

# Digital Competence in Teacher Education: Historical roots and current manifestations.

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# Digital Competence in Teacher Education: Policy and Research context

- *'in the last decade, much effort has been put into defining the specific demands on new teachers' digital skills and to how they should be strengthened in their training'* (Brox, 2017, p. 130).
- The current focus in this area of digital competence has resulted in widespread attention in the international educational research arena (Martin and Garcia-Sanchez, 2017)
- Explorations of its development have already been undertaken (Bawden, 2001; Ala-Mutka, 2011; Ferrari; 2013)

## The 'tangled ball of concepts' (Aesaert et al, 2013, p. 143)

'a complex landscape of definitions and concepts' (Ala-Mutka, 2011, p. 15).

'*moving target*' (Tomte, 2015, p. 140).

The results indicate that national governments define digital literacy in their curricula in different and sometimes diverging ways. Different terms refer to the concept of digital literacy, such as digitally skilled, digitally competent, digitally literate, ICT competent and ICT capable ... the notion of digital literacy is poorly understood in formal education (Aesaert et al (2013, p. 143)



Ilomaki et al (2016) found that the most used term was, first, digital literacy, second, new literacies, third, media literacy, fourth, multiliteracies and fifth, digital competence. They concluded that the term digital competence was a relatively new term in the research articles reviewed.

# Literacy or Competency: What's in a name and why the different terms?

1. Reflecting linguistic preferences? (Erstad, 2015; Krumsvik, 2008).
  2. More substantial differences?
    - Janssen et al (2013) argue that digital literacy is more often used in European policy and initiatives relating to e-inclusion whereas competence is employed more in an educational context.
  3. Reflecting a broader shift in education?
    - to the language of competencies as opposed to content-based perspectives Ilomaki et al (2016)
- Ilomaki et al (2016), they noted that, *'the term most often used close to digital competence, and often as a synonym, ... and both the terms can be found in the same article'* (p. 664).

## In Teacher Education

- There is a *'clear need to simplify and straighten out the concept of teachers' professional digital competence'* (Ottestad, 2014, p. 247).
- In a review of literature in this area, Petersson (2017) comments that;
  - ... it seems as if **no obvious consensus or shared knowledge has been developed on what digital competence in educational contexts 'is'** and what the competence entails during the last 10 years of research investigated in this review. Rather, the meaning and scope of digital competence and its related concepts (e.g., digital pedagogy, ICT competence, digital literacy and pedagogical digital competence) **seem seldom to be well-defined** and are often used as synonyms when describing the competences needed for actors working in educational contexts. (Petersson, 2017)
- The 'double challenge' (Lund & Erikson, 2016) (Krumsvik, 2014)



## Common dimensions across different frameworks

- **The pedagogical** – less clarity here.  
When the PCK of certain subjects areas are not fully mapped out, what hope is there for a clearly defined and understood TPACK?
- the **lack of consensus of what constitutes effective pedagogical use** and the balance between technical aspects, pedagogical aspects and **professional aspects**.



## Common dimensions across different frameworks

- **The professional** – Professional digital competency (Instefjord and Munthe, 2017)
- not a high amount of consensus in this space - largely virgin territory but it could be argued that it is the most important area
- Cyber-ethics, Understanding of media economy, Filter bubbles, digital echo chambers, epistemological implications of digital technologies (Krumsvik, 2008)





# Implications

- *‘Does it matter what student teachers understand about technologies as long as they can use them and implement them in their own teaching?’ (Brox, 2017, p. 129)*
- Ultimate goal - avoid an uncritical and accepting (Taylor, 2004)
- The need to cast a wider net in relation to digital competence in teacher education – but this has implications
- Wider cross-curricular implications for teacher education - elbowing into an already crowded space
- Educational technology courses in teacher education - localised construct – how are new and emergent understandings of teacher digital competence being interpreted at a localised level?

- Convergence of two camps or legitimate differences in focus?

