THE RELATIONSHIP BETWEEN ICT TOOLS AND FLOW IN THE ASSESSMENT OF DIGITAL COMPETENCE IN HIGHER EDUCATION

MELLEARN CONFERENCE

15 05 2024

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THE RELATIONSHIP BETWEEN ICT TOOLS AND FLOW IN THE ASSESSMENT OF DIGITAL COMPETENCE IN HIGHER EDUCATION

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The goal of the research

- To study the instructors' attitude towards the use of digital solutions and methodology-based ideas and to explore their interests in development opportunities

- To explore the instructors' needs in the field of digital competences

Research Questions

- Q1: What level digital competences do the teachers have according to their own self-assessment?

- Q2: How do they support the students' digital competences in the classroom or during a semester?

Hypothesis

H1: We assume that the teachers' digital competences need development, however their motivation towards the use of digital technologies is positive.

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The sample and method of the research

- ✓ Quantitative research (online questionnaire)

- ✓ Sample: LUPS teachers (N=824)

- ✓ The numbers of the participants: n=355

- ✓ Self-assessment method

- ✓ SPSS statistical program

- ✓ Qualitative research: spring of 2023
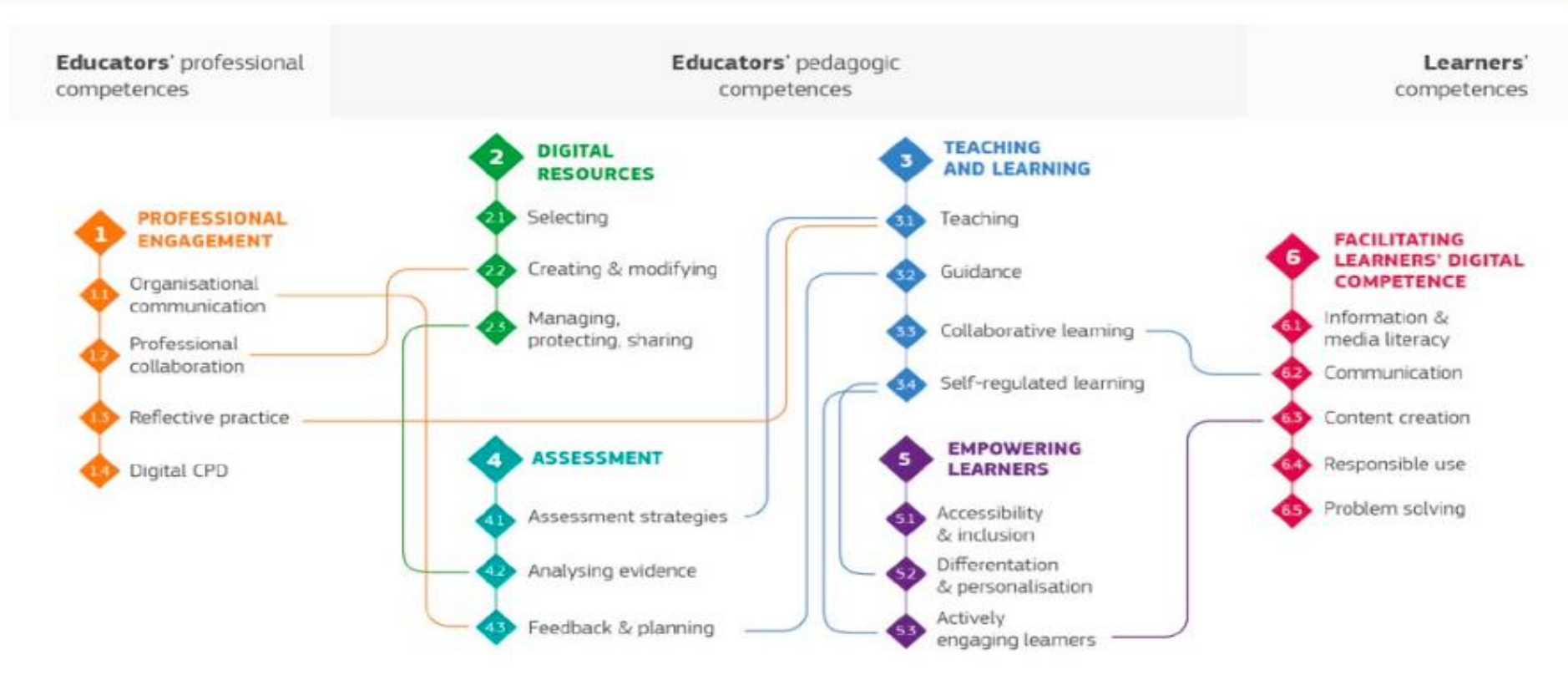
- ✓ The period of the research: 2021 - 2023

Measurement tool - DigCompEdu (6 areas - 22 questions)

Subareas of the main competence areas based on the DigCompEdu framework (source: Redecker 2017)

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Measurement tool – a plan for focus group discussion

- Goal: to find accurate answers for the quantitave results, identifying latent results that cannot be detected by statistical methods and confirming or refusing quantitative results.

- Common aim: is to achieve a student-centred paradigm shift in pedagogy

- Sharing own opinions and experiences in 60 min.

- Dynamic discussion, qualitative method for collecting data accepted in social science

- Methodology background: planned in small groups (max. 6-7 persons, led by moderators). Based on the interaction between group members, an interaction from several point of views, is not the same as an interview.

- Advantages: cheap, fast, easily understandable

- Disadvantage: the organization of the discussion is complicated

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Description of the focus group discussion

- conducted on faculty by faculty with the involvement of student moderators – our own professional interests cannot influence the outcome of the discourse

- applicants: 31 person were involved in the focus group discussion

- same number of participants per /faculty (about 8 people) but heterogenious according to their professional interest.

- the answers for scientific purposes, in full awareness of our criminal liability, and the data will be treated anonymously. Lecturers - consent to the recording of the interviews.

The structure of the focus group discussion

- **The discussion was built on 6 focuses:**

- (1) General questions for background variables

- (2) Questions for ICT devices

- (3) Methodology knowledge

- (4) ICT-based courses

- (5) Digital Competences 1

- (6) Digital Competences 2

- Keywords were used to maintaing the dynamics of discussions.

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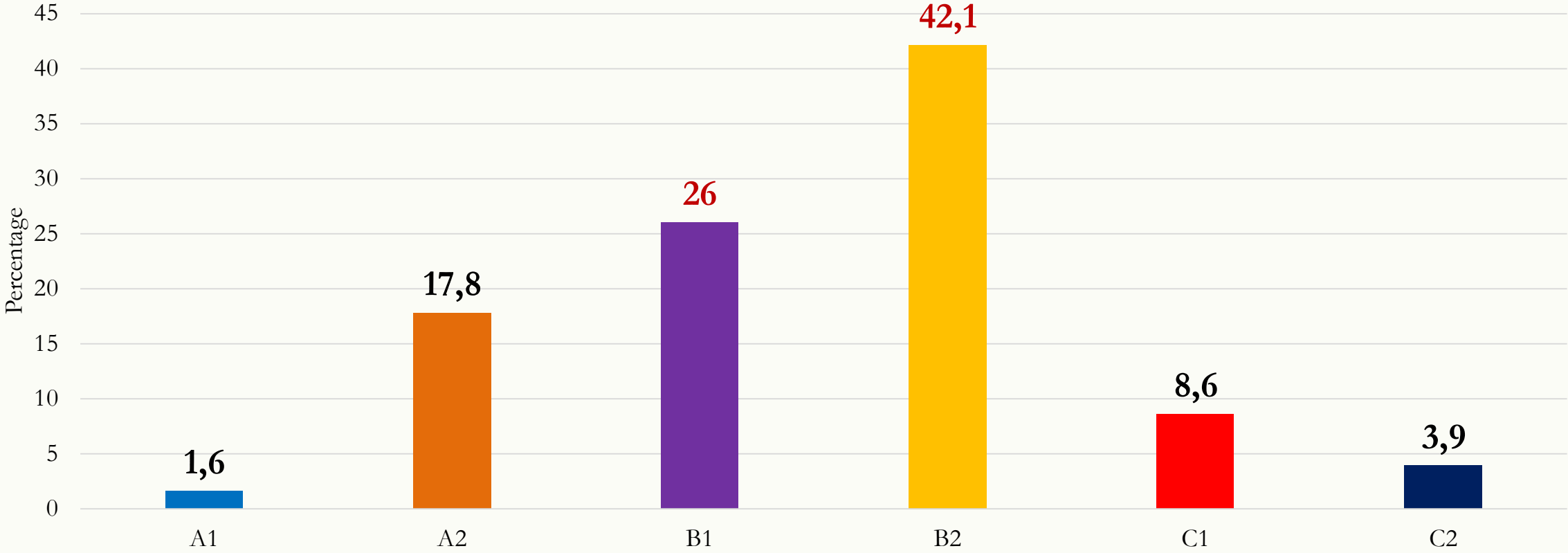
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Research results

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Self-classification of UPS teachers

The classification of the respondents based on the individual competency levels based on the results of the questionnaire (precent)

Source: TKP Research, the database of DigCompEdu 2022

Percentage of scores achieved by teachers per competence area
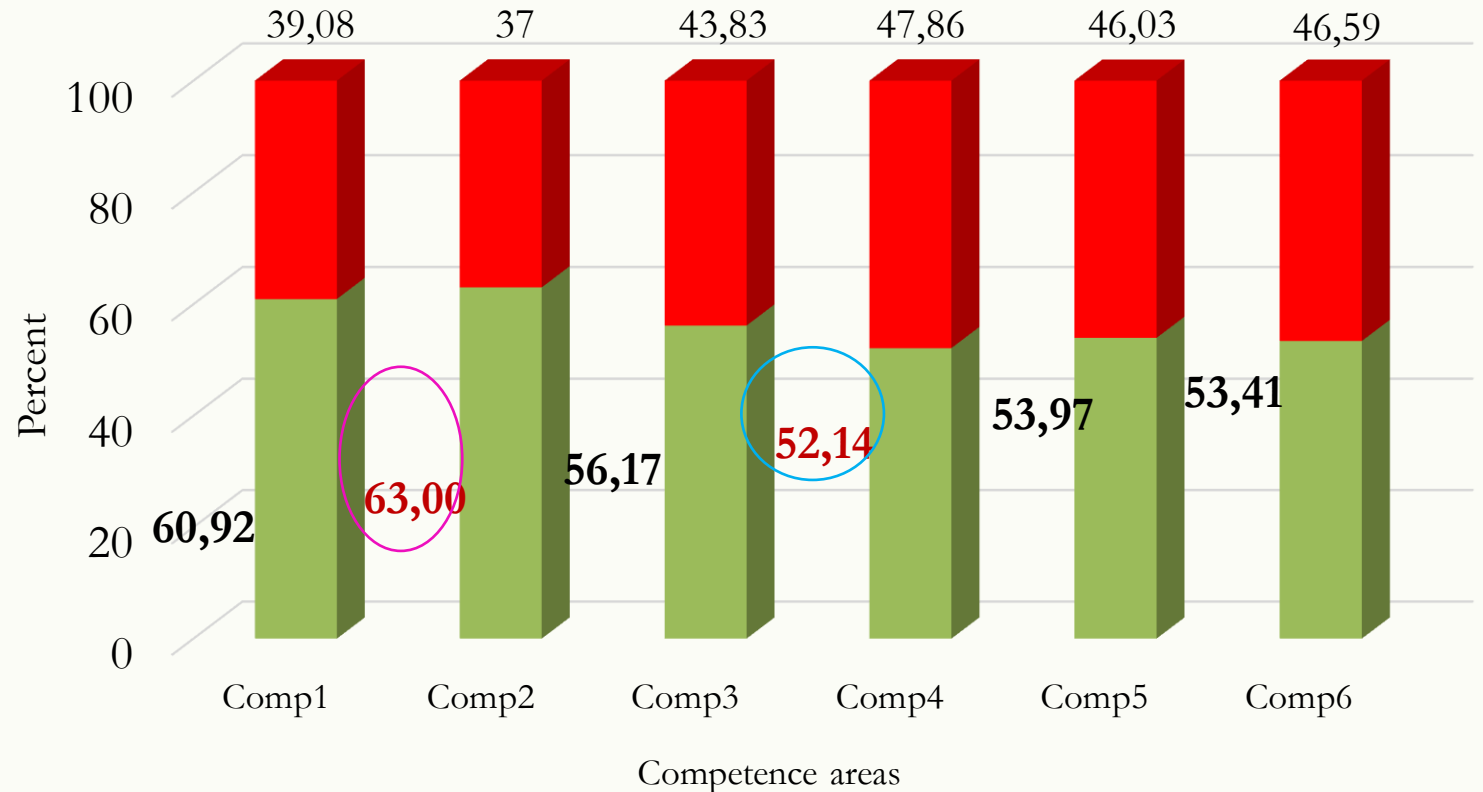
Area 1: Professional Engagement

Area 2: Digital Resources

Area 3: Teaching & Learning

Area 4: Assessment

Area 5: Empowering Learners

Area 6: Facilitating Learner's Digital Competence

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Sources: TKP kutatás, DigCompEdu adatbázis 2022

- *„We live in a world where we have to really engage them (students) and that's the only way to do it, I think." [...]*

- *[...] "it would be important to be able to get the latest software [...] because we should give them the latest knowledge and we cannot provide them in all areas at the moment" [...]*

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Profile of LUPS - DigCompEdu Online Questionnaire
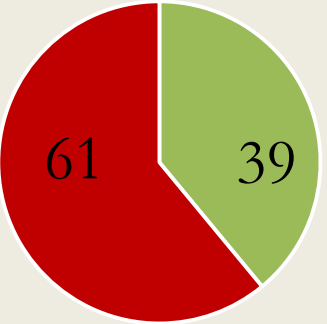
Did they participate in ICT-supported trainings in the last 5 years? (%)

		Levene's Test for Equality of Variances		t-test for Equality of Means						95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.	Std. Error Diff.		Lower	Upper
Összesített pontszám	Equal variances assumed	0,246	0,62	4,79	286	0	**8,18**	1,71		4,82	11,54
	Equal variances not assumed			4,75	233,92	0	8,18	1,72		4,79	11,57

Forrás: TKP2021-NKTA-51; n=355; Levene Test

***: P ≤ 0.001, **: P ≤ 0.01, *: P ≤0.05

Forrás: TKP kutatás, DigCompEdu adatbázis 2022

To what extent did the following factors motivate them in their choice of further trainings?

Forrás: TKP kutatás, DigCompEdu adatbázis 2022
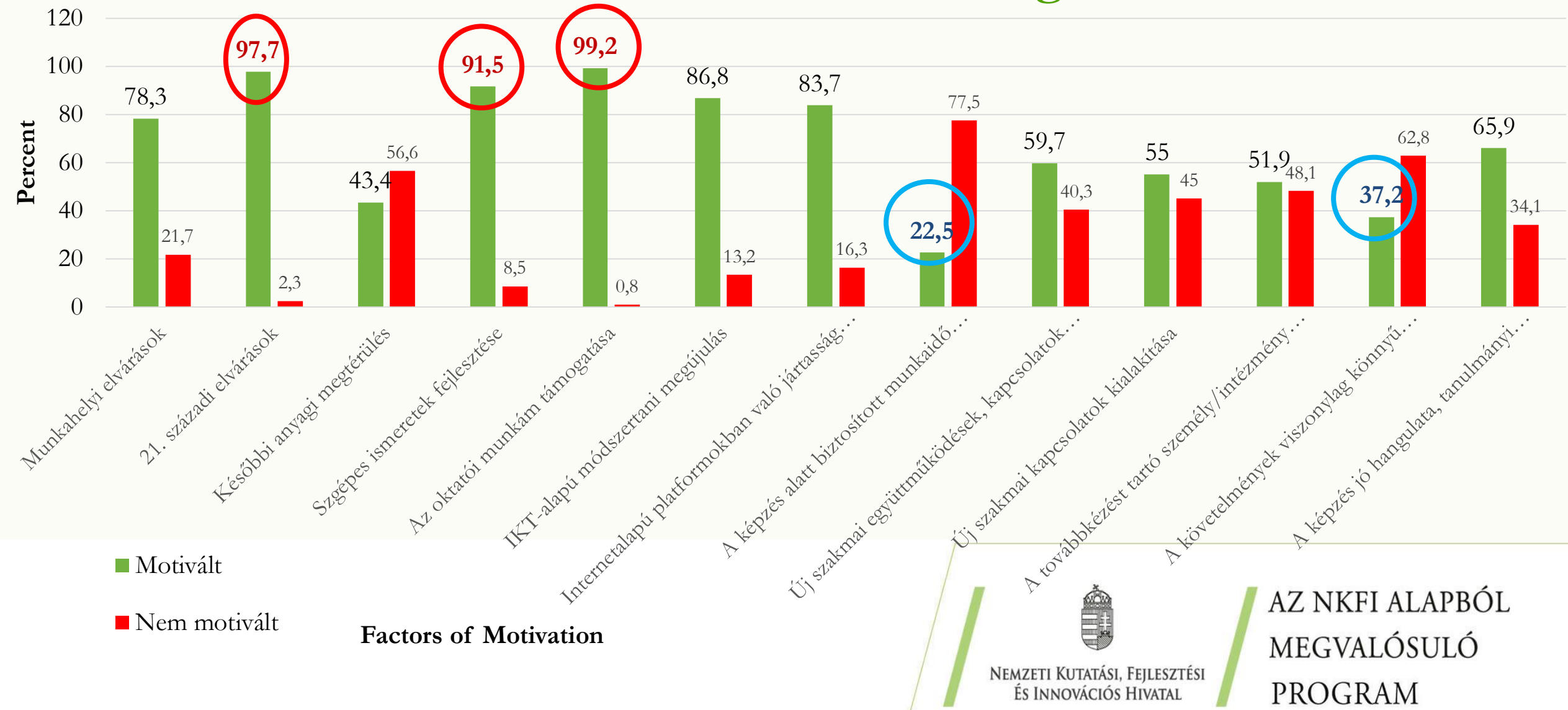
According to the results of flow-based teaching: success is guaranteed by the use of the flow-based teaching model!

Source: Dominek, 2022, p. 77
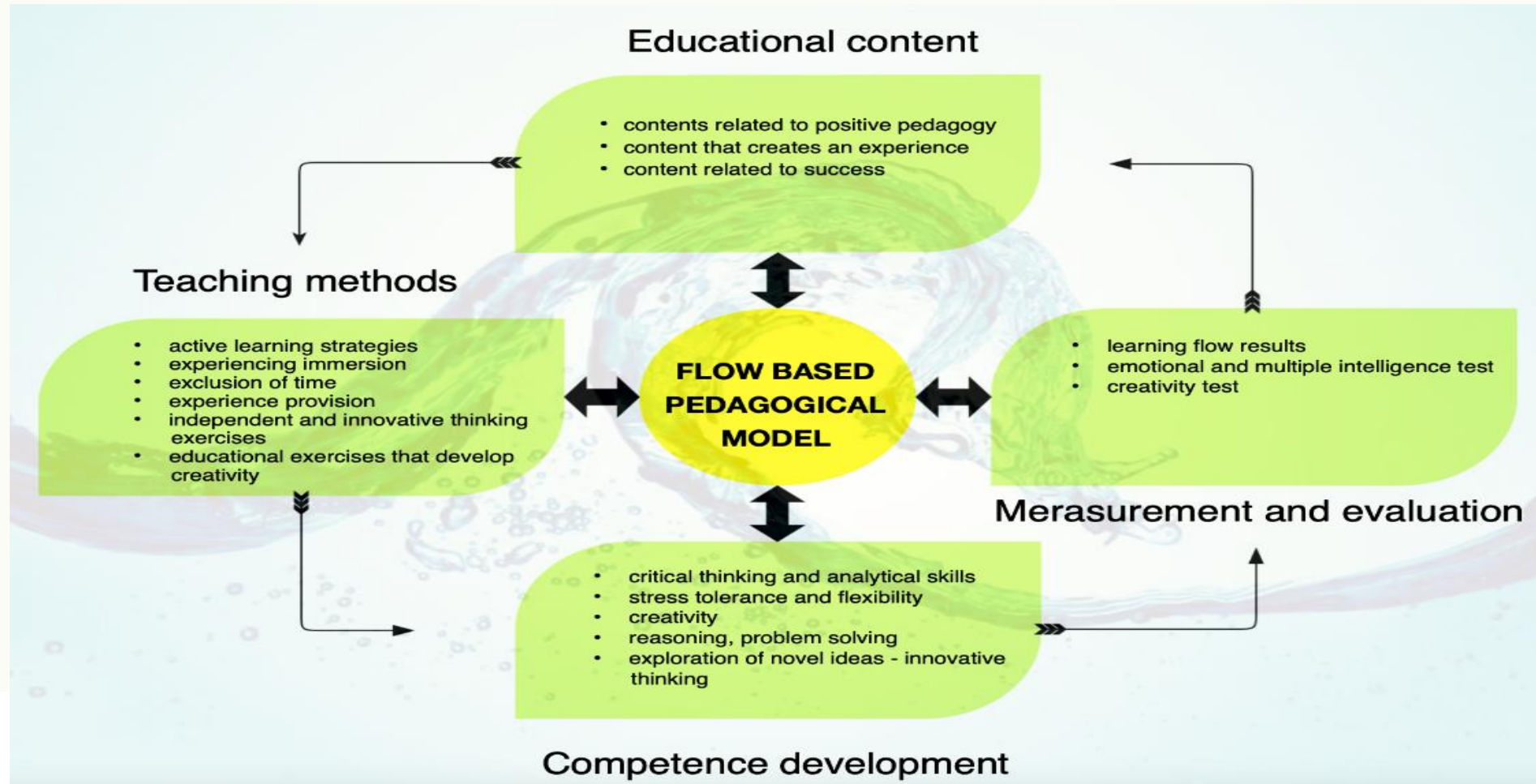
Conclusion

H1: We assume that the teachers' digital competences need development, however their motivation towards the use of digital technologies is positive.

It means that the teachers are open to integrating new ideas and methodology-based innovations into the classroom, are keen to test new methods, and are creative and critical in the use of different digital technologies.

Our hypothesis is consistent with the qualitative & quantitative results, as most of the respondents gave positive feedback on the ICT-supported lessons and highlighted the importance of developing digital literacy for both teachers and students.

Thank you for your attention!

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