

The Many Faces of TPACK/English Language Teacher Education

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TYPICAL EDUCATION OR TPACK'L EDUCATION IN ELT

by Sercan Çelik

Knowledge, Its Transformation and English as Lingua Franca

Knowledge has always been a loyal company to men throughout his long journey in this world. Aristotle was the very first name to attempt to define it in the realm of philosophy. For this purpose, he categorized knowledge into three: Episteme (scientific), Techne (Skill and crafts) and Phronesis (Wisdom). Yet, a lot of water has flowed beneath the bridge since then and this original definition of knowledge had to transform itself after it has gone beyond control of humankind with the introduction of 21st century technologies such as web 2.0 tools, mobile apps, tablet pcs or interactive white boards. Now that we have a different understanding of knowledge in today's world, current Lingua Franca, as Seidlhofer (2005) defines it being a way of referring to communication through a language between speakers with different first languages, English has a continuously increasing role in the fast-globalizing world. Power (2005) noted that about 3 billion of overall population of the world was expected to speak English with different purposes within the following decade.

Considering the magnitude of such a huge number of speakers and new advancements in technology starting especially at the turn of 21st century, it is unwise to deny possible outcomes of technology in English Language Teaching. As Keengwe and Kang (2012) asserted, using technology in EFL/ESL classrooms enhances students' language skills, motivation, participation and collaboration. Accordingly, Shyamlee and Phil (2012) listed

several advantages of technology focusing on language teaching: 1) Cultivating student interest in study thanks to powerful multimedia, 2) promoting communication capacity, 3) widening students' insights of the target culture, 4) teaching going beyond time and space, 5) creating collaborative atmosphere among students and lastly 6) easy communication between students and the teachers. Yet, on the teachers' side, fulfilling these goals using "cutting-edge" technology means far more than simply having knowledge on web tools. As it is pointed out in the literature so many times, Mims, Polly, Shepherd and Inan's (2006) study suggested teachers should have mastery of tools and necessary pedagogical awareness to be able to make teaching and learning effective and meaningful using technology. In their recent study Kurt, Mishra and Koçoğlu (2013) argued that adaptation of new technologies do not necessarily guarantee successful teaching and learning experiences.

PCK's Evolution into TPACK

Koehler and Mishra's (2005) innovative concept of TPACK seeks to answer all the related questions on this issue. In fact, TPACK's origin goes back to Shulman's (1987) PCK – Pedagogical Content Knowledge – which suggests in order for successful learning, teachers need to have mastery to combine their pedagogical knowledge with their content knowledge. However, what Punya and Mishra did was to elaborate this frame and add "T" component, which solely refers to technology, into this already existing concept. Mishra & Koehler (2006) asserted that in teacher education, the successful teacher is one who can draw from content, pedagogy and technology, forming a technological pedagogical content knowledge (TPACK) framework—and that it is this knowledge that is of most worth. In short what they did was to take Shulman's PCK one step further, but what it led academia was to see beyond that day and to envision future of the education.

TPACK in ELT

Albeit technology has always been an indispensable aspect of language teaching, until very recently, educators failed to see its effect in learning in spite of using it just for the sake of using it. Though TPACK researches have increased considerably in amount, they mostly focus on Math and Science education (Koçoğlu, 2009). In that sense, there is a lack of literature that provides insights on how TPACK of language teachers result in with respect to learning outcomes. By a detailed research on the literature, 11 articles, 2 proceedings and one master's thesis were located from online sources such as Ebscohost databases and also Google Scholar using key words "tpck, tpack, etpack and elt." All these articles were selected among those written within the last decade and more recent ones were preferred. As a result, more TPACK studies are needed in ELT, because teaching a language, a social and living phenomenon, cannot be limited to formulas, vocabulary lists, and dictionary definitions or behavioristic fill-in-the-blanks exercises that lead nowhere but to rote learning. In order to go beyond time and space,

especially to create collaboration and meaningful learning, high TPACK in ELT is needed much more than other fields.

Yet, this does not depict the overall picture. Scholars are putting too much effort to maximize benefits of technological tools that are becoming more and more integral parts of our daily lives day by day. However this creates the dilemma: while merging technology, pedagogy and content, do we need to be fair or do we need to prioritize any of them? Spires, Hervey and Watson (2013) conducted a study with 20 in-service language teachers and they sought an answer for if inquiry learning project assists TPACK development of language teachers. Their study found that teachers' belief in using computers with instructional purposes showed an increase. However, in their paper they expressed that teachers did not change their pedagogical approaches when integrating technology. This finding is very important in that especially for experienced teachers without enough exposure and mastery over technology, PCK knowledge remains more essential for meaningful learning. This also implies that technology integration becomes a greater challenge for veteran teachers. Hence it makes adding "T" to Shulman's PCK relatively difficult.

Tai and Chuanh's (2012) study with in-service English teachers helped to answer this problem of prioritizing any "aspect" of TPACK. In their study, they designed TPACK-in-action model and followed 5 steps: 1) Modeling, 2) analysis, 3) demonstration, 4) application and 5) reflection. This design becomes more meaningful when taken into consideration with their idea on why and how to use technology: "Teachers need to know why they do what they do" (p. 1). Accordingly, they stated that "in order to transfer their TPACK knowledge to their own classrooms, to authentic learning environments, using technology while learning to integrate it effectively is a must" (p.2); therefore, they provided modeling, demonstration and more importantly application in their workshop. In like manner, Ansyari (2012) in his master thesis come up with a similar conclusion. He asserted that learning-by-design model provided participants with deep understanding of TPACK at the end of the study, which was confirmed by post-assessment. Such a design makes more sense when implemented by teachers who didn't change their pedagogical approach in the TPACK workshops. As teachers get exposed to not only verbal experience but authentic experience as well, they may see more value in different uses of pedagogies that they have never thought of using before with a certain technology.

On the other hand, Hughes and Scharber's (2008) study indicated that TPACK workshops are useful not only for pre-service, but also novice and veteran teachers. Though they reviewed the literature and made use of several guidelines in their TPACK workshop design (Hughes, 2004; Pope & Golub, 2000), they come up with two ultimate objectives to consider when working with teachers of different experience-level: (a) helping pre-service and novice teachers become more meta-cognitively aware of their knowledge base, including TK, TPK, TCK, and TPCK, and (b) creating cognitive conflict within veteran

teachers by immersing them in New Literacy and Critical Literacy literature and recognizing the deictic nature of evolving technologies and new literacies (p. 15).

From the review of literature, TPACK workshops are reflected on as being meaningful and useful for all language teachers with differing in years of experience in teaching profession. Kocoglu (2009) and Tai and Chuang (2012) reported most important of their findings was the increase in confidence level and instructional competency of the participants. Participants commented on the workshops finding them encouraging, enlightening, innovative and “to the point” for 21st century learners.

It was expressed in van Olphen’s (2008) study that increased TPACK by the lecturer implies having core element for enhancing second language learning with a purpose. If we remember that technology has a motivating force when used appropriately in language setting, van Olphen’s statement elaborates this fact and broadens its scope by simply adding TPACK into this case. In order to further language teachers’ understanding of cognition to integrate technology with their content and pedagogical knowledge, TPACK is found to be an essential element, which in return increase students’ language competence.

Ansyari’s (2012) master thesis concluded that all 12 participants of learning-by-design TPACK workshop were content and had positive experiences during the study. Later, as lessons plans were examined of these participants, those positive experiences on paper were confirmed in practice. Briefly, learning-by-design approach is suggested to improve language teachers’ TPACK.

Spires, Harvey and Watson (2013) acknowledged in their TPACK study with various level of participants in terms of teaching experience that while novice teachers are reported to lack “vision” to choose the best technology for teaching a certain topic, veteran teachers’ reports addressed to higher need to focus on content knowledge, specifically new perspectives within literacy such as new literacies and critical literacy, in order to create cognitive conflict within veteran teachers’ minds. With regard to that, different groups of teachers (pre-service, novice, veteran) bring different strengths to TPACK workshops and do need different focuses to further their TPACK.

Kurt, Mishra and Kocoglu’s (2013) study revealed that greatest increase was on TPK of 22 pre-service teachers. In other words, their study helped pre-service teachers to gain high confidence in choosing technologies that enhance the teaching approaches and students’ learning in a lesson. Still, in the same study, significant increase in participants’ TPACK was observed as well. Researchers reached the conclusion that technology related courses offered to PTs should go beyond the isolated skills instruction and teach PTs explicitly how to consider technology, content and pedagogy together for effective instruction in a particular subject area. Second, throughout the present study, PTs of English worked as “designers.” They created technology integrated lesson plans in their subject area for a particular group of students. They, then, implemented their plans in a

real classroom setting. That is to say, what should be inferred from this study is that in teacher education programs, students must be given freedom and responsibility to come up with their original lesson plans instead of being taught with a prescriptive manner. Finally, in teacher education programs, coursework must be supported with fieldwork. In other words, in order to be able to get a full grasp of TPACK, both theory and practice are needed. What Aristotle did was to separate knowledge into *techne*, *episteme* and *phronesis*, respectively technical knowledge, theoretical knowledge and practical wisdom. However, what TPACK offers is to blend them in a principled manner and benefit from *techne* as content and *episteme* as pedagogy in order to synthesize knowledge of teaching and then develop capability of finding the correct technological practice, *phronesis*, to create much more effective learning opportunities.

F-TPACK: Future

Clearly, 21st century learning and teaching has a different stance from that of previous ages. In this “digital era”, learners need to be more than simply learners and need to act more like synthesizers, collaborators and creative thinkers. As they are “born into” technology, they are more likely to bring new perspectives into what we have accumulated.

Although a somehow limited but still detailed literature review was done there are questions yet to be answered in connection to ELT.

Firstly, not even a single longitudinal study which tracks TPACK of in-service language teachers was encountered. Such a study would offer new insights on design of TPACK workshops.

Additionally, literature review increased the curiosity of how TPACK might differ in different cultural contexts. Does it have the same impact and meaning among for instance native/non-native language teachers or in EFL/ESL settings?

Next, it seems to be worth putting an effort to understand whether TPACK might play different roles in ESP (English for Specific Purposes).

Lastly, as it is closely-tied to ELT, a study on effects of TPACK in international language testing would deepen roots of technology in various subjects of language teaching.

C-TPACK: Conclusion

TPACK is a trendy topic to put lots of money, energy and time on, not because scholars like to assign new meanings to acronyms but it is worth to do so since TPACK deals with not 19th century doctrines, but it is meant to shape future’s world citizens.

World has changed a lot since Aristotle, is constantly subject to change, and nobody foresees future. What we can do is to benefit from accumulated data of science and pass today's values on to new generations. Between old and new generation, technology will remain as a powerful means of transformation of knowledge, which used to be in different forms in Aristotle's era. Any effort to expand the scope of it is worth investigating. Teachers need to be aware of this responsibility and had better not be indifferent to this phenomenon. As David Thornburg wisely uttered once, "Any teacher that can be replaced by a computer, deserves to be." So, especially as language teachers, we should not be oppose the idea of welcoming technology in our classroom, instead, we need to become masters over technology to achieve our goals of educating our futures.

Expert Review: Adam Simpson

Q: How does TPACK affect the role of technology in ELT?

A: As you can tell, I am quite a fan of this model and basically TPACK, it's putting us on the right lines of how we should be using technology in language teaching. And it does this in a couple of ways. It makes us think really about why we are using technology and how we are using it basically with the content of our courses rather than just saying OK instead of doing this on a piece of paper, I'll do it via a PowerPoint. It's making us think what the benefits of doing that are. So this is that link between the content we have for our teaching materials and how that's beneficial or not beneficial through being delivered by a technological means. Also, it is making us think back to the pedagogy that we use and how does that fit in, how can we lead into a text or a listening for example through technology? How can technology be an interlocutor, how can it be the means of delivering the material? Maybe this could be audiovisual or it can be textual. Are there any benefits to this? It really is in the area of the content of the material itself and in our ideas of how we should go about teaching. The TPACK model is making us think a bit more about how we're using technology and why we're using technology.

Q: What is the value of TPACK model for the future of ELT?

A: I think it's absolutely vital for the future of language teaching and there are some very obvious reasons for that. The current zeitgeist in some places is for learners to go onto tablets. All of them work via iPads and other tablets like this. And naturally these are technological gadgets. These are going to be the tools that they're using. So if we don't give adequate thoughts to how we're using technology like these tablets for learning and we don't think about the tools we are using, the applications we are using, we are going to get an awful mess very soon. It is just going to be like people are going to be using a traditional thing like here is the text I am sending it to you on your tablets and we'll do the reading just as we would whereas there are so many possibilities if we carefully think about the tools in applications we use, so we really need to be thinking about how we're integrating such gadgets in our future of our teaching. So having a

sound theoretical basis for technology is absolutely vital and lots of work is being done on this and I am very happy to see people are already thinking about not just using tablets for the sake of using them, but how they can actually advance the way we deliver information and how can use technology for recycling language and how we can actually be more social in our use of language through various applications as well. So TPACK is absolutely fundamentals of the future of the language teaching.

Q: How would TPACK be helpful for pre-service ELT teachers?

A: So... pre-service... We're often looking at how we plan a lesson and the stages of planning and their various ways of setting out lesson plan and looking at the different stages of a lesson. Quite often when we start using technology, we just think this might liven things up a bit, teaching people of a certain age who've grown up with technology so we should be using technology and i think that's a big danger especially for pre-service teachers and newly qualified teachers. Let's just do it in a technological way because it's something that the learners will enjoy. That's not of course necessary choice like using technology for the sake of it. Learners have a very certain way of using technology and they use it in their daily lives but not necessarily in hundreds of different and fun ways they have had their patterns they use and what they want from technology and they are very adapt at getting what they want. So if a nearly starting teacher just say let's use this just for fun, just to make the class a bit different, you risk actually alienating learners by doing such a thing. So I would say it's very important for pre-service teachers and newly qualified teachers to be thinking about how does certain piece of technology or how does an application facilitate your pre-listening or how does it facilitate activating schemata or as I mentioned before how might it acts as the interlocutor for delivering the content rather than just saying "oh here is a fun application let's do that just for a change of scene." So again getting back to proper and considered use of the technology and there is no point in waiting until later in your teaching - create a get down to this.

Q: What are the challenges for ELT teachers with TPACK in today's setting in Turkey?

A: As I've just mentioned there is quite a big move to get learners, particularly younger learners, doing their work via tablets and other technological tools such as this. The big danger is the move into this is so fast and so poorly considered that it could just be a case of people trying to do what they do 'untechnologically' but on their technological gadgets. We have so many different things that we can use in terms of technology; one example I'd like to say is feedback. We can give audio recordings, we can give annotated feedback to piece of students which could never work to the same extent just on a piece of paper. So we're reading it to say "welcome the technology take us" and what can we do that we couldn't do before and i think that's a step to if we are not careful, it's going to be missed out on in the big rush to get young learners and everybody else using technology. We are not going to say "What are the real benefits here", we are just going to say, it's just going to end up "Use it! Don't think about how you are using it too much,

just use it and do what you were doing before but now with the aid of the technology." That's a real shame because there are many benefits to using tech that non-tech in the old fashioned paper just simply didn't allow us. So that's my main concern we are not going to see a tech being utilized to its full advantage.

Q: What should researchers focus on to make the most of TPACK in ELT?

A: While I was getting into thinking about the TPACK model, I was thinking where exactly does language fit in to the wider scheme of things and initially I thought that technology was there but language lies somewhere mainly between content and pedagogy. And I got into a discussion with a few people. They said "In the original model, there is a circle going around the entire model, which is the context. So I would say language deserves to be there, it's the context. So there is no reason why when we are implementing the use of technology, we can't look at the language of the technological tool, the language of the application as well. And there is no reason why we can't do that - use that as an opportunity for learning English. So that's the area of research I'd like to see. We obviously got the language in the content, we obviously got consideration of language in our pedagogical methods. What I'd like to see is how we can actually use the technology, how we can exploit different applications and tools as a source for English Language.

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