization can take place. All the literature reviewed supports the principle that interaction is imperative to learning English as a second language, be it between instructor-learner or learner-learner. This being the case, it would support a style of teaching video that includes frequent opportunities for learners to pause the video to carry out interactive tasks, for which learners should be encouraged to partner with a "study-buddy', friend or family member, with whom to do exercises and practice their speaking. In this way, although the videos remain as a form of asynchronous learning, learners are still able to interactively practice speaking, albeit in a different setting and not within a synchronous classroom environment. This is all well and good for those who are able to find a suitable study partner, but a possible suggestion for those unable to do so is to provide a forum for contact information exchange within the course program for students to find speaking partners from among others taking the same course.

CONTRIBUTION OF THE STUDY

In a world where more and more, learners are taking it upon themselves to find their own ways and means of learning, through learning on demand, video content, YouTube, asynchronous videos and the like, it is becoming easier for learners to source and access relevant, quality materials from which to learn. At the same time, with the increasing number of sources of good learning material, it is becoming increasingly competitive for those seeking to produce materials, and being more aware of what they want, learners are less willing to accept the mediocre. The Discussion section within this study draws together threads from the various, relevant literature, into a cohesive guide for those seeking to embark on creating a video learning course and offers strategies and practical solutions for so doing. Instructors should aim to be more involved, participative, engaging, personable and physically present in their videos, employing humor, informal language and showing their human side without fear of imperfections, particularly important when teaching ESL, which is more than the sum total of lexis and grammar but a form of communication. Teaching quality, consistency while maintaining variety, and video production quality are all of paramount importance, and can be a sig-

nificant aid to student engagement or learning if done right. Equally, if any of these are poorly executed, they can become a barrier to learning. This is of significance to academia, wherein many institutions are adapting to the online environment, which shows no signs of abating, despite the return to relative normality post-COVID-19. The study may also contribute to training providers in the corporate world where online training videos are prevalent as a means of delivering training on a cost-effective and on-going basis.

Practical Implications from the Study

So where does this leave courses offering ESL exclusively through asynchronous online instructional video? There is still hope, as seen by the insights and recommendations in the Discussion, recommendations, which include: investing more time producing quality videos, using different scenes and camera angles, showing the instructor on camera throughout the video, gauging the appropriate speed of instruction and content, pauses, and interactive tasks, all of which can increase student engagement. Most importantly, however, is the quality of teaching and personality of the instructor, which must be evident in the media to portray a sense of the teacher's personality. From all this, it can be seen that video production is not for the faint-hearted or untrained, and if any specific recommendation were to result from this research, it would be that teachers need training in the art of producing quality, instructional videos; just because a lecturer understands their own subject, it does not necessarily qualify them to produce interesting and stimulating videos of sufficiently good quality to engage students. If instructors are trained and follow the strategies and guidelines resulting from the Findings, and as highlighted in the Discussion, then students stand a better chance of engaging with the learning and immersing themselves in the language, and this takes them one step closer to internalizing the language through video, even if it is subsequently found that asynchronous video *alone* is insufficient as a means for learners to internalize ESL.

In conclusion, where video learning is part of a wider, blended learning program, videos can potentially afford to be more passive, because there will be follow up in the synchronous class. However, where learning is exclusively through asynchronous online instructional video, it is important for the instructor to be seen, and to attempt to show their personality through both verbal and non-verbal communication as this is this would seem to provide the greatest chance of such videos leading to ESL learners internalizing knowledge in language acquisition.

Limitation of the Study and Future Research Direction

This study is a systematic literature review that found that research in the field of knowledge management applied to learning ESL and, in particular, internalization of language, through asynchronous online instructional video is noticeable by its absence. The dearth of related literature does not automatically mean that ESL cannot be internalized though asynchronous, instructional online video, but may indicate only that insufficient research has been conducted to understand how to achieve this. A limitation of this study is, therefore, that it is based on a review of the limited literature available, that limitation potentially being in part due to the intentionally narrow scope of the systematic literature review, as it sought to review literature in a very pre-defined field, which possibly does not yet exist.

"*Despite some recent interest in studying video strategies in online settings, the literature in this area is still sparse. In particular, we found that most of the research currently done relies on students' perceptions, and that more research is needed that looks at course and learning outcomes, as well as effects of video on various kinds of social, cognitive, and teacher presence in online courses*." West et al. (2017). Despite dating back to 2017, and despite the plethora of literature pertaining to online learning, the research into learning language through asynchronous video remains in its infancy. As such, this systematic literature review is merely a starting point, a stepping stone to future research which is recommended be undertaken into internalizing ESL through asynchronous instructional videos, building upon the foundation of this study. To this end, it is the current author's intention to further research this field by producing a series of asynchronous

online instructional videos in the development of a fully online ESL course, whilst simultaneously actioning the insights gained from the current study. Once the course is designed, developed and deployed live with enrolled students, primary data will be collected through feedback to determine students' perceptions of the experience, how immersive it was and the extent to which learners felt their language skills improved through the video teaching. Feedback sought will concentrate on such areas as pronunciation, intonation, stress patterns and other areas of connected speech, as well as the extent to which the learners felt that they could relate to the instructor.

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