

## Expanding English language teachers' knowledge repertoire

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*Technology will not replace teachers;  
teachers who use technology will replace those who do not.*

Fotos & Browne (2004)

### Introduction

This paper extends discussion of the constituents of teachers' knowledge in the 21<sup>st</sup> century classrooms. Drawing from a broad literature base, the paper argues that although a well-designed English language teacher education program is essential in positioning an English language teacher competently in the classroom, what constitutes teacher's knowledge now is much broader than what is conceived by earlier knowledge models. The paper suggests a model that emphasizes technology as a new knowledge type rather than looking at technology completely as a *tool* metaphor. Considering the possibility of myriad information accessible through the use of technology, the paper argues that empowering English language teachers with the knowledge of technology is more important than ever. Using narratives from the author's experience of teaching English using technology, the paper illustrates how technology could be used as a unit of presentational practice in supporting instruction, benefitting students' acquisition of both technology affordances and informational content.

Since the emergence of technology in classrooms, there has been skepticism about the role of technology versus that of a teacher. The use of computer-assisted language learning (CALL), mobile-assisted language learning (MALL), including other technology assistive learning programs, has changed the teaching and learning paradigms. Quite often, some teachers are engulfed by fear, uncertainty, and insecurity about their jobs because of the belief that technology has come to replace them. While it is true that a lot of teachers largely believe technology is replacing them in the classrooms; it is not. Little do we think that behind technology, is a real person – not a robot. Therefore, as observed by Fotos and Browne (2004), technology will not replace teachers; instead, teachers who use technology for instruction will stand the test of the changing times.

Due to the increase of English language speaking communities worldwide, technology has had a profound influence on the way English is taught. Technology has supported not only quick but also convenient access to myriad instructional materials that positively impact English language teaching and learning, allowing students to share information that could have been nearly impossible to share if there was no technology. Technology has also advanced the emergence of new literacies (Mallette & Mthethwa, 2012). When students read online materials, they interpret information and make sense from a variety of multimodal sources. From these various sources students

create new knowledge, which becomes a domain for the acquisition of other knowledge types.

An example of how students create knowledge using ICTs can be drawn from one of my experiences when I taught undergraduate classes at Southern Illinois University in the United States, where I taught C&I 112 courses. This was an English course taught to freshmen. The syllabus mainly consisted of the following topics: Literacy narratives, genres, advertising analysis, advertising techniques, evaluative texts, summarizing/analysis, synthesizing, reflections, and developing portfolios.

In this course, I had to teach about the topic of the *1995 Heat Wave in Chicago*.

Teaching this topic was a requirement for a whole semester project, conducted by one of the professors at the university. Overall, the class was composed of competent students, who were also quick learners. They didn't struggle with technology, and their computer laboratories were equipped with the latest Macintosh computers, with access to high speed internet. For this project, students had to log on to their computers, using their university identity (ID) numbers. Once they were logged in, they accessed a Blog with a drop-down menu, where they clicked to access different information such as;

- \* Chicago Heat Wave
- \* Weather Focus
- \* Photos
- \* Cartoons
- \* Newspapers

Each time students clicked on the menu, they accessed information grouped according to the web page specifications. For instance, there were tabs for pictures, cartoons, newspapers, and so on. Some cartoons were of politicians addressing multitudes of frustrated people in Chicago, after the outbreak of the *Chicago Heat Wave*. On another tab were old newspapers that talked about the coming of the heat wave, warning the people of Chicago long before it struck. On another tab were pictures that showed the people's desperation when the heat wave finally struck Chicago. All these materials were thoroughly created, arranged and put on the web for easier access. It is worth noting that the weather focus at that time warned the people of Chicago about the imminent heat wave, even though nothing was done to prepare for that looming disaster. Information on the blog did not blame anyone for the catastrophe. However, students in their final projects were required to identify who was to blame for this quagmire. Thus, students had to read and triangulate all the sources of information: words, pictures, newspapers, and cartoons and establish whether or not there was a human error in that scenario.



*Southern Illinois University, Carbondale, C&I 112 Students*

Using technology in this case provided a new genre for recycling and presenting old information in an interactive way, which no other mode of presentation could have done better. Even though some students asked why they were asked to do this project about an event that happened in 1995 (a long time ago), after engaging with the materials they understood how the *Chicago Heat Wave* shaped the present Chicago in terms of infrastructure. For instance, they understood that the improvement of the cooling system in the city was a result of the deadly heat. Therefore, students were able to understand Chicago's new identity, in relation to the heat wave. As an instructor, had I despised the use of technology in the English language classroom, probably someone else would have been tasked to take over the topic or even the entire course and show students how to navigate the web to access information.



The role of technology in teaching and learning is underscored by the vast knowledge capital that could be accessed easily. For instance, the Southern Illinois students (SIU) were able to complete a project, which was a requirement, using online materials. They didn't have to go out physically to collect data; all they had to do was to sift information that was already presented in multimodal format. And my role as an instructor was that of guiding them to sources of knowledge, and often times helping them with how to triangulate information to reach conclusive evidence about the *Chicago Heat Wave*. At the end of the semester students completed the project and confessed that even though at the beginning they did not know why they were doing something that happened such a long time ago and did not feel it is relevant to their time, still they enjoyed doing the project because most of the information was easy to access.

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Recently, in a B.Ed. English language class at the University of Swaziland, there was an urgent need to find the meaning of the word "self-contained". None of my students had a dictionary with them. I then suggested they use their cellphones to look for the meaning of the word. Within a short period of time, they found the meaning of the word, and quickly read its definition and collocation. I then asked them to relate their experiences of searching the meaning of the word using their cellphones. In a nutshell, they reported that it was an amazing experience. Finding the meaning of the word was easy and quick. Even though they had a couple of online dictionaries to choose from, the exercise of choosing the dictionary and looking for the meaning of the word didn't take much time. This, therefore, is an indication that sourcing information from websites is not only quick; it also saves time. Actually, the time used for getting hard

copy dictionaries, paging, and scanning meanings of words could be used for meaningful instruction when cellphones are used in class, especially in ESL contexts because cellphones are more available than other types of technology. The University of Swaziland (UNISWA) students also shared the same sentiments about the accessibility of information when using technology versus using the traditional way. Using technology in the English language classrooms not only expands teacher and students' knowledge but also necessitates a much broader understanding of knowledge constituents in the 21<sup>st</sup> English language classroom.

## Knowledge

The term "knowledge" is used to encompass "all that a person knows or believes to be true, whether or not it is verified as true in some sort of objective or external way" (Alexander, Schallert & Hare 1991: 317). Alexander et al.'s (1991) conceptualization of knowledge is characterized by intimately comprehending parts of something as interconnected and explicable by reference to the whole, assuming a status of being comprehensive. This type of definition of knowledge encases information supported by both truth values and non-truth values. For instance, an experience of something by a person is subjective; it can only be attested by the experiencer in the world he or she experienced it in. To a second person such experience could only exist as shared information, sometimes with questionable truth values. More specifically, the knowledge of an English language teacher who teaches challenged students, for instance, may differ from that of another English language teacher who teaches normal students because their cognition of knowledge is partly drawn from their experiences. And some of the knowledge accumulating from their experiences may not constitute a universal truth but a relative one, since we don't experience things the same way. The totality of the teacher's knowledge, partly drawn from his or her experience, largely underlies his or her actions in the classroom.

The question of how broad and inclusive the teacher's knowledge should be is determined by many factors including, but not limited to, his or her experiences and disposition. Some literature defines the tenets of knowledge in categories, such as "personal knowledge" (Conelly & Clandinin 1985; Elbaz 1991), "the wisdom of practice" (Schwab 1971), "professional craft knowledge" (Brown & McIntyre 1993; Shimahara 1998), or "action oriented knowledge", indicating that this knowledge is for immediate use in teaching practice (Carter 1990); "content and context related knowledge" (Cochran, DeRuiter & King 1993; Van Driel, Verloop & De Vos, 1998); knowledge that is to a great extent "tacit" (Eraut 1994; Calderhead & Robson 1991); and knowledge based on experiences (Grimmett & MacKinnon 1992; Gunstone 1999). Perhaps, because of the integrative nature of these definitions, knowledge should be viewed holistically rather than each component in isolation.

However, that said, there is need for the expansion of the tenets of knowledge to include, among other things, teachers' knowledge of innovations. This type of knowledge is necessary in these changing times, marked by advancement of technology. The fundamental question is whether or not teachers recognize the need to

expand knowledge. If they recognize the need, the resultant behavior manifests in the classrooms; teachers use technology to augment their English language lessons. The knowledge of technology should overarch the teacher's inclusive concepts and actions. And this includes summarizing a large variety of cognitions from both conscious and well-balanced opinions to unconscious and unreflected intuitions. There seems no doubt that teacher's knowledge should be guided by research and innovation, if, at all, teachers wish to remain relevant to current times. Using constructivist theories, technology has undoubtedly become a hallmark for constructing knowledge.

### **Totality of knowledge**

The totality of the teacher's knowledge includes his or her beliefs; knowledge and beliefs are apparently inseparable (Pajares 1992), although beliefs are seen roughly as referring to personal values, attitudes, and ideologies, and knowledge as referring to the teacher's more factual propositions (Meijer, Verloop & Beijaard 2001). For instance, not long ago, the common language in technology circles was a desktop computer, then laptop, and now a tablet. A teacher whose beliefs are informed by negative cognition of these gadgets is unlikely to use them in an English language classroom (Mthethwa 2014). This teacher would look for alternative routes to explain or do activities, without using technology. Yet, the use of technology and access to internet information would strengthen his or her knowledge base because as we interrogate these gadgets for information in different meaningful ways, we garner experience of using them. Desktop computers, for instance, are predominantly not touch screens as opposed to tablets. And for this reason, tablets are more interactive. They also allow users to access information quickly and very efficiently as opposed to desktop computers. Therefore, the knowledge of these differences among the gadgets is crucial to form part of the overall cognition of the teacher's knowledge.

### **Teacher knowledge models**

Models outlining the totality of teacher's knowledge and development have been shared through research papers and other educational forums. The first teacher's knowledge model can be traced to the work of Fuller and Brown (1975). This model views teacher professional knowledge as constituting gradual changes in the teacher's concerns. Since the development of these models began, there have been numerous models impacting educational forums. For instance, Berliner (1994) elaborated another widely known model of teacher professional development that focused on changes in teacher's professional decision-making capabilities.

Berliner's (1994) model describes teacher professional development as a continuous movement through the stages of novice, beginning, competent, professional, and expert teacher. There are four stages in this model: (1) the way a teacher monitors classroom events, moving towards an unconscious recognition of common patterns; (2) the degree of conscious effort involved in classroom performance, moving towards fluid, flexible, automated routines; (3) the degree to which performance is guided by personal experience, and the degree to which the teacher can predict events accurately; and lastly, (4) the teacher's focus. Along with the initial models, Beijaard, Verloop, and

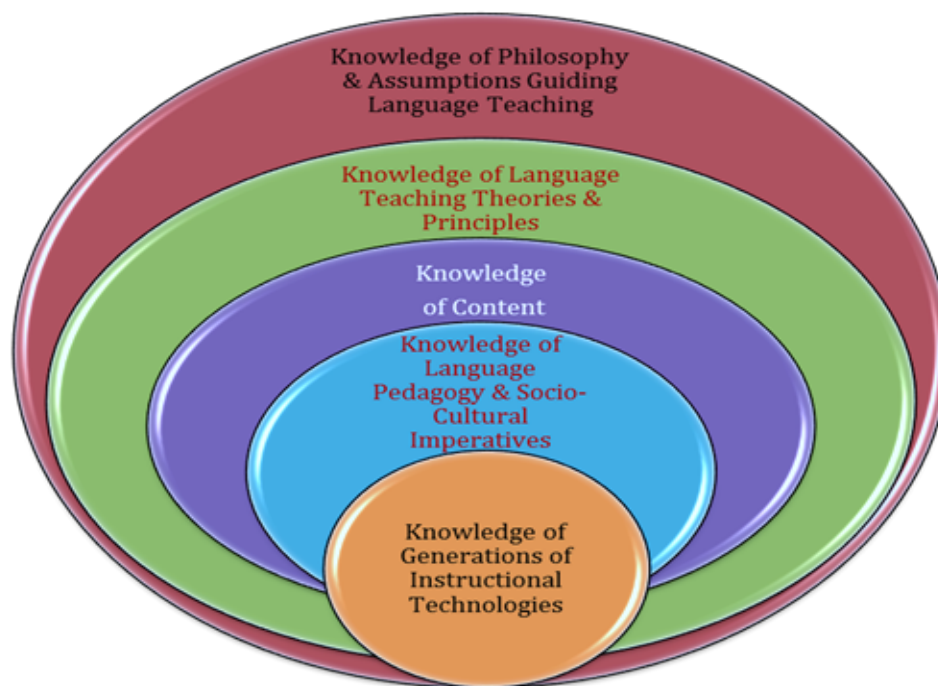
Vermunt (2000) add that teacher's cognition of knowledge and development also take place along with his or increasing school and classroom experience. Therefore, teacher's knowledge is not static but dynamic, and experience counts in the overall cognition.

### **Proposed English language teachers' model**

Even though there are a lot of models in education, some models tend to be generic; they represent knowledge across disciplines. These models are, by extension, presumed to also apply in English language – something relatively true. However, every discipline commands its own jargon and metaphors. Also, every discipline develops according to its own educational trend. For instance, teaching Science using technology is different from teaching English using the same. Well, some people may argue that technology is just a tool. In as much as this holds true, the tool needs to be conceived as part of the teacher's entire knowledge. That is, the tool should be understood together with the rest of the content information constituting knowledge. It should be embedded within the larger discourse. For instance, in English language there is computer assisted language learning (CALL), computer mediated instruction (CMI) and mobile assisted language learning (MALL), where teachers learn to embed technology with content knowledge.

English language teacher's knowledge of technology should by far surpass the restrictive definitions of knowledge by generic models, characterized by limitations on the use of technology in English language pedagogy. Discussion about the inclusion and success of technology in the English language classroom is largely supported by research. A majority of studies such as Armstrong and Yetter-Vassot (1994); Blake (2000); Brett (1997) and Pusack and Otto (1990); to mention but a few, support the inclusion of technology in English language instruction. Therefore, to suggest a model that captures current English language teaching practices means suggesting a model that puts technology as its center piece. This model should anchor teacher's knowledge around technology and emphasizes a relationship between philosophy, theories, content knowledge, and pedagogy.





### **Knowledge of the generations of technology**

At the center of this model is knowledge of instructional technology. There is no doubt that technology has reduced the world into a village; hence, the use of the term “global village,” denoting how technology has made the world look small. Justification for this claim can be seen in the number of people owning and using cellphones in the world. An estimated figure of 4.77 billion people is believed to be using cellphones. There is absolutely no doubt that technology has infiltrated our lives and impacted the way we communicate. People owning cellphones across the globe now communicate very easily. They communicate with friends and relatives in their own time and spaces. We are at an era where cellphones have also become compatible with banking facilities. People use this generation of technology to transfer and pay bills through the banks. Apart from mere communication and banking, accessing information has also become quicker through using technology, as seen from both SIU and UNISWA students. Imagine looking for a meaning of a word two decades ago; it would take one to get a dictionary and search for the word. Today by a click of a tab, students access meanings of words and their collocation, as seen in the introduction of this paper.

Therefore, teachers of English should not be complacent with the basic uses of technology; they should surpass the knowledge of manipulating keypads for texting, chatting with friends, banking or paying bills. This type of knowledge is only limited to the social functions of technology, with minimal impact on educational forums. At a much higher level, English language teachers should be able to transfer knowledge in the medium of technology. Their affordances in using technology such as computers, tablets, and smartphones should be desirable in the English language classrooms. In this proposed model, the overall totality of the English teacher’s cognition of knowledge is encased within technology. English language teaching programs such as computer-

assisted language learning (CALL), computer-mediated instruction (CI), mobile-assisted language learning (MALL), including other related programs are all examples of how technology should be tailored for a specific instructional purpose, assisting English language teachers to be functional in the classroom.

### **Knowledge of language pedagogy and socio-cultural imperatives**

The knowledge of language pedagogy is invaluable in teacher education and development. Teaching methods aid teachers by bringing to awareness their thought processes underlying their actions. As discussed earlier, actions are somehow linked to the teacher's understanding of the language teaching theories. Therefore, when teachers become conversant with teaching methods, they can choose to teach differently from how they were taught or how they have been teaching. Also, they would understand why they prefer certain methods against others and can easily switch between methods if, for instance, students are not benefitting from a pre-planned method.

In addition to knowledge of content, English language teachers need to understand the nature of their discourse communities because communities can potentially challenge the teacher's disposition. Therefore, teachers need to understand how people around them impact their understanding and perception of practice. Also, they need to understand the cultural imperatives dominating the cultural discourses and be able to navigate these imperatives appropriately. Some languages are not regarded with esteem due to their historical background. For instance, Afrikaans in South Africa is regarded as a language of oppression, while English is regarded as a language for liberation. Therefore, teachers need to understand how these languages imperatives fare in the communities.

### **Knowledge of content**

Knowledge of content in English language education cements the teacher's knowledge of the discipline. Basically, the general assumption is that an English language teacher is a specialist in his or her field. Furthermore, the expectation is that the teacher has either gone through thorough college training or university training in order to specialize in the discipline, and a reasonable expectation is that the teacher has, at least, studied grammar, stylistics, second language acquisition, discourse analysis or other related courses. However, at a more advanced level, the expectation is that he or she has studied phonetics, phonology, syntax, sociolinguistics, morphology, semantics or other related linguistic courses. Teachers of English at this level are expected to have studied courses dealing with the "scientific" study of language, where they discover the impressive body of subconscious knowledge that underlies language use. This underlying knowledge forms a substantive base for understanding students' linguistic behaviors. For instance, teachers who understand the linguistic typology of Japanese and English, such as the subject-object-verb (SOV) parameter in Japanese, and subject-verb-object (SVO) parameter in English, understand how to assist Japanese learners of English or vice versa. This type of content knowledge is pivotal for the effectiveness of the teacher in the language classroom



### **Knowledge of language teaching theories and principles**

Knowing how language teaching practices connect with major theories of learning is crucial for the English language teacher. The paradigm shift from behaviorism to constructivism or even to pragmatism is an integral part of understanding how knowledge is constructed. Therefore, knowing the distinction between these theories allows teachers to develop instructional objectives in line with any of them. For instance, teachers influenced by behaviorism emphasize behavioral objectives and activities; they view knowledge as a complete entity, ready for students' intellectual consumption. Therefore, a teacher understanding knowledge from this theoretical framework has limited or no appreciation of students' engagement with the environment, nor does he or she regard the context of learning as a variable in knowledge construction. On the other hand, an English language teacher whose foundational theory is constructivism understands that the context also serves as a fountain for knowledge retrieval. He or she understands that knowledge lives in the consciousness of the minds which inhabit the planet. So there is vast knowledge that can be constructed by learners if they interact with their context or environment.

### **Knowledge of philosophy**

On the outer layer of this model is knowledge of Philosophy. Philosophy serves as a stem through which the acquisition of knowledge is based. English language teachers' perception of knowledge is not arbitrary; it is buttressed to their ideological assumptions, experiences and set of values. For instance, absolutists view knowledge from the perspective of the "supremacy of the intellect over other human faculties" (Kelly 2009: 33). They stress that true knowledge is that which is achieved by the mind independently of the senses. To them, knowledge is "independent of ephemeral considerations; it is timeless, objective, and in some way not related to the particular circumstance of individual era, societies, and cultures" (p. 34). On the other hand, from the empiricist perspective, knowledge comes from senses; it is acquired through experience. This perspective views knowledge as evolving and can be framed within the ideals of human experience in society. As a result, in this view, knowledge is socially constructed and largely depends on "sociological contexts within which it is generated" (p. 39).

One fundamental question could be why English language teachers need to understand the philosophy buttressing their knowledge acquisition. Understanding the base from where their knowledge is constructed directly translates to what they believe is meaningful in their classroom practices. For instance, a teacher whose ideologies are strongly absolutist disregards the sociological contexts, student's senses, including their experiences, and only subscribes to their intellect. In this teacher's view, the human being does not matter, nor his sociocultural background; all that matters is his or her intellect. On the other hand, English language teachers whose cognition of knowledge is empiricist view knowledge holistically, as a product of the human intellect, society, and experience. The latter teacher uses a humanistic approach to language teaching and considers students' experience as the basis for his or her teaching endeavor.

## Conclusion

Moving forward in the direction of empowering teachers of English in using technology in the classroom resonates with the improvement of instruction. As argued in this paper, technology should be viewed beyond a tool metaphor and be recognized within the realm of knowledge types, which would require teachers of English to advance their career in growing this knowledge type. A teacher is an agent of change in the classroom; changes may be to the syllabus and/or method of teaching. Success in instruction is associated with the teacher's impact on the teaching/learning process, and teachers are expected to play a key role in balancing the knowledge of theories, methods, and content. However, within these constructs is the biggest of all expectations now – that of using technology as a unit of presentational practice. And, therefore, technology should be viewed as an additional type of mandatory knowledge for English language teacher education and development. The two narratives used at the beginning of this paper endorse an inevitable emergence of new pedagogies, where the use of technology brings new teaching/learning contexts, new literacies, new genres, new identities, and new language experiences to the whole body of knowledge.

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