

Background for the study

Friction between the desire to provide efficient language instruction using modern digital technology, and the fear of introducing innovations for innovation's sake characterizes many formal learning environments. The current trend to provide one-to-one coverage of digital devices in primary education in Norway makes this issue quite pressing for the majority of (language) teachers. Teachers, teacher students, but also other stakeholders and policymakers need to evaluate the necessity and efficacy of the rapid digitalization of primary language classrooms.

RQ1: What motivates teachers and teacher students to integrate digital tools in early foreign/second language instruction?

RQ2: How do teachers and teacher students assess their own use of digital tools in early foreign/second language teaching?

Material and methods

Stage 1: Exploration of teacher students' motivation for using digital tools and their reflections around the classroom use of these tools.

Informants: Students from the Primary and Lower Secondary Teacher Education program
18 third-year students (30ECTS in English) in groups
10 fourth-year students (60ECTS in English) in groups

Material: Written lesson plans and reflection notes (total nr. of words: 8703)



Figure 1: *Frequency-based word cloud of all student reflections (software names and references removed).*

Preliminary results: student reflections

Motivation

“The keep talking game was a big help with the students' motivation.”

“Using podcasts in the classroom will hopefully **make the lessons more interesting** for the pupils.”

“One benefit with using Actionbound is that **it can be fun as it is something different and not often used in class.** [...] In addition, students are able to work either in pairs or in groups which **creates a sense of teamwork and which can be seen as motivating** for most students.”

Language production

"When they have to **work to reach a common goal**, such as getting the Bee Bot to the correct location, **they produce language to a greater extent.**"

Variation

“It is a tool that offers a variety of activities, creating a lot of options so that more students find activities and tasks to which they respond in terms of motivation and engagement. **Having a bigger span of tasks based on various forms helps in adapting the lesson to the diversity represented in one class as they find tasks in which they feel challenged on their level,** creating an environment where all students feel connected to the community in the classroom, an important aspect of the core curriculum.”



Image: Colourbox.

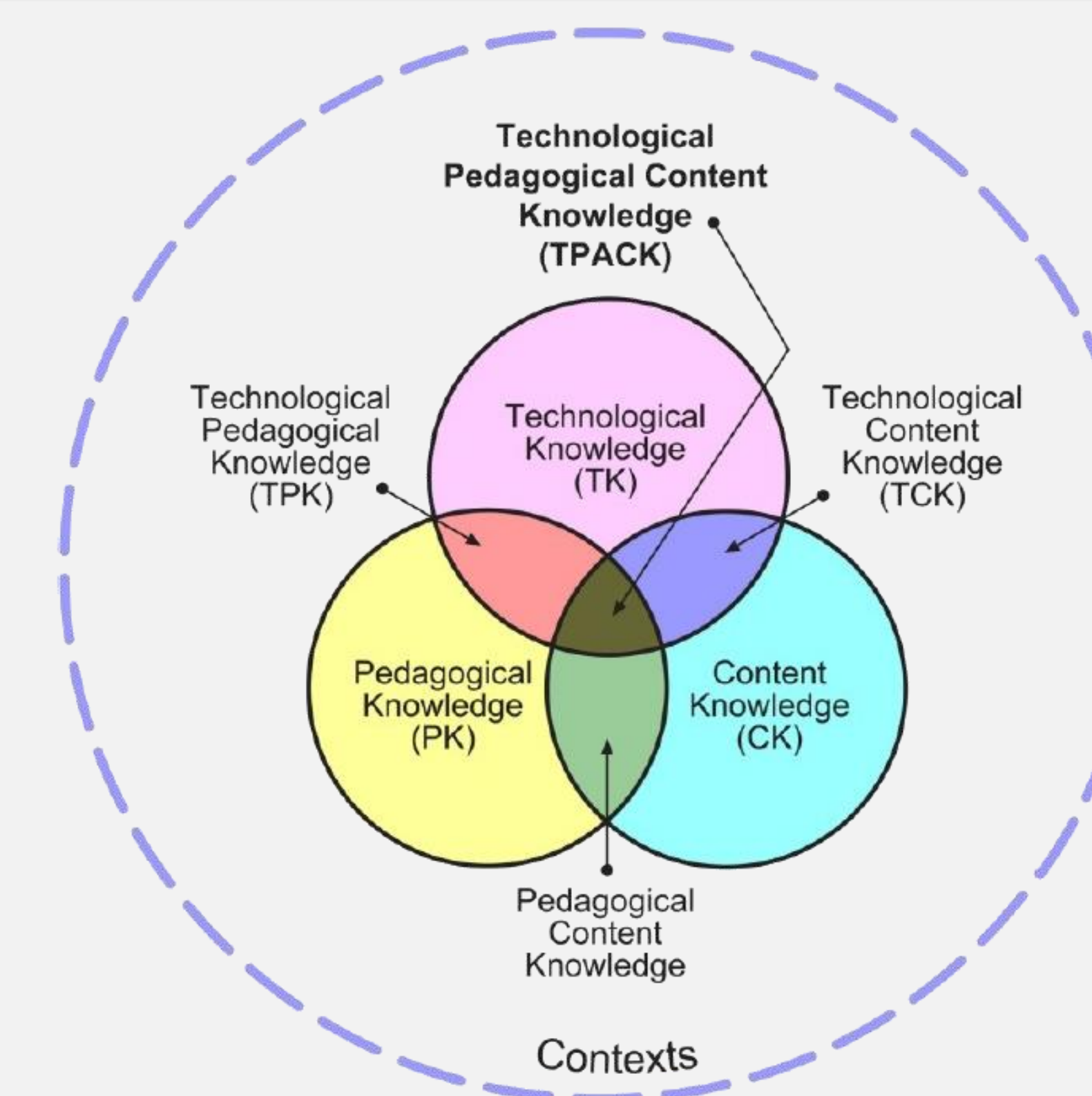


Figure 2: *The TPACK framework and its knowledge components (Keohler & Mishra, 2009, p. 63).*

Lack of access to technology

“Unfortunately, **we just had one podcast station with microphones and headsets** [...]. As a second option, the other pupils had to use Creaza on an iPad. Most of the pupils succeeded using Creaza, but **two of the groups had some technical issues**, which caused them to not be able to finish their podcasts.”

Lack of time

“Both tools are great ways of promoting active learning, yet we recognize that there are some drawbacks related to them, mostly in the sense that **they are time-consuming, and that problems related to the technology may occur during the activity.**”

“Some social studies subjects are highly theoretical and **may need copious amounts of reading, research, or lecturing for students to comprehend.** This somewhat limits the learning possibilities of using Actionbound in teaching social studies content.”

Isolation

“The pupils were calm through the whole lesson which meant they were focused when working in groups, but it also meant **they had a lack of oral activity.**”

“It (Screencastify) is also a good substitute for speaking in front of the class for students that are afraid to do so [...]. **However, this could also be a downside because it is useful for students to speak to an audience.**”

Discussion

Observed teacher use of digital tools from Blikstad-Balas & Klette, 2020 (L1 classroom):

- Narrow and transmissive use (PowerPoints to present; MS Word to produce)
- Minimal TPACK training

Pupil reflections from Heddeland & Horverak, 2022:

- See only the obvious advantages of technology in the language classrooms (films, chatting in the target language)
- Many hidden affordances

Teacher-student reflections summary:

- Afgd
- "sagd
- Sg
- Asg

Technological Pedagogical Content Knowledge in teacher training:

- Technology (TK) is usually not a problem
- Pedagogy (PK) and content (CK) are taught
- PCK is in focus especially in the content classes
- The interplay of all three components (TPACK) is the issue (Koehler & Mishra, 2009; Voogt et al., 2013)

Selected references

- Blikstad-Balas, M., & Klette, K. (2020). Still a long way to go. *Nordic Journal of Digital Literacy*, 15(1), 55-68. <https://doi.org/10.18261/issn.1891-943x-2020-01-05>
- Heddeland, S., & Horverak, M.-O. (2022). Teknologi i skolen – mulighet eller distraksjon? *Norsk pedagogisk tidsskrift*, 106(2), 104-115. <https://doi.org/10.18261/npt.106.2.3>
- Koehler, M., & Mishra, P. (2009). What is Technological Pedagogical Content Knowledge (TPACK)? *Contemporary Issues in Technology and Teacher Education*, 9(1), 60-70.
- Voogt, J., Fisser, P., Pareja Roblin, N. N., Tondeur, J., & van Braak, J. (2013). Technological Pedagogical Content Knowledge - a review of the literature. *Journal of Computer Assisted Learning*, 29(2), 109-121. <https://doi.org/10.1111/j.1365-2729.2012.00487.x>

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