BANKU AUGSTSKOLA

BA SCHOOL OF BUSINESS AND FINANCE

RISEBA

Biznesa, mākslas un tehnoloģiju AUGSTSKOLA

LEARN HOW DIGITAL TRANSFORMATION COULD DIFFUSE INTO ORGANISATIONS:

Impact of Motivation and Innovation on Digital Competences and Learning

Sandra Starke and Iveta Ludviga

Finansē Eiropas Savienība NextGenerationEU

2027 Nacionālais attīstības plāns

Digital 2025, 06.-10.07.25 in Venice, Italy

Presenting author:

Sandra Starke received a diploma degree in business administration at the University of Applied Sciences in Mainz (Germany) in 2006.

<u>Professional experience:</u>

- Head of the IT Division at a health insurance company in Germany
- PhD candidate at BA School of Business and Finance in Riga, Latvia since 2022
- Scientific assistant since 2024

<u>Research interest:</u>

The workforce is a decisive factor for a successful digital change. She investigates sustained learning as a dynamic capability in digitally changing work environments in the healthcare sector.

Sandra Starke
Leiterin IT-Betrieb bei AOK Rheinland-Pfalz/Saarland

I. Introduction

Digital 2025, 06.-10.07.25

II. Research aim

Develop an integrated model visualising how self-determined motivation and innovation adoption affects digital competence and learning

Provide empirical evidence for digital competency development and learning triggers

III. Theoretical framework

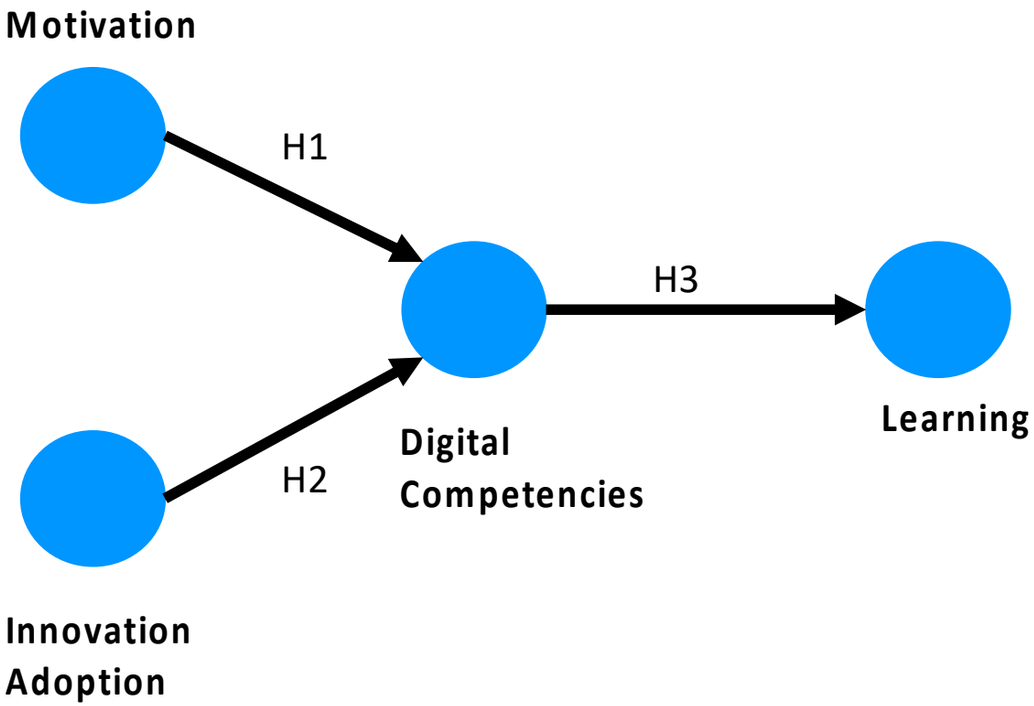
Self-determined Motivation is defined as the motivation caused by fulfilling the basic needs for autonomy, competence and relatedness (Deci and Ryan, 1985)

Digital Competence is defined as "a set of knowledge, skills and attitudes" needed for "personal fulfilment, active participation, and employment" (European Comission, 2018).

Diffusion of Innovation is defined as the stages of how innovation spreads over time, depending on the perceived attributes of the innovation (Rogers, 1962)

Learning is defined as "…the process of improving actions through better knowledge and understanding" (Fiol and Lyles, 1985).

IV. Research model and hypothesis



H1: An individual`s self-determined motivation has a positive effect on digital competences in the context of digital transformation.

H2: Individual innovation adoption positively affects digital competencies in the context of digital transformation.

H3: Digital competencies mediate the effect of motivation and innovation adoption on learning.

VI. Methodology

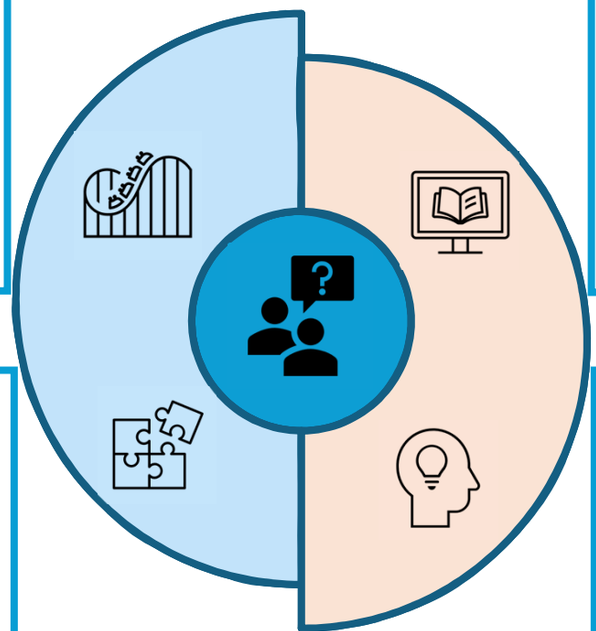
Quantitative		
Method / Tool	**Topic**	**Source / justification**
Survey placed in LinkedIn and Prolific	152 Respondents 52% female, 47% male, 1% divers 47% aged between 25-40 23% managers, 27% experts/seniors	Dwivedi et al., 2023
Jamovi Smart PLS 4	Confirmatory Factor Analysis PLS-SEM	Hair, Ringle and Sarstedt, 2011
Structural equation modelling	Multivariate analysis	Roca and Gagné 2008

VII. Questionnaire & Constructs

Self-determined Motivation
9 items
Sample item: I feel like I am free to decide for myself to build digital skills.

Meske and Junglas, 2021

Digital Competence
15 items
Sample item: What level of skill do you think you have on searching for information online and work with this data?
Biggins et. al, 2017



Innovation adoption
15 items
Sample item: New digital technology makes it easier to accomplish my tasks.

Raman et. al, 2021

Learning
6 items
Sample item: The company I am currently working motivates the employees for continuous education and learning.
Arranz et. al, 2019

VIII. Analysis & Results

(Navarro and Foxcroft, 2024;
Hair et al., 2011;
Hair et al., 2021)

Digital 2025, 06.-10.07.25

CMB: Principal component analysis (25 %)

Outer model

- RMSEA 0.0782 indicates a good model fit
- Internal consistency:
  Cronbach´s alpha > 0.7 for all items
- Item reliability
  Average Variance extracted AVE > 40 %
  for all items

Inner model:

- Path coefficients and significance analysis (p-value)
- Predicting the power of the model (R^2)

VIII. Analysis & Results

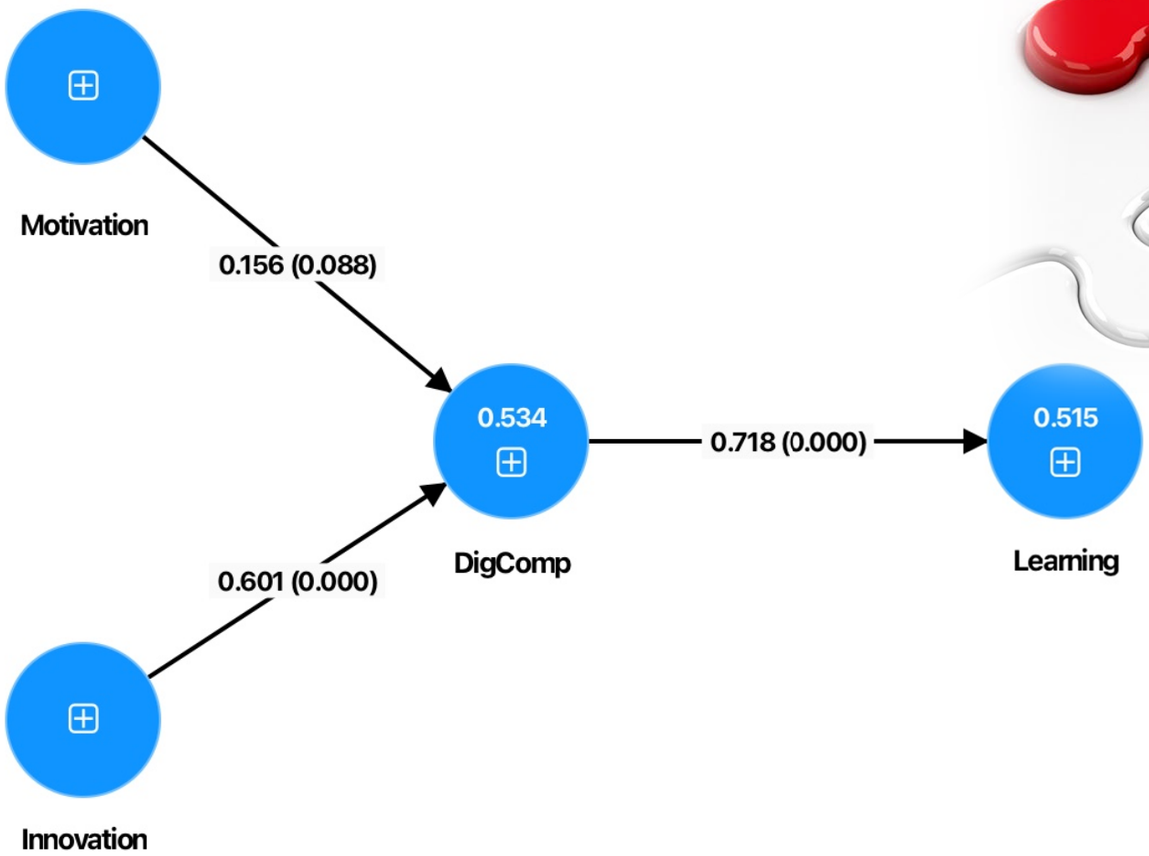
Outer Model

Internal consistency and convergent validity is given for all factors

Construct	Cronbach´s alpha	Average variance extracted
Motivation	0.800	0.458
Innovation adoption	0.870	0.404
Digital Competence	0.900	0.420
Learning	0.788	0.476

VIII. Analysis & Results

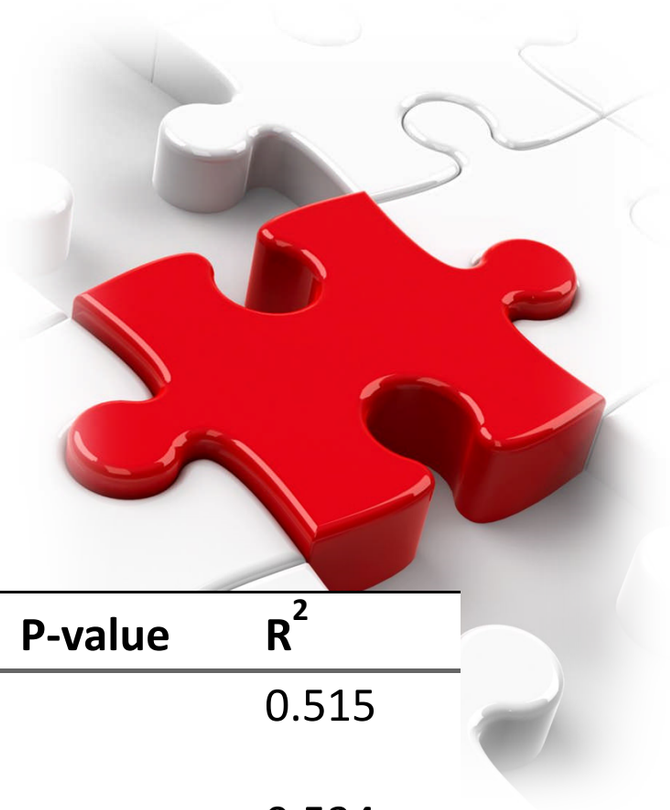
Inner Model



This model explains 53 % of building Digital Competence and 52 % of Learning

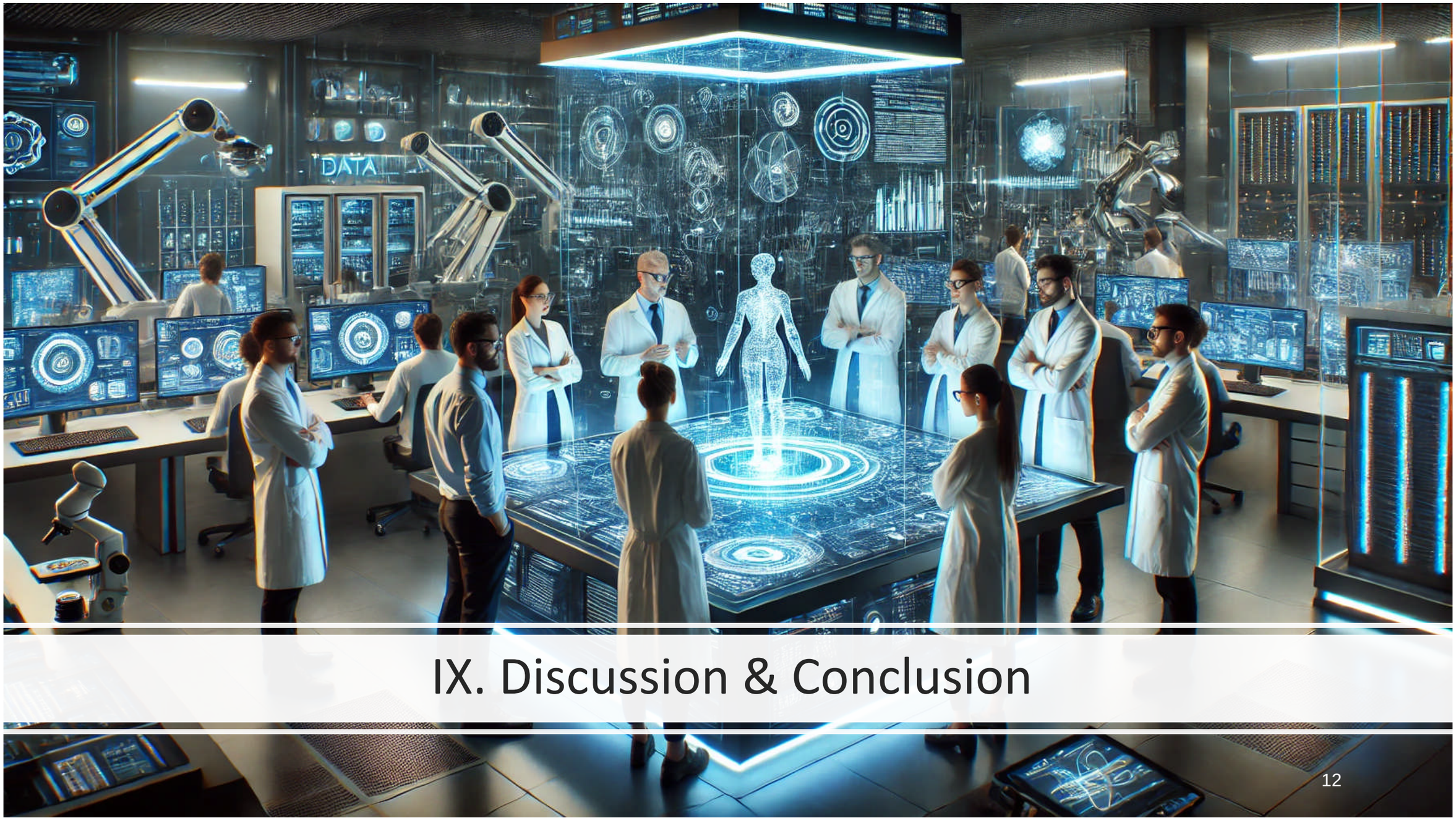
VIII. Analysis & Results

Inner Model



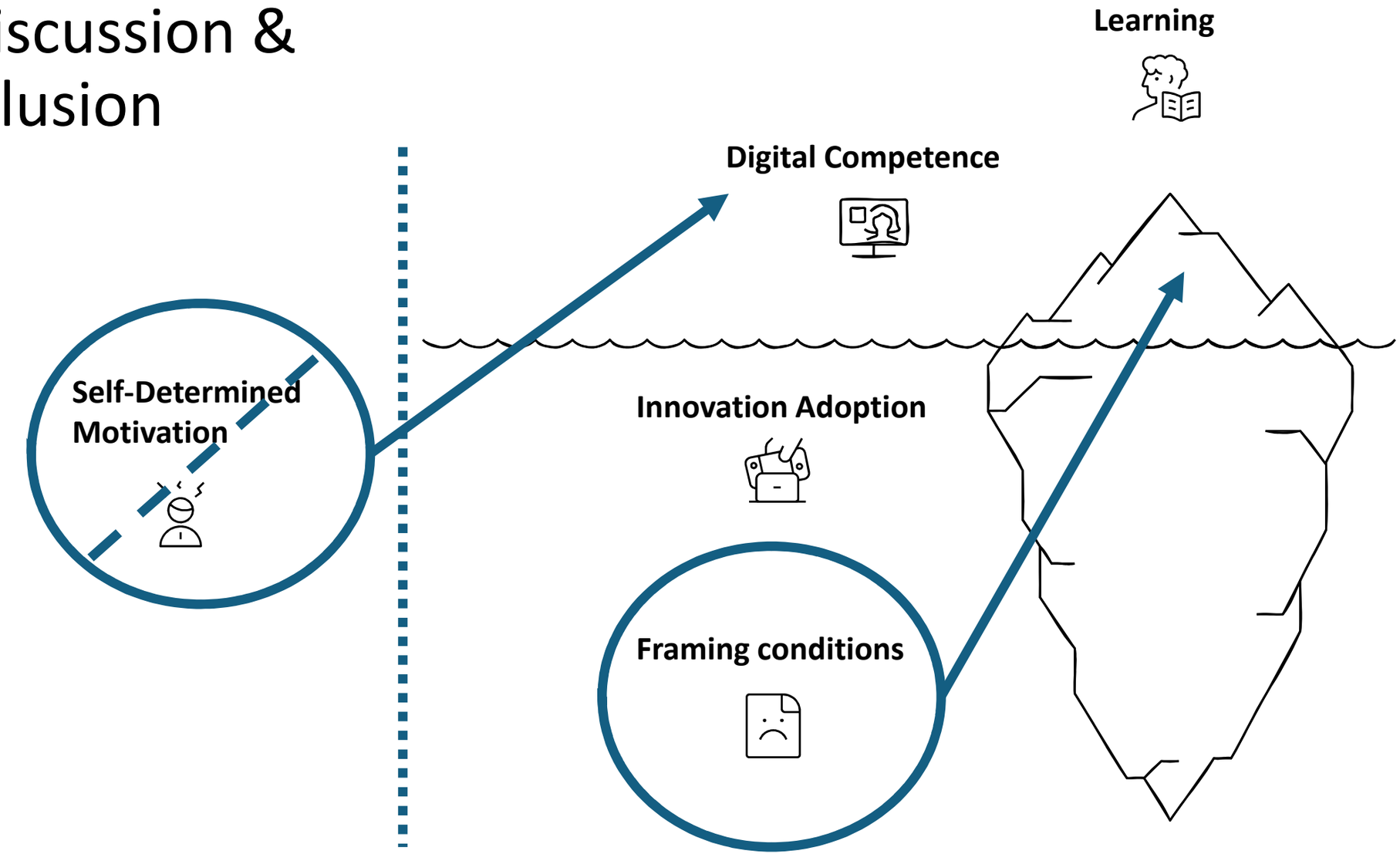
Path	Path coefficient	P-value	R^2
Learning			0.515
Digital Competence			0.534
Motivation → Comp	0.156	0.088	
Innovation → Comp	0.601	0.000	
Comp → Learning	0.718	0.000	

H1 rejected
H2 confirmed
H3 confirmed



IX. Discussion & Conclusion

IX. Discussion & Conclusion



IX. Discussion & Conclusion

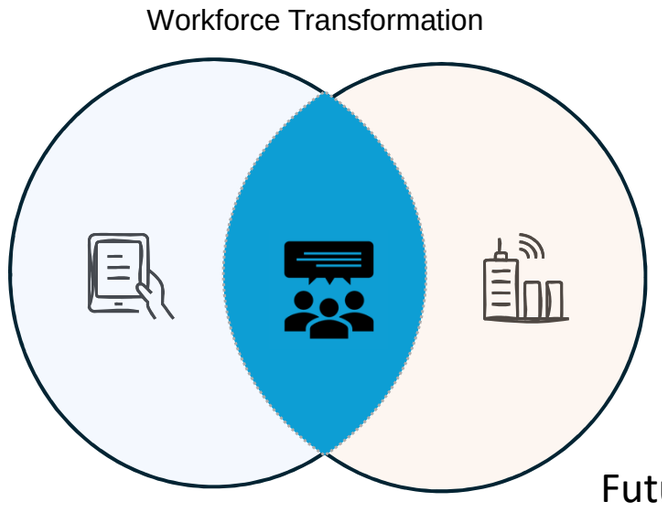
- Employees must be prepared to use digital technology confidently and be open to innovation
- Organisations must adopt and enable employees to participate
- New knowledge and mindsets needed to transform current workforce

X. Contribution & Limitation

Testing the Self-Determination Theory in Digital Work Environments

Extending Diffusion of Innovation Theory. Introducing Digital Competencies

Introducing Sustained Learning as a Dynamic Capability



Limitations:

- Small sample sizes
- Individuals´ perceptions
- Participants recruited via social media and crowd-sourcing platform

Future Research Agenda:

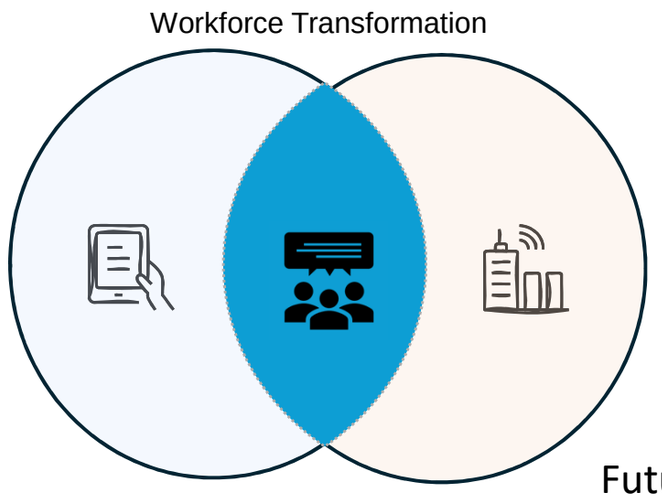
- Investigate learning
- Develop measures

X. Contribution & Limitation

Testing the Self-Determination Theory in Digital Work Environments

Extending Diffusion of Innovation Theory. Introducing Digital Competencies

Introducing Sustained Learning as a Dynamic Capability



Limitations:

- Small sample sizes
- Individuals´ perceptions
- Participants recruited via social media and crowd-sourcing platform

Future Research Agenda:

- Investigate learning
- Develop measures

BANKU AUGSTSKOLA

BA SCHOOL OF BUSINESS AND FINANCE

RISEBA

Biznesa, mākslas un tehnoloģiju AUGSTSKOLA

Finansē Eiropas Savienība NextGenerationEU

2027 Nacionālais attīstības plāns

LEARN HOW DIGITAL TRANSFORMATION COULD DIFFUSE INTO ORGANISATIONS:

Impact of Motivation and Innovation on Digital Competences and Learning

Sandra Starke
Leiterin IT-Betrieb bei AOK Rheinland-Pfalz/Saarland

THANK YOU FOR YOUR ATTENTION!

Questions?

Contact: sandra.starke@ba.lv

References

[1] E. L. Deci and R. M. Ryan, *Intrinsic Motivation and Self-Determination in Human Behavior*. Boston, MA: Springer US, 1985. doi: 10.1007/978-1-4899-2271-7.

[2] E. M. Rogers, *Diffusion of Innovations*. New York: Free Press, 1962.

[3] J. Hartmann, M. Heckner, and U. Plach, “Future Skills bei Studierenden - Messung und Einflussfaktoren ,” *Die Neue Hochschule*, pp. 24–27, Jun. 2023, doi: https://doi.org/10.5281/zenodo.10057167.

[4] S. Carretero, R. Vuorikari, and Y. Punie, “The Digital Competence Framework for Citizens,” 2017.

[5] U.-D. Ehlers, *Future Skills*. Wiesbaden: Springer Fachmedien Wiesbaden, 2020. doi: 10.1007/978-3-658-29297-3.

[6] G. Vial, “Understanding digital transformation: A review and a research agenda,” *The Journal of Strategic Information Systems*, vol. 28, no. 2, pp. 118–144, Jun. 2019, doi: 10.1016/j.jsis.2019.01.003.

[7] D. J. Teece, G. Pisano, and A. Shuen, “Dynamic capabilities and strategic management,” *Strategic Management Journal*, vol. 18, no. 7, pp. 509–533, Aug. 1997, doi: 10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z.

[8] K. S. R. Warner and M. Wäger, “Building dynamic capabilities for digital transformation: An ongoing process of strategic renewal,” *Long Range Plann*, vol. 52, no. 3, pp. 326–349, Jun. 2019, doi: 10.1016/j.lrp.2018.12.001.

[9] D. Ellström, J. Holtström, E. Berg, and C. Josefsson, “Dynamic capabilities for digital transformation,” *Journal of Strategy and Management*, vol. 15, no. 2, pp. 272–286, 2022, doi: 10.1108/JSMA-04-2021-0089.

[10] M. M. Crossan, H. W. Lane, R. E. White, and L. Djurfeldt, “Organizational Learning: Dimensions for a Theory,” *The International Journal of Organizational Analysis*, vol. 3, no. 4, pp. 337–360, Apr. 1995, doi: 10.1108/eb028835.

References

[11] C. M. Fiol and M. A. Lyles, “Organizational Learning,” *Academy of Management Review*, vol. 10, no. 4, pp. 803–813, Oct. 1985, doi: 10.5465/amr.1985.4279103.

[12] W. H. Starbuck, A. Greve, and B. L. T. Hedberg, “Responding to Crises,” *Journal of Business Administration*, pp. 111–137, 1978, [Online]. Available: http://ssrn.com/abstract=2708264

[13] Z. Wang and A. Panaccio, “A Longitudinal Investigation of the Changes in Work Motivation and Employees’ Psychological Health,” *Adm Sci*, vol. 12, no. 4, p. 193, Dec. 2022, doi: 10.3390/admsci12040193.

[14] W. Schaufeli, “Engaging Leadership: How to Promote Work Engagement?,” *Front Psychol*, vol. 12, Oct. 2021, doi: 10.3389/fpsyg.2021.754556.

[15] N. Arranz, M. F. Arroyabe, J. Li, and J. C. F. de Arroyabe, “An integrated model of organisational innovation and firm performance: Generation, persistence and complementarity,” *J Bus Res*, vol. 105, pp. 270–282, Dec. 2019, doi: 10.1016/j.jbusres.2019.08.018.

[16] J. Lee, H.-D. Song, and A. Hong, “Exploring Factors, and Indicators for Measuring Students’ Sustainable Engagement in e-Learning,” *Sustainability*, vol. 11, no. 4, p. 985, Feb. 2019, doi: 10.3390/su11040985.

[17] V. Bikse, I. Lusena-Ezera, P. Rivza, and B. Rivza, “The Development of Digital Transformation and Relevant Competencies for Employees in the Context of the Impact of the COVID-19 Pandemic in Latvia,” *Sustainability*, vol. 13, no. 16, p. 9233, Aug. 2021, doi: 10.3390/su13169233.

[18] S. Iyanna, P. Kaur, P. Ractham, S. Talwar, and A. K. M. Najmul Islam, “Digital transformation of healthcare sector. What is impeding adoption and continued usage of technology-driven innovations by end-users?,” *J Bus Res*, vol. 153, pp. 150–161, 2022, doi: 10.1016/j.jbusres.2022.08.007.

[19] S. Talwar, M. Talwar, P. Kaur, and A. Dhir, “Consumers’ resistance to digital innovations: A systematic review and framework development,” *Australasian Marketing Journal*, vol. 28, no. 4, pp. 286–299, Nov. 2020, doi: 10.1016/j.ausmj.2020.06.014.