

Deeper learning design principles in blended education

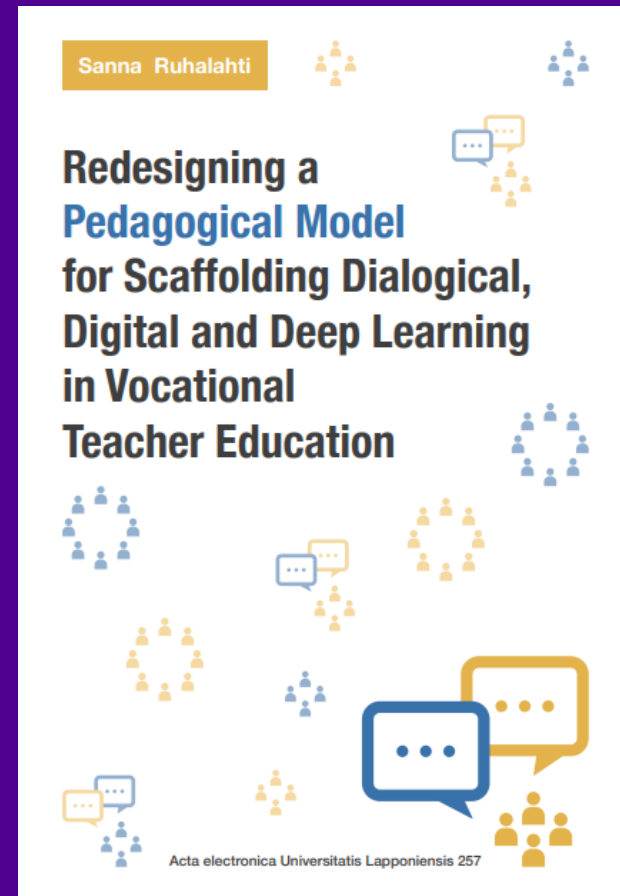
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About me

- PhD (Media education)
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34 responses submitted

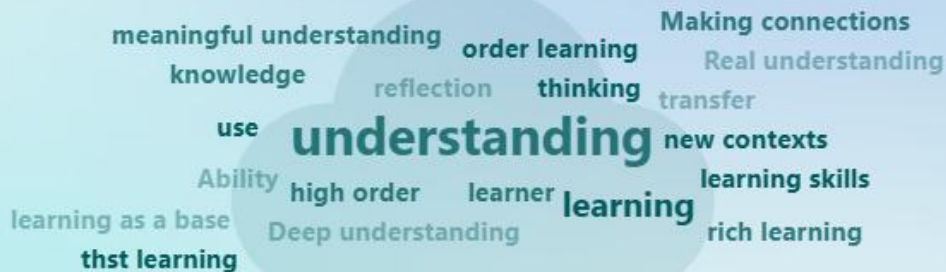
What Does Deeper Learning Mean? In your own words

Scan the QR or use
link to join



<https://forms.cloud.microsoft/e/yv4JfYyJrt>

Copy link



Wordcloud

All responses



1 of 1



**Ever felt like a grasshopper?
What about your students?**



What kind of learning designer you are?

**We expect learning to be
collaborative and social,**



**but how do we support students to learn
together?**

Blended education gives us multiple spaces and technologies, but it does not automatically produce collaborative or deeper learning.

**It's all about
learning design!**

Deeper learning

- Deeper learning involves higher-order thinking (analysing, interpreting, evaluating, comparing, constructing, and creating) and knowledge creation (e.g., Anderson et al., 2001; Nelson Laird et al., 2014; Paavola, et al., 2002; Schraw et al., 2001; Lu et al., 2021; Yujie et al., 2026).
- Working life requires graduates who can analyse, evaluate, collaborate and create (e.g., Adams Becker et al., 2017; Bouckaert, 2023; NACE, 2025; World Economic Forum, 2025).
- Therefore, blended education must be designed for more than content delivery.

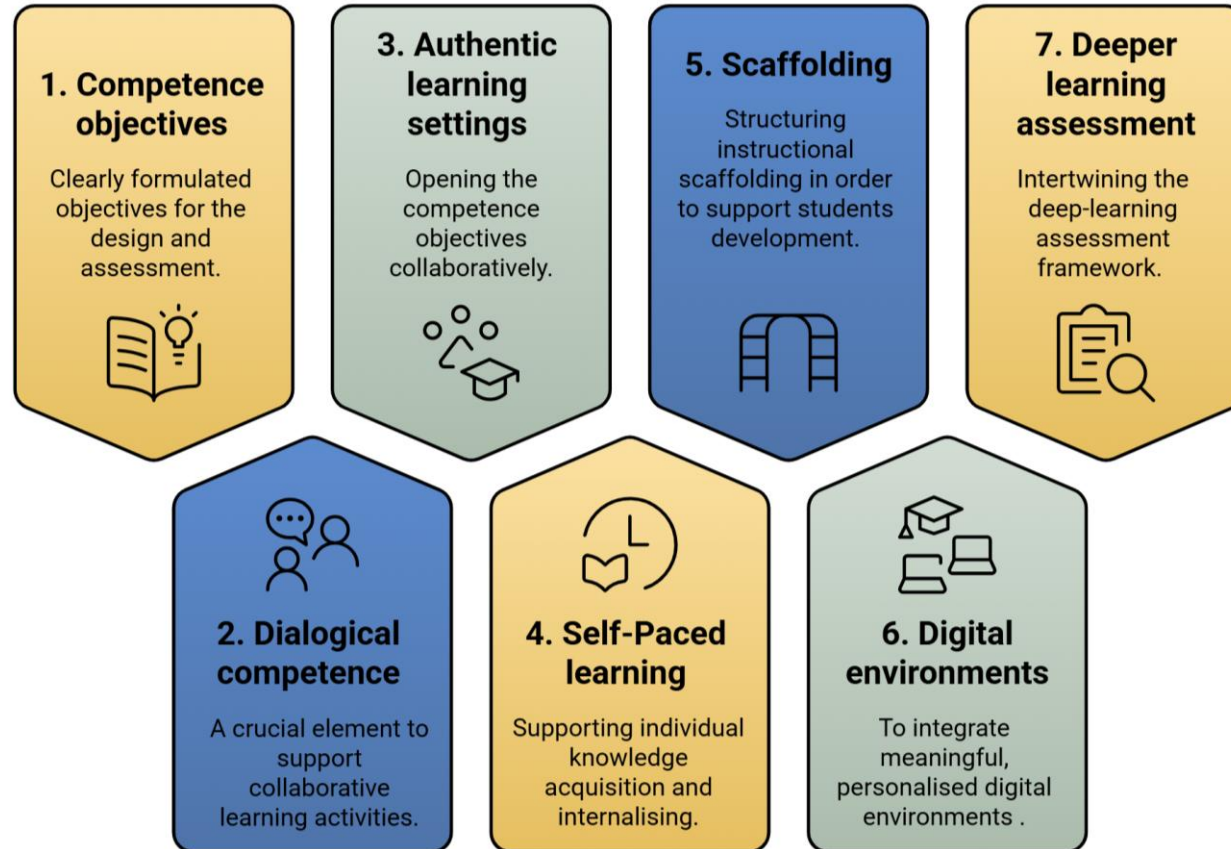
What fosters deeper learning in blended education?

Pedagogical element and contribution	Sources
Authenticity and authentic learning provide an important foundation for community knowledge construction that enables deeper learning.	Aarnio, 2006; Herrington et al., 2010; Czerkowski, 2014; McGee & Wickersham, 2005; Cho & Rathbun, 2013
Self-paced learning help learners achieve deeper learning.	Paavola et al., 2004; Sfard, 1998; Turkle, 2015, p. 61; Ruhalahti et al., 2018
The learning community is a key factor and source of motivation in the pursuit of deeper learning.	Ryan & Deci, 2000; Bereiter, 2002; Aarnio, 2006
Collaborative and dialogical knowledge construction support the collaborative creation and development of knowledge.	Paavola et al., 2004; Näykki, 2014; Enqvist & Aarnio, 2004; Aarnio, 2006; Tillema, 2006; Aarnio, 2015; Ruhalahti et al., 2017
Projects, project-based learning and community artefacts provide shared objects and contexts for knowledge construction.	Paavola et al., 2004
Dialogical knowledge construction in digital environments should be skilfully structured.	Aarnio & Enqvist, 2007; 2016
Scaffolding promotes higher-order thinking skills and supports personal learning environments (PLEs).	Lonka, 2015; Gibson, 2013; Korhonen, 2020

From blended education maturity to deeper learning design:

7 deeper learning design principles

Pick the principle(s) that resonates most with you



1. Competence objectives

- Clearly formulated competence objectives provide the starting point for constructive alignment.
- They guide the selection and organising of learning activities, interaction, technologies and assessment toward deeper learning outcomes.

Are the online, face-to-face, collaborative and assessment activities all visibly connected to the intended competence(s)?

1. Competence objectives

Clearly formulated objectives for the design and assessment.



embed⁺

2. Dialogical competence

- **Why?**

Dialogue enables equal participation and shared knowledge construction.

- **What must learners develop?**

Skills in listening, inquiry, argumentation, building on others' ideas and creating shared understanding.

- **What must the educator design?**

Structures, methods, roles, scaffolding, participation expectations and facilitation across modalities.

- Dialogical methods: <https://www5.hamk.fi/dialogi/diale/>

Dialogue is the design condition. Have we designed only an opportunity to interact, or have we also helped students learn how to engage in deep dialogue?



2. Dialogical Competence

A crucial element to support collaborative learning activities.

3. Authentic learning settings

Authentic starting point

- Competence objectives (or complex question, phenomenon, case or professional challenge)

Shared interpretation

- Students first individually creates open questions, then collaboratively creates open questions from the competence objectives, and then create broader learning themes

Knowledge construction

- Learners produce a meaningful artefact, solution or shared knowledge construction or explanation

Does the blended learning journey begin with content delivery, or with an authentic questions that creates a need to learn?

3. Authentic learning settings

Opening the competence objectives collaboratively.



4. Self-paced learning

- Self-paced learning creates purposeful space for individual preparation, knowledge acquisition, reflection and internalisation before, between and after collaborative learning activities.
 - To learn individually in students' actual development level (ADL, actual development level), to support individual knowledge acquisition and internalising

Where in the learning process do students have time to think, internalise their learnings?



4. Self-Paced Learning

Supporting individual knowledge acquisition and internalising.

5. Scaffolding

Scaffolding individuals

- Orientation
- Feedback
- Reflection & internalisation

Scaffolding communities

- Dialogical methods
- Group roles
- Collaborative tasks
- Shared artefacts, assignments & checkpoints

Which learning activities require scaffolding now, and when can students take bigger responsibility?

5. Scaffolding

Structuring instructional scaffolding in order to support students' development.



6. Digital environments

- The principle is not about using more technology. It is about selecting an appropriate environment for each learning activity and connecting the environments into a coherent learning journey.
- Digital environments should be selected and orchestrated according to their pedagogical purpose: individual knowledge acquisition, dialogue, collaborative knowledge construction, creation, feedback, assessment and reflection.

For every technology, ask:

1. Pedagogical value: What learning activity does it enable?
2. Participation: How does it support individual and collaborative learning?
3. Inclusion: Is it accessible, understandable and usable for diverse learners?



6. Digital environments

To integrate meaningful, personalised digital environments.

7. Deeper learning assessment

Assessment for learning

- Feedback and formative guidance during the process

Assessment as learning

- Individual and community reflection, self-assessment and peer dialogue

Assessment of deeper learning

- Evaluation of higher-order thinking, knowledge creation and authentic outcomes

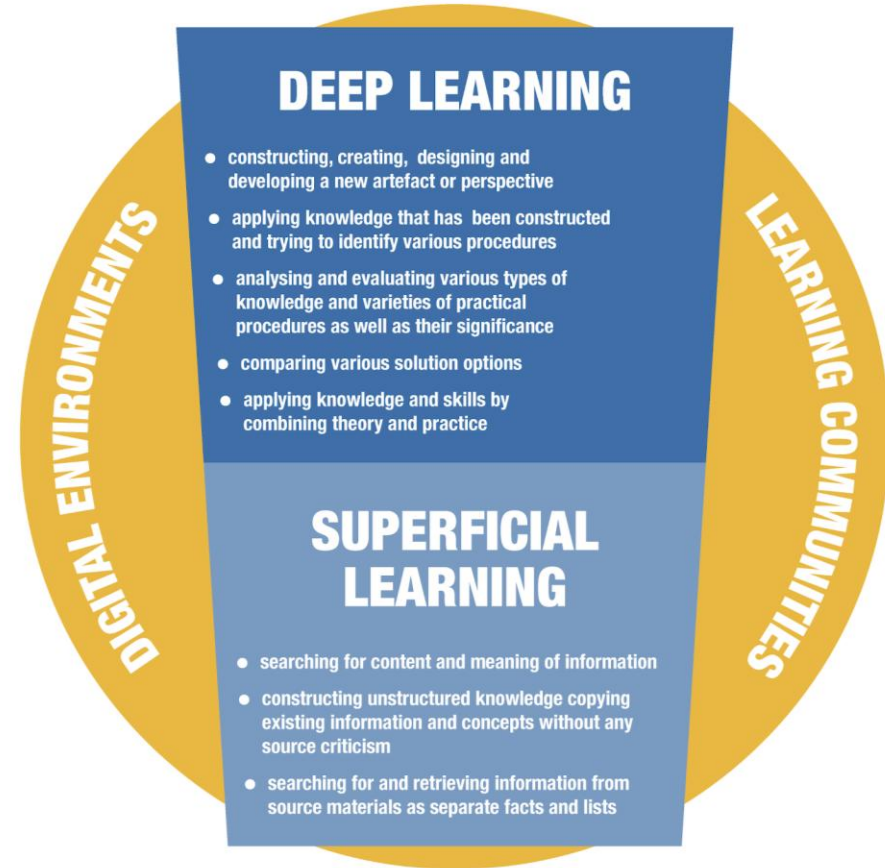
How has assessment for learning supported students in achieving deeper learning outcomes? In what ways does it make individual and collaborative learning processes visible?

7. Deeper Learning Assessment

Intertwining the deep-learning assessment framework.



Deeper learning assessment (evaluation) framework for sociocultural learning settings

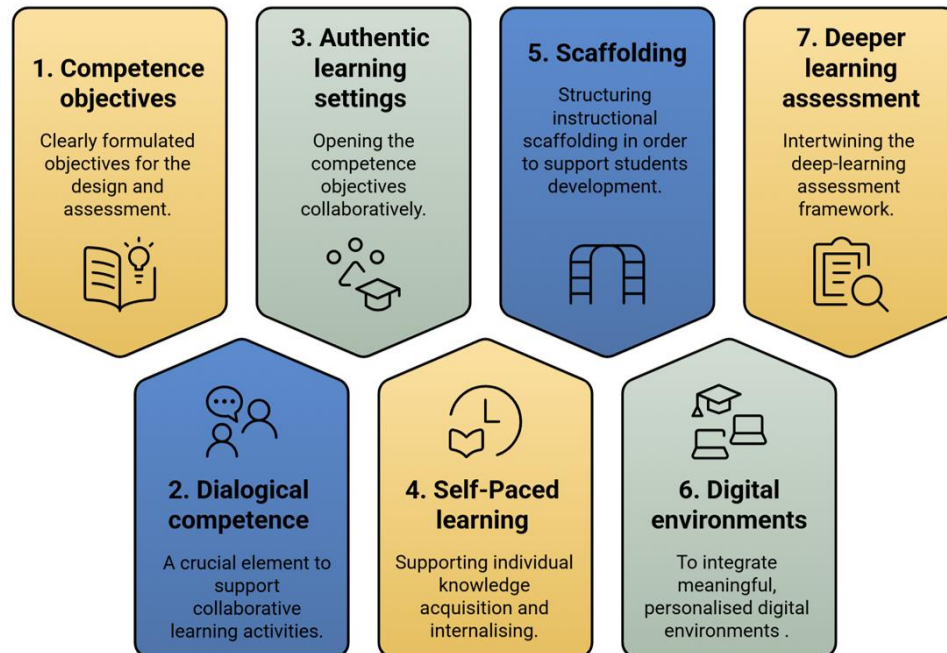


Final takeaway

- EMBED+ framework provides the developmental architecture for mature blended education across courses, programmes and organisations.
- The seven deeper learning design principles translate this ambition into **pedagogical decisions that educators can use when designing learning processes.**
- Together, they connect institutional maturity with meaningful learning experiences, deeper learning and shared knowledge creation.

Which deeper learning design principle would most strengthen in your upcoming blended course or programme?

Share your choice in the chat.



<https://sannaruhalhti.com/>

Thank you!
Designing blended learning.
Supporting deeper learning.



Join to EMBED+ community:
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In summary

1. **Competence objectives** establish direction.
2. **Authentic learning settings** create a meaningful starting point.
3. **Self-paced learning** enables preparation and internalisation.
4. **Dialogical competence** enables equitable collaborative inquiry.
5. **Scaffolding** supports individual and collaborative learning.
6. **Digital environments** connects students and foster collaborative learning.
7. **Deeper learning assessment** supports learning process and outcomes.

Key references

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