

An evaluation framework for microlearning tools

For designing and delivering microlearning content

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Research aim and questions (1)

Conceptualising an evaluation framework for microlearning tools for designing and delivering microlearning content

Main research question:

What are the potential and shortcomings of the current mobile learning tools for **designing and delivering** microlearning content and what would be the core criteria of an **evaluation framework** for mobile learning tools of microlearning content **in the context of digitalization and higher education**?

Sub questions:

1. What are the **potential and challenges** in designing and delivering microlearning content?
2. What would be the **core criteria** for an **evaluation framework** for designing and delivering mobile learning content?

Methodological approach (2)

Search strategy

- Literature review using PRISMA method
- Open coding of the literature to categorize related papers
- Different databases for search:
 - Springer
 - Science Direct
 - IEEE
 - ACM
 - Wiley
- Year range 2010-2021
 - This captures the increase in smartphone ownership
 - Captures the beneficial multi-device environments for microlearning

Search terms

"mobile learning", "microlearning", "digitalization", "higher education", "evaluation", "design", "delivery", "push notification", and "micro MOOC"

Inclusion and exclusion criteria

Inclusion Criteria

Smartphones and/or tablets are used for microlearning.

Study is performed in the higher education setting or is applicable to this setting.

Article should be peer reviewed.

Article addresses microlearning content design characteristics.

Article addresses microlearning content delivery characteristics.

Exclusion Criteria

Study does not use laptops as microlearning devices.

Microlearning must not be limited to the formal (classroom) context

Literature filtering (PRISMA) (3)

Database hits: 176

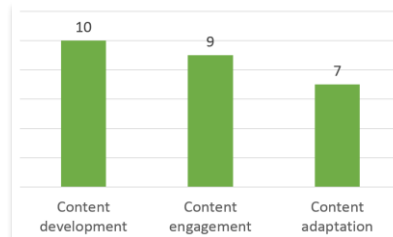
To exclude:
Papers not about microlearning or higher education

Hits remaining: 56

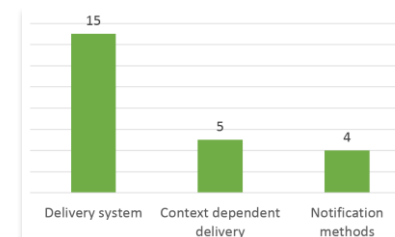
To exclude:
Papers not adhering to the inclusion/exclusion criteria

28 papers in total

Literature coding (4)



Microlearning content design coding



Microlearning content delivery coding

Key findings (5)

In the light of current literature:

Microlearning content **design tools** have the potential to:

Support content organization, efficient reuse of learning material (through Open Education Resources), content personalization and content engagement.

Microlearning content **delivery tools** benefit from tools:

Integration with the Learning Management Systems of the higher education institution, resulting in standardization. Context awareness increases learning efficiency by sensing environment factors. Notification methods increase learning time

Shortcomings of current microlearning tools:

There exists a digital divide among the tools which can be negative for content reuse. Also learning complex subjects is difficult with current microlearning tools.

Final evaluation framework (6)

