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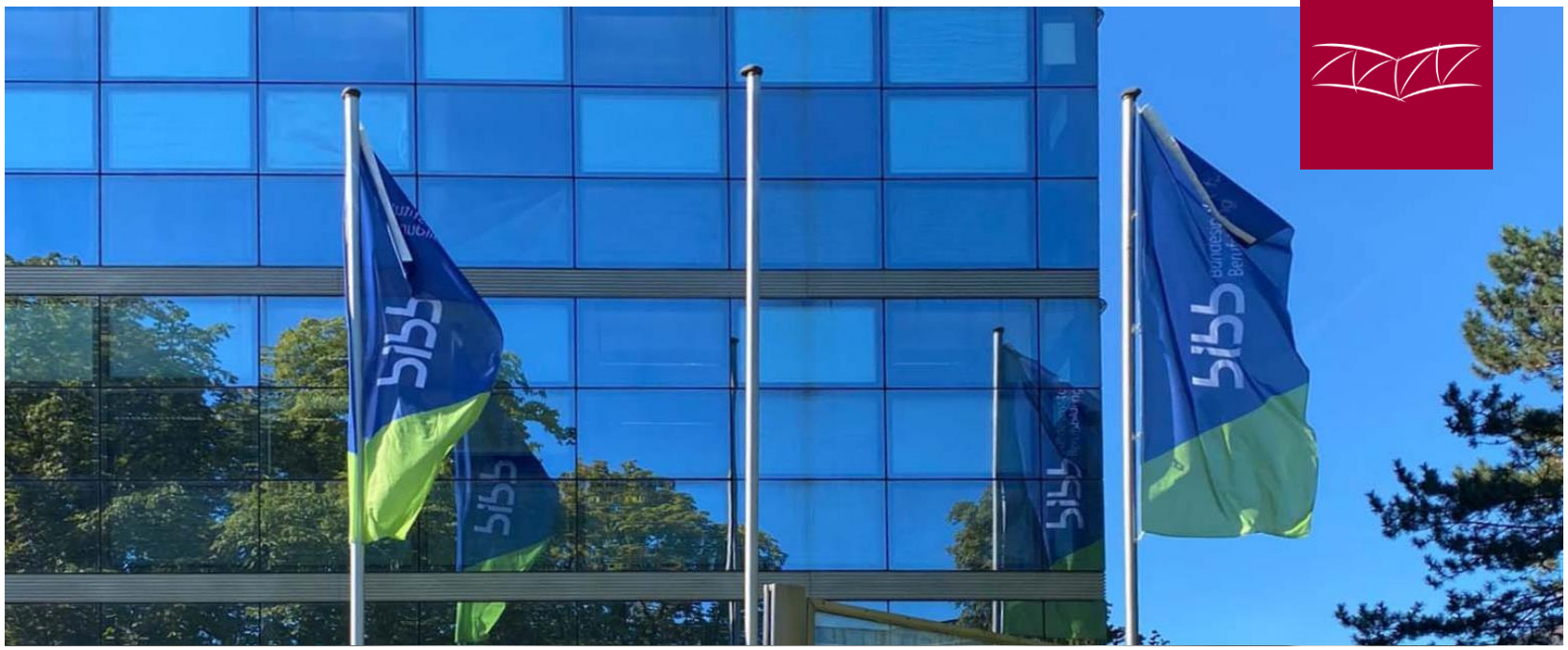

Digital tools in German Vocational Schools – AI and motivation

Dr. Daniel König – SDT Conference Geneve (01.07.2026)

Helmut Schmidt Universität
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Zentrum für Digitalisierungs- und Technologieforschung der Bundeswehr

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Overview

- Digitalization and work/life
- Research project KoDiA: Questions and Methods
- Results
- Summary

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Ongoing digitalization of work and life

Digital competences …

- **are neccessary for a participation in work and life.**
- **need to be available to everyone.**

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Project Design

Research Questions

- How do teachers at vocational schools promote the digital competence of vocational students?

- What interests and needs do vocational students have when it comes to the use of digital media in the classroom and their participation in a digitalized world?

Methods

Mixed methods approach:

- four exploratory focus group discussions 20 VET teachers in Hamburg, Germany
- Online survey with 2,329 vocational students in Hamburg, Germany

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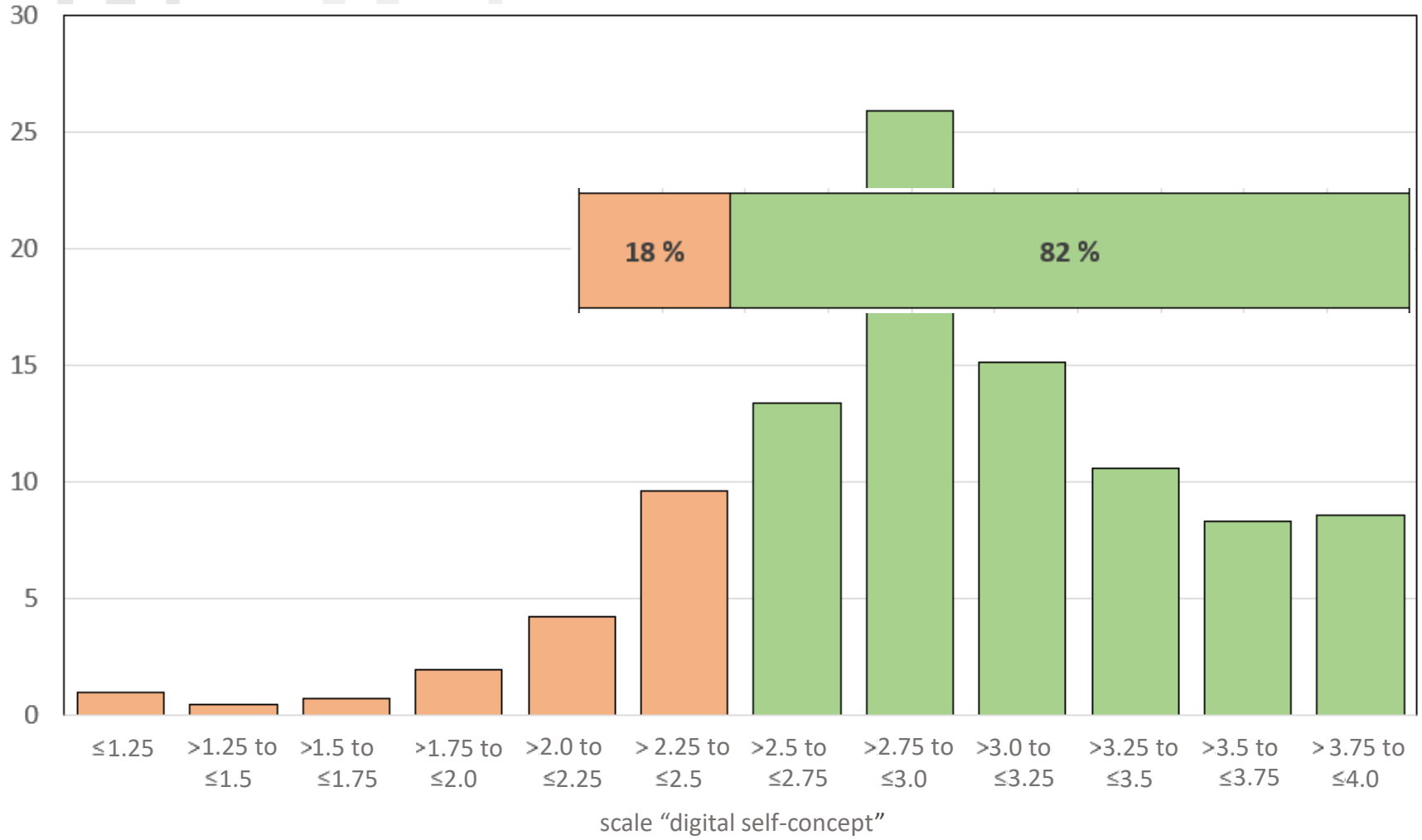
General digital self-concept

(cf. Schauffel et al. 2021)



n = 2,309, $\bar{x}$ = 3.0 (scale: 1-4)
Cronbach‘s Alpha = .91

negative positive

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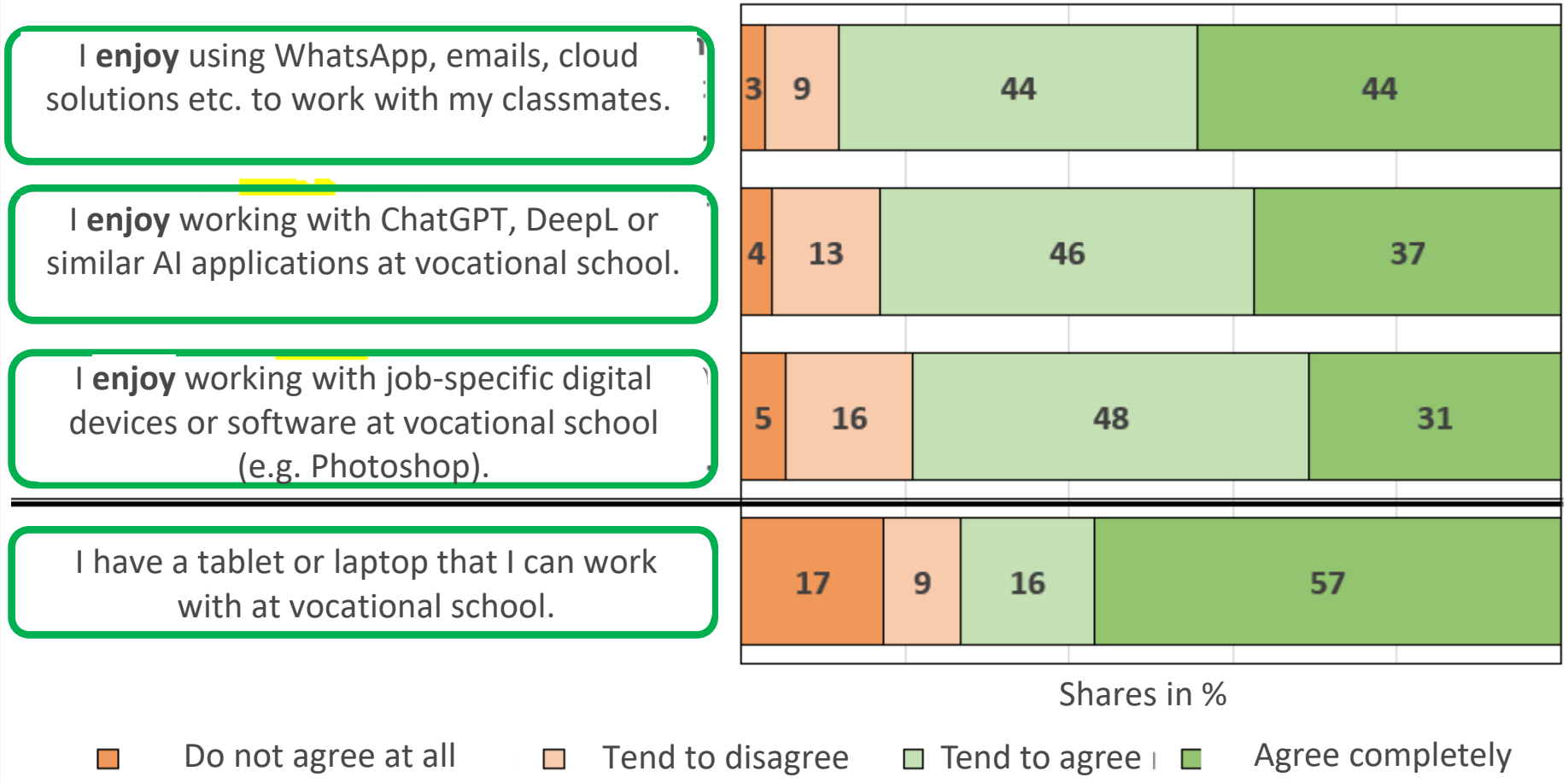
Use of digital technologies in vocational schools



n = 2,123, 1,070, 768 and 2,329

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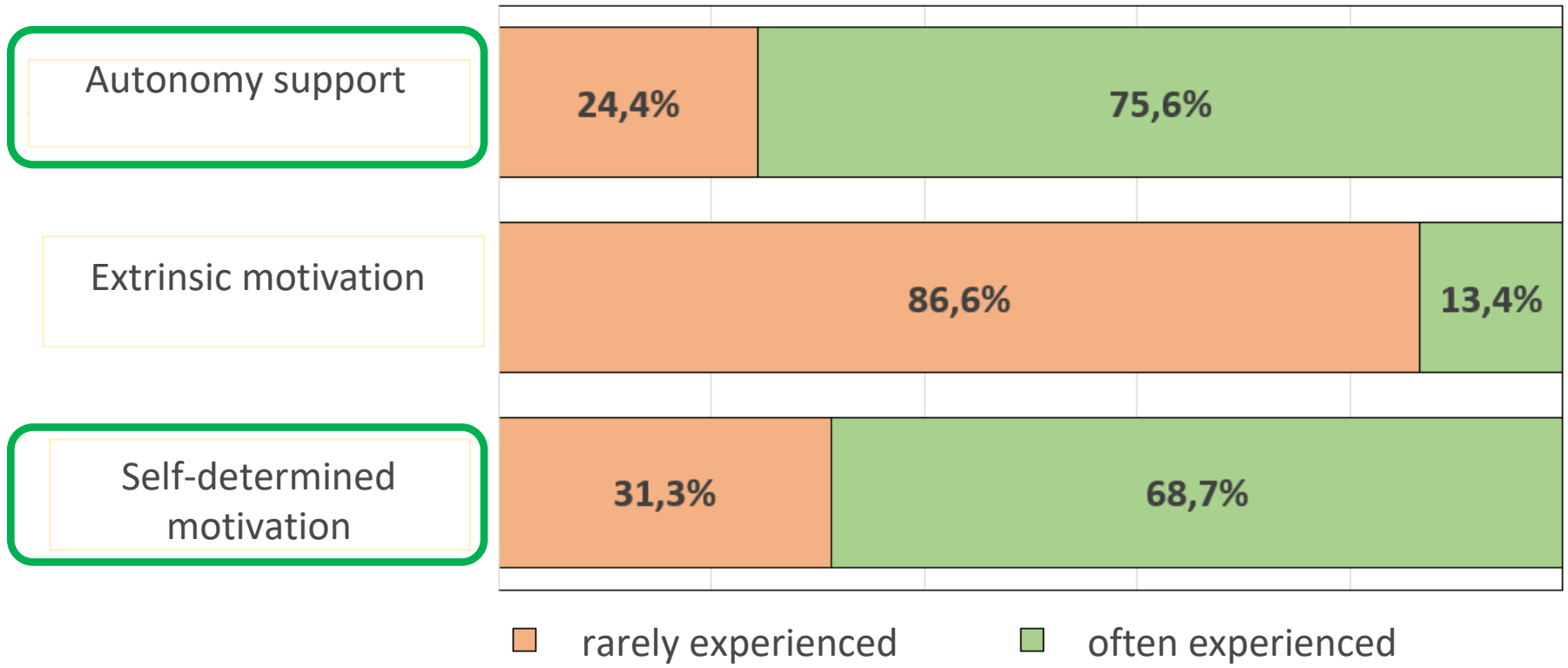
Self-determination Theory



n = 2,311, 2,321, 2,322
means $\bar{x}$= 2.9; $\bar{x}$= 1.9; $\bar{x}$=2.9
(scale: 1-4)

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And then also AI....

The following competences are becoming increasingly relevant for pupils, trainees, students and employees in particular:

- Basic IT knowledge that goes beyond pure application knowledge and a **basic understanding of AI technologies**
- New understanding of the **interaction between humans and technology**, especially with regard to ethical and social aspects
- Process-oriented, **holistic thinking and acting**
- Lifelong learning and **"learning to learn"**

(Source: ACATEC Platform Learning Systems)

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Results

Theoretical assumptions confirmed (cf. Deci & Ryan 2008):	What does this mean for VET classrooms?
Experiencing autonomy, competence and social relatedness in VET classrooms **promotes self-determined and instrinsically motivated learning** with digital technologies.	The **use of familiar digital technologies in VET training contexts** (e.g. WhatsApp, cloud solutions, AI applications, tablets) and the use of familiar platforms in VET classrooms (such as YouTube, podcasts, memes, tiktoks etc.) increases motivation, as well as students‘ digital self-concepts.
Intrinsically motivated experiences with digital technologies & higher school leaving certificates have a positive influence on the digital self-concept.	**VET teachers** are confronted with a **variety of digital competence levels and frequently changing digital tools**. >> Not all VET teachers are currently promoting digital competences in VET classrooms.
Overall insights:	**Promoting intrinsic motivation** in VET classrooms can help students **acquire digital competences**.

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I'm looking forward to your questions and comments.

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