Using TPACK to examine teacher professional development for online and blended learning

1. Introduction

The **increase of technology-use** within education leads to a sheer amount of new teaching possibilities and learning activities. This **requires teacher professional development (TPD)**, which should address **technological, pedagogical and content knowledge** (TPACK) to be effective.
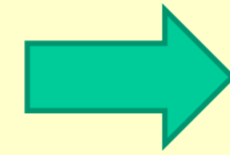
2. Objective

This paper looks at 5 scientific articles regarding **teacher professional development for online and blended learning.** The goal is to identify which article addresses **which part of the TPACK framework**. The focus remains at the initial design of the TPD program, and not on the outcomes.

3. Methodology

| Sys. literature review Content analysis | → | Situating within TPACK framework (Koehler & Mishra, 2009) | → | Peer discussion of classification |

4. First Results

First author * Year	Context of TPD
1) Ching 2014	Prim. and sec. teachers (n= 69) following an online course to develop a web-based application.
2) Comas-Quinn 2011	University teachers (n= 20) receiving training in delivering their courses in a blended mode.
3) Cowan 2013	Sec. teachers (n= 3) following expert teachers to embed the use of online teaching.
4) Doering 2009	Sec. teachers (n= 8) using geospatial technology, investigating optimal pedagogy for graphic problem solving.
5) Ernest 2013	University teachers (n=20) developing their experience with online group work and identifying further TPD needs.

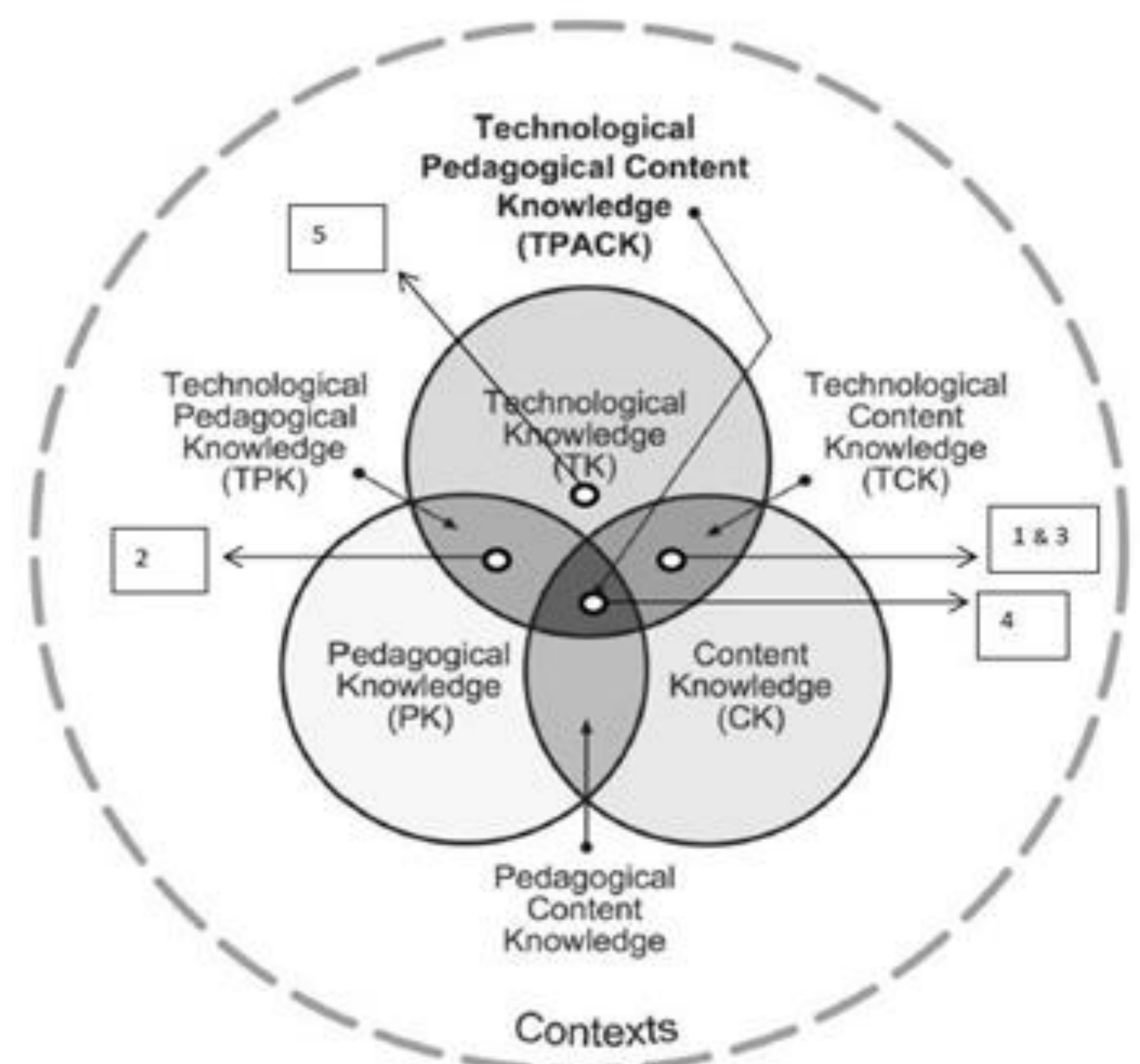* The numbers in the picture align with the order in the first column

Fig. Articles within TPACK framework (Koehler & Mishra, 2009)

5. Tentative conclusions

Difficult to reach centre of TPACK framework

Initial design focus can differ from attained results

Clear reference to TPACK in the article possibly leads to a more central position within the framework

More information needed about the relationship between the design and the results of the TPD

More research is needed about why certain TPD approaches for online and blended learning are successful

Ching, C. C. and Hursh, A. W. (2014) "Peer modeling and innovation adoption among teachers in online professional development", Computers & Education, pp 72-82
Comas-Quinn, A. (2011) "Learning to teach online or learning to become and online teacher: an exploration of teachers' experiences in a blended learning course", ReCALL, Vol 23, No. 3, pp 218-232.
Patton, M. Q. (2015) Qualitative research & evaluation methods. California: Sage.
Cowan, P. (2013) "The 4I model for scaffolding the professional development of experienced teachers in the use of virtual learning environments for classroom teaching", Contemporary Issues in Technology and Teacher Education, Vol 13, No. 1, pp 82-98.
Doering, A., Veletsianos, G. and Scharber, C., et al. (2009) "Using the technological, pedagogical and content knowledge framework to design online learning environments and professional development", Journal of Educational Computing Research, Vol 41, No. 3, pp 319-346.
Ernest, P., Guitert Catasús, M. and Hampel, R., et al. (2013) "Online teacher development: Collaborating in a virtual learning environment", Computer Assisted Language Learning, Vol 26, No. 4, pp 311-333.
Koehler, M. J. and Mishra, P. (2009) "What is technological pedagogical content knowledge?" Contemporary Issues in Technology and Teacher Education, Vol 9, No. 1, pp 60-70.
Wilson, A. (2012) "Effective professional development for e-learning: What do the managers think?" British Journal of Educational Technology, Vol 43, No. 6, pp 829-900.
Wolf, P. D. (2006) "Best practices in the training of faculty to teach online", Journal of Computing in Higher Education, Vol 17, No. 2, pp 47-78.

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