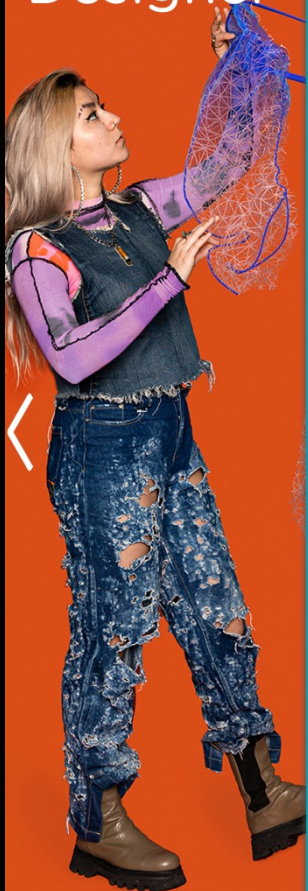


A hand is shown adjusting a small globe on a stand. In the background, there are several other globes of different colors (red, blue, green) on stands, suggesting a classroom or laboratory setting. The text is overlaid on this scene.

Future Skills Zukunftskompetenzen für die Welt von heute?!

Prof. Dr. Ulf-Daniel Ehlers

Virtual Fashion Designer



Digital Detox Dietitian

x



Is this your job?
take the jobtest

apply

Offline is the new luxury, so we heard. New technologies have radically changed our daily life and compromised the balance between our working and private lives. As a digital detox dietitian, you know exactly how much digital technology your client needs and you give professional advice with a personal approach. Together you seek for an appropriate treatment that suits the needs of the patients, without losing themselves in it.

Shiva Therapist



Supersma Handyman



Organ Designer





A large white banner with the text "MORGEN IST DIE FRAGE" is stretched across the front of a multi-story building. The building has a light-colored facade and several windows. The banner is held up by thin poles. The scene is set against a clear blue sky, with some green foliage visible in the foreground and to the right.

MORGEN IST DIE FRAGE

narrative.

zukünftige gegenwarten

gegenwärtige zukünfte

(Luhmann 1976)

A crystal ball is the central focus, resting on a dark, moss-covered rock. The crystal ball's surface is highly reflective, showing a distorted, inverted image of a landscape. In the reflection, a person is visible standing in a field, surrounded by trees. The sky is blue with white clouds, and the overall scene is captured in a cinematic, low-key lighting style. The background is dark and out of focus, suggesting a natural outdoor setting.

**Was ist das
Masternarrativ der Zukunft
der Hochschulbildung?**



Bildung als Ideengeschichte



Transformation –
als Gestaltungs-
prinzip für
Zukunft.

On the verge of next society

A hand in a suit sleeve points upwards towards a glowing white line that curves across the frame. The background is dark with abstract, swirling blue patterns. A laptop is visible in the lower left, and a bright light flare is at the bottom center.

Quelle: Peter Altmann

Digital



Nächste
Gesellschaft



Moderne
Gesellschaft



Buchdruck

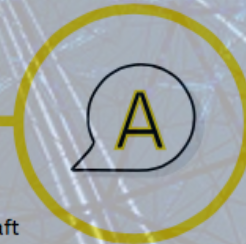
Schriftlich



Antike
Gesellschaft



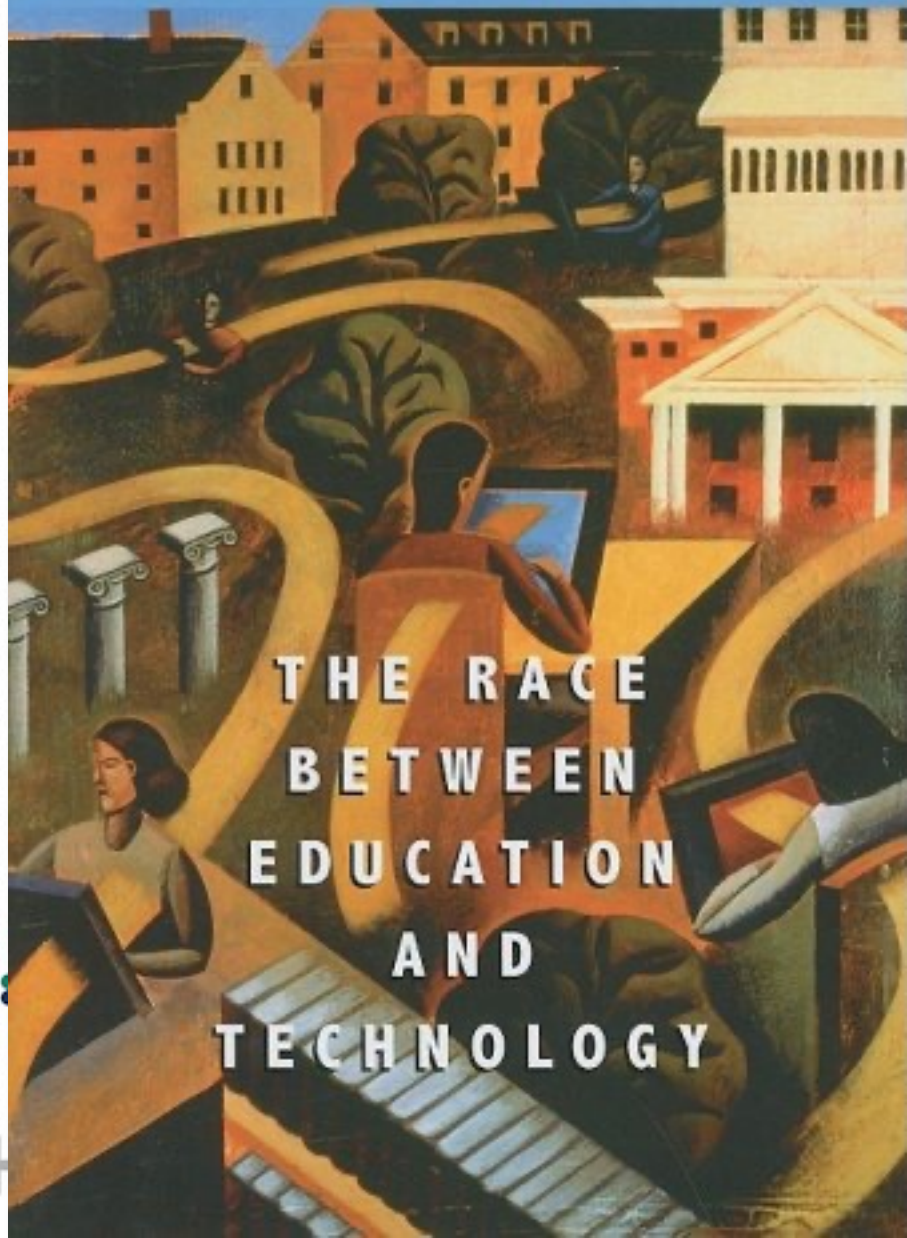
Tribale
Gesellschaft



Mündlich

(Dirk Baecker 2014)

Claudia Goldin & Lawrence F. Katz



THE RACE BETWEEN EDUCATION AND TECHNOLOGY

Past

DIGITAL REVOLUTION

Prosperity

Social
pain

Future
Technology

Future
education

Incremental
Change

Future
education

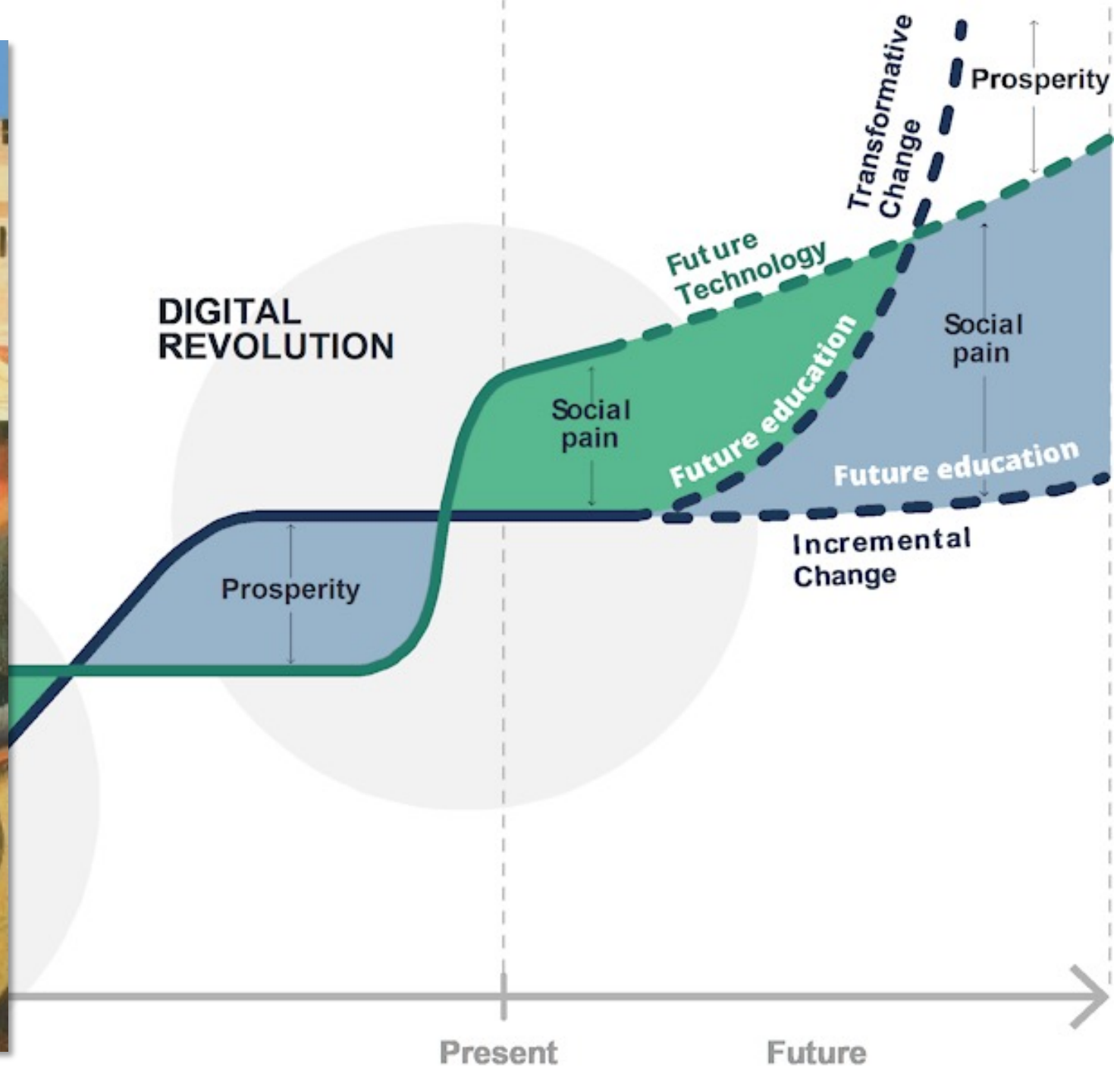
Prosperity

Social
pain

Transformative
Change

Present

Future



A flock of birds is flying in a V-formation across a sky filled with soft, white clouds. The birds are small, dark silhouettes, and their path curves from the top left towards the bottom right. The overall tone of the image is serene and hopeful.

Emergenz



Future Skills

The future of learning and higher education

Future Skills Ansätze international (2008-2018)

- Starker Fokus auf Digitalkompetenzen
- Oft stark auf Employability konzentriert
- Wenig empirisch fundiert
- Keine Verankerung in bildungstheoretischen Konzeptionen

(Ehlers 2019)

	Nr. of matches	The OECD Future Skill Framework	PISA Key Competence Framework	European Commission Future Learning Model	OECD Key Competencies	OECD Global Competencies	WEF 21st Century Skills	P.21 Partnership for 21st century learning	Tuning Transversal Skill Model	AEGEE Transversal Skills and Competencies Policy Paper	21st century stem model	National Research Council Model: Skills for Work and Life	21st skills envision experiences	Harvard Global Citizenship education	Graduate Employability 2.0	Social and Emotional Learning Methodology	The future of Skills. Employment in 2030	Future Skills Model NextSkills
Subject oriented skills																		
critical thinking	10				1	1	1	1	1		1	1	1			1	1	1
creativity	11	1	1	1									1				1	1
digital knowledge and skills	6								1	1	1							1
entrepreneurship	6	1		1				1		1								1
emotional intelligence	4				1	1												1
environmental knowledge and skills	9		1		1		1	1	1	1			1					1
ethical responsibility	5	1		1		1		1										1
perseverance/grit	4					1	1											1
reflective thinking	3	1								1								1
resilience	3						1											1
entrepreneurship skills	5				1				1	1		1						1
global citizenship	3					1		1					1					
global mindedness	2				1	1												
intercultural competence	2	1								1								
ambiguity and uncertainty	2			1														1
career readiness	2			1		1												
conduct life plans, personal development	2		1							1								
emotional intelligence	2			1					1									
compassion	1			1														
learning forward	1			1														
reconciling tensions & dilemmas	1	1																
self-awareness	1			1														
Object related skills																		
digital & data literacy	9	1			1	1	1	1				1	1				1	1
complex problem solving	7				1		1	1			1	1	1					1
digital literacy	5					1	1	1		1								1
Organisation related skills																		
communication skills (language, media, digital)	14		1		1	1	1	1	1	1	1	1	1	1	1			1
collaboration	8		1	1	1				1				1	1				1
flexibility and adaptability	5					1	1	1					1					1
innovation	8					1	1		1			1	1		1	1		1
leadership	9	1					1					1	1	1	1	1		1
learning to learn	7		1	1	1				1			1	1	1	1			1
working appropriately and autonomously	5					1				1	1	1	1					

Future Skills

The future of learning
in higher education

Future Skill Profile

- 17 Profile auf Basis qualitativer Forschung
- Jedes Profil enthält weitere Bezugskompetenzen



Lernkompetenz



Selbstwirksamkeit



Selbstbestimmungs-
kompetenz



Selbstkompetenz



Reflexions-
kompetenz



Entscheidungs-
kompetenz



Initiativ- und
Leistungskompetenz



Ambiguitäts-
kompetenz



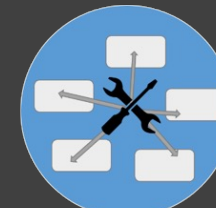
Ethische
Kompetenz



Design-Thinking
Kompetenz



Innovations-
kompetenz



Systemkompetenz



Digital-
Kompetenzen



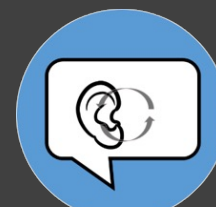
Sensemaking



Zukunfts- und
Gestaltungs-
kompetenz



Kooperations-
kompetenz



Kommunikations-
kompetenz



**Ethische
Kompetenz**



**Design-Thinking
Kompetenz**



**Innovations-
kompetenz**



Systemkompetenz



Sensemaking

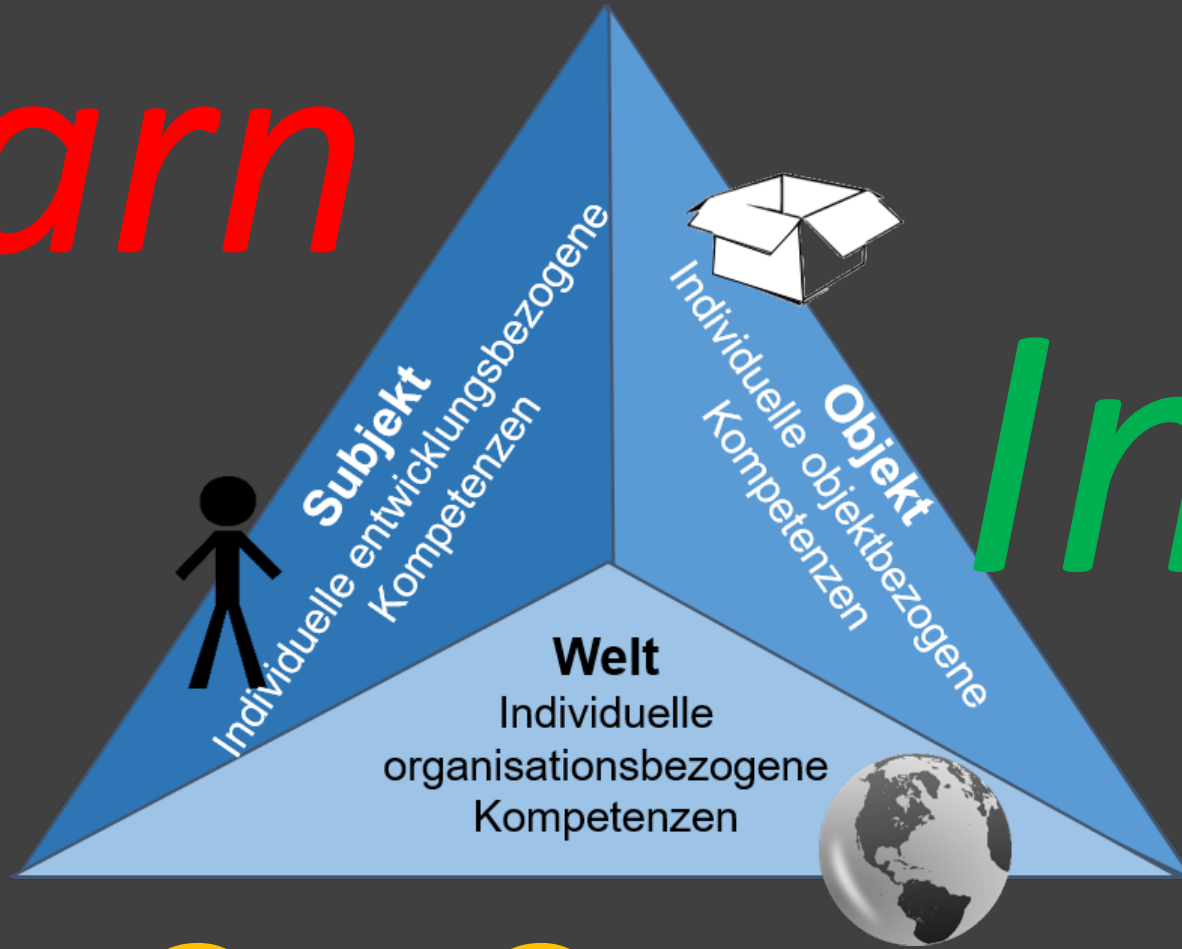


**Zukunfts- und
Gestaltungs-
kompetenz**



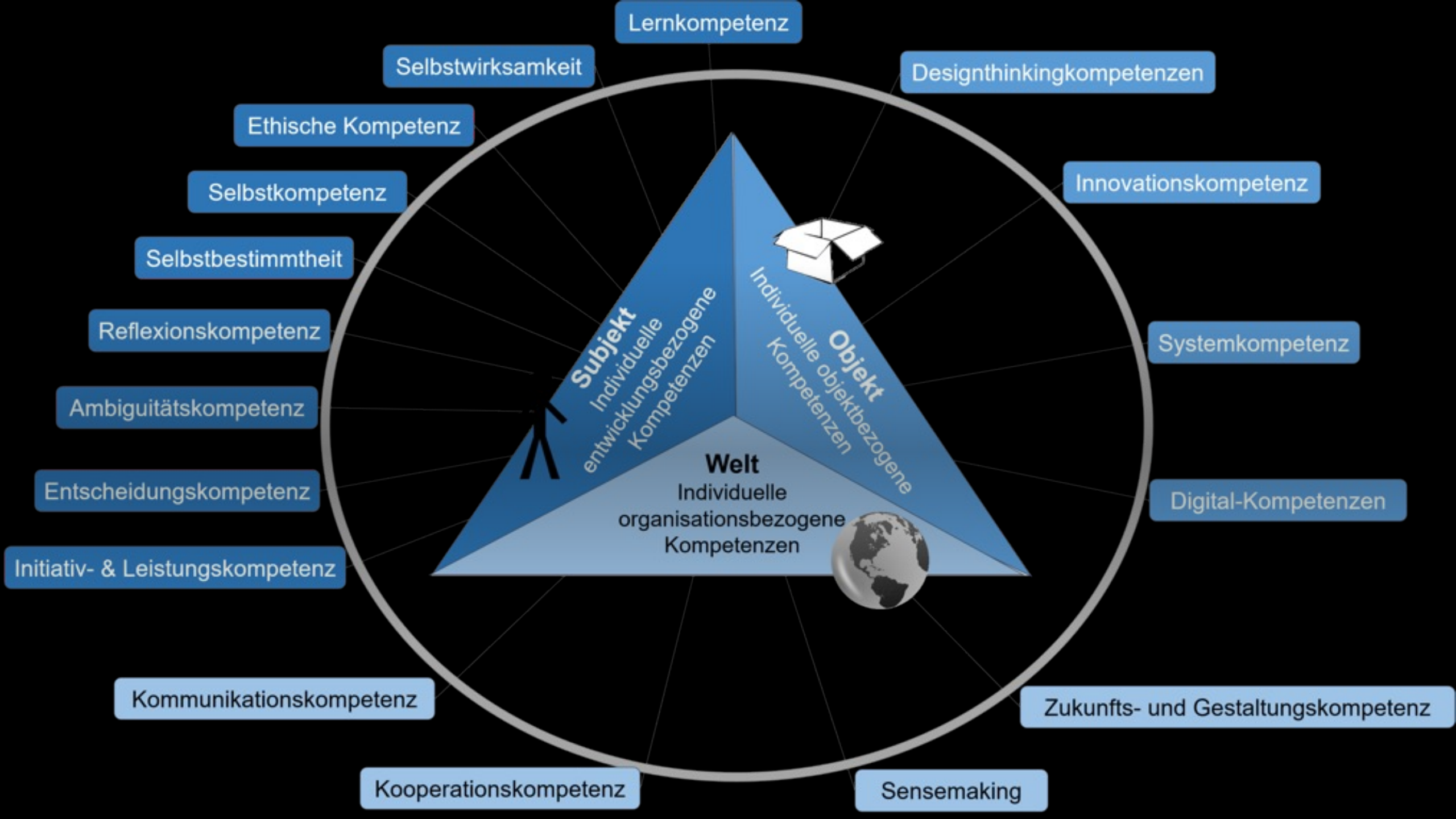
**Kooperations-
kompetenz**

Learn



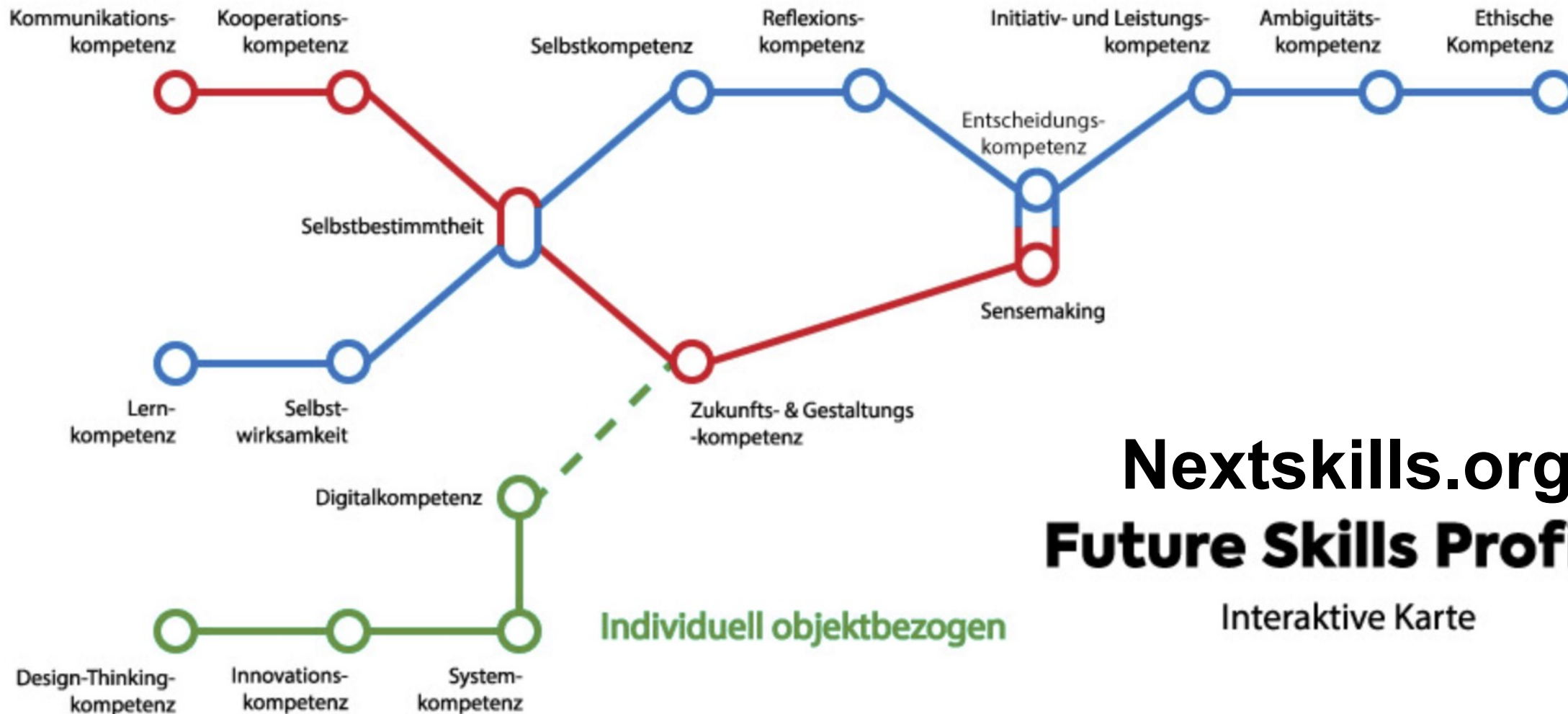
Invent

Co-Create



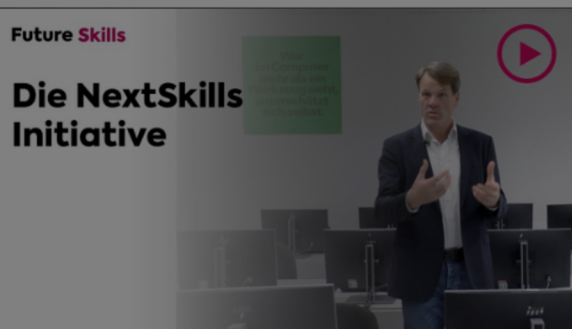
Individuell organisationsbezogen

Individuell entwicklungsbezogen



Nextskills.org Future Skills Profile

Interaktive Karte



Future Skills Book: Overview

In this Open Access book, Ulf-Daniel Ehlers analyses changed basic coordinates of higher education worldwide and asks how higher education must evolve to meet in a world of global challenges, social changes and innovation-driven, agile fields of work.

[Download Full Version English](#)

[Download Full Version Deutsch](#)



Videoseries

www.nextskills.org

Future Skills Introduction

Can graduates really be prepared for the future by predominantly acquiring knowledge? Do we already have adequate concepts for competence development in higher education? Or do we need something new, something radical? Learn more about the definition of Future Skills and opportunity.

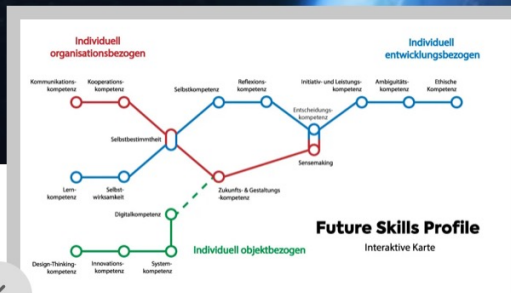
[More](#)



The Future Skills Turn

It's like having to replace the pilot in a car race, right in the middle of a steep turn and during a risky overtaking manoeuvre. The old institution of higher education is faced with the challenge of having to reinvent itself. Learn more about challenges and opportunities.

[More](#)



Future Skills Finder

An interactive map to discover the Future Skills Profiles



Future Skills Video Series

Learn about Future Skills step by step



10 Examples of Future Skills in Practice

The FutureSkills Practice Book



Triple Helix

The DNA of Future Skills



Future Skills

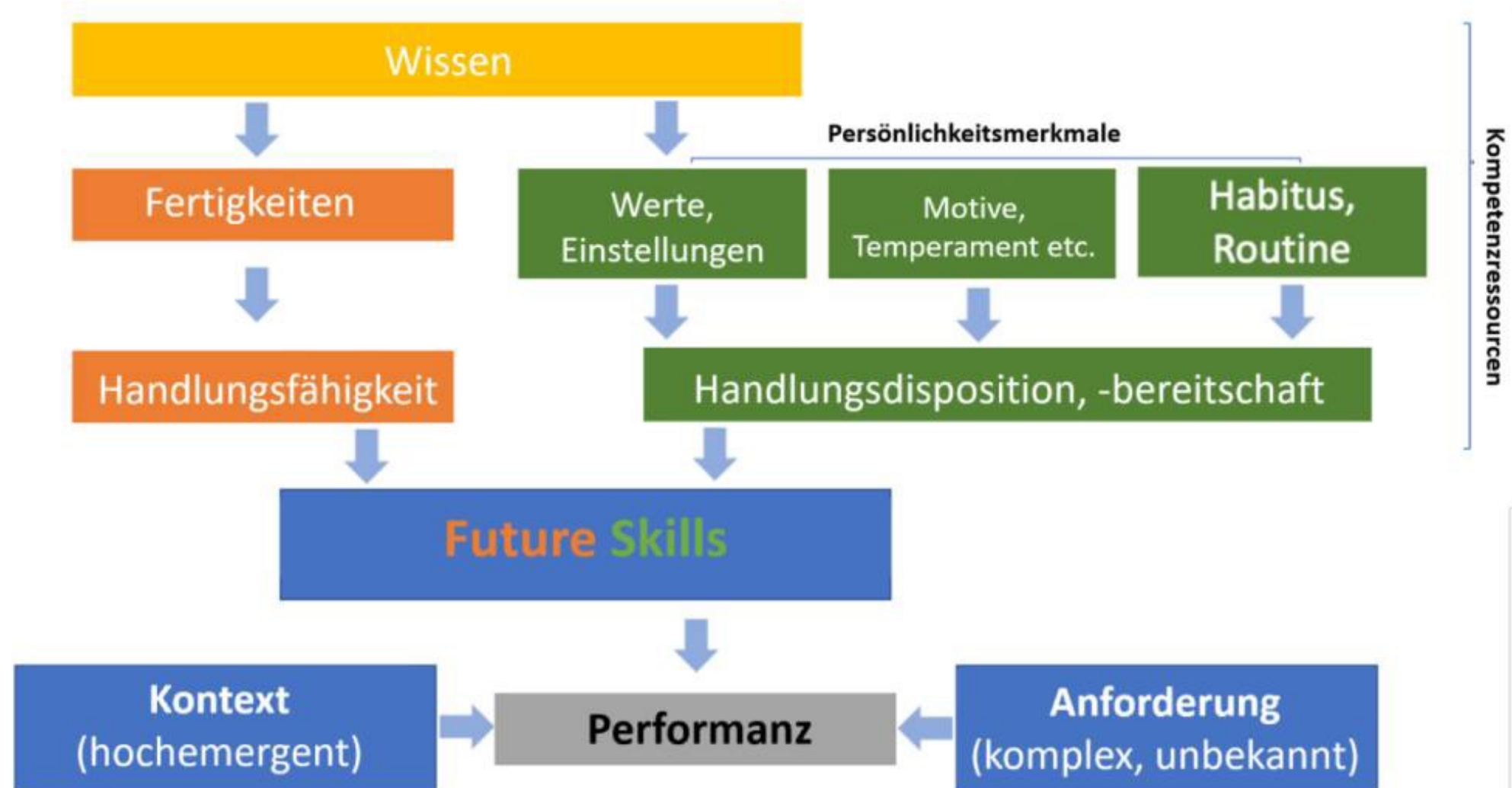
The NextSkills Initiative has developed a new framework for Future Skills with 17 Future Skill Profiles. Together with the

Future University

The NextSkills Studies call for rethinking higher education and propose clear-cut drivers for the development of the

www.nextskills.org

Future Skills als Handlungskompetenz



Perioden- system der Future Skills Elemente

Welt

Subjekt

Objekt

1

Km

Kommunikations-
kompetenz

5

Ln

Lern-
kompetenz

9

Rk

Reflexkions-
kompetenz

14

Dt

Designthinking-
kompetenz

2

Kp

Kooperations-
kompetenz

6

Sw

Selbst-
wirksamkeit

10

Ek

Entscheidungs-
kompetenz

15

In

Innovations-
kompetenz

3

Zg

Zukunfts- &
Gestaltungskmp.

7

Sb

Selbst-
bestimtheit

11

Il

Initiativ- und
leistungskmp.

16

Sy

System-
kompetenz

4

St

Sinnstiftungs-
kompetenz

8

Sk

Selbstkompetenz

12

Ak

Ambiguitätskmp.

13

Ek

Ehtische
Kompetenz

17

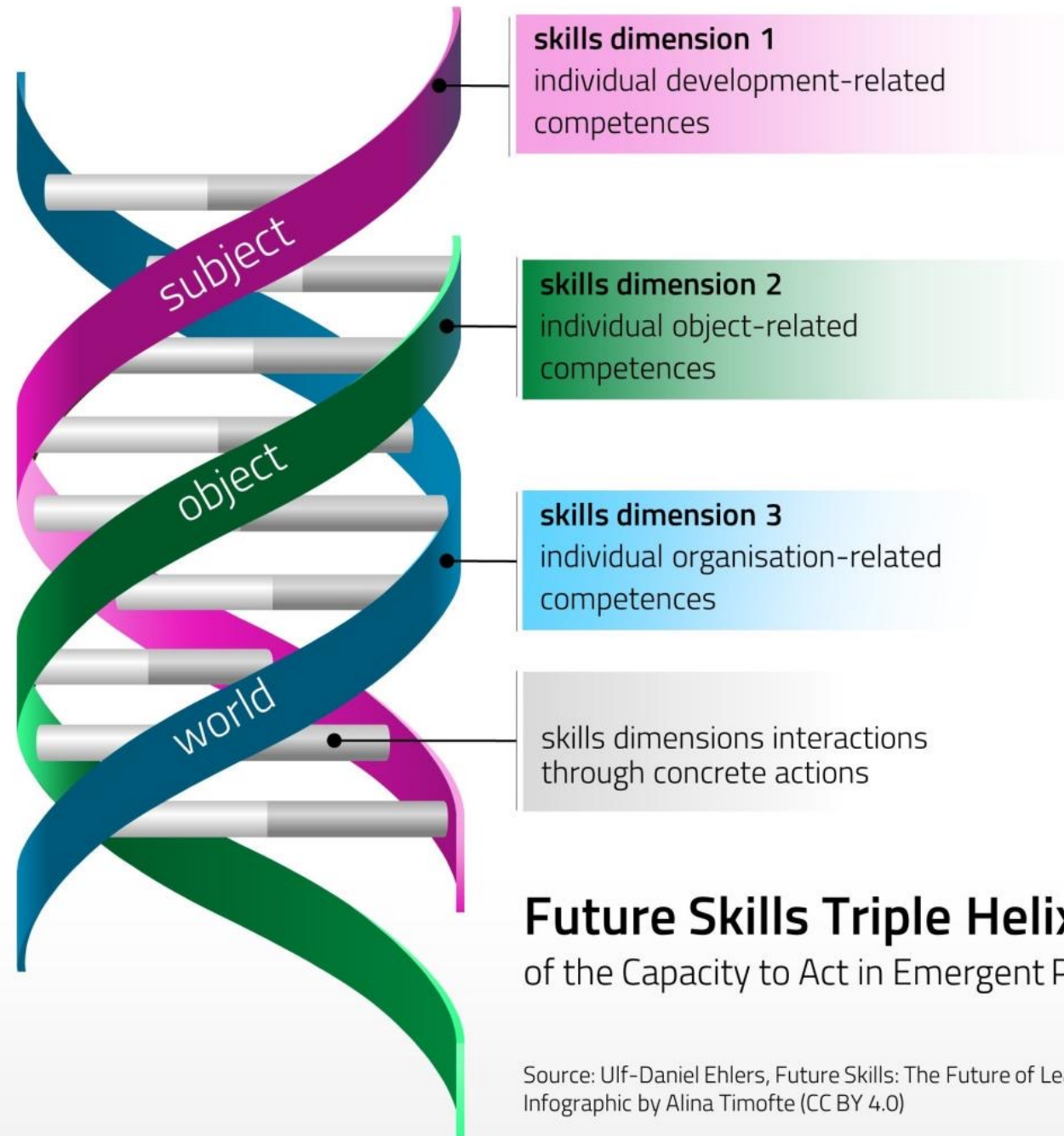
Dk

Digital-
kompetenz

Triple Helix

Die Fähigkeit, in zukünftig unbekannten und hochemergenten Situationen in professionellen und privaten Kontexten, selbstorganisiert und erfolgreich handlungsfähig zu sein, macht ein Zusammenwirken von drei unabhängigen Kompetenzbereichen notwendig.

(Ehlers 2020)



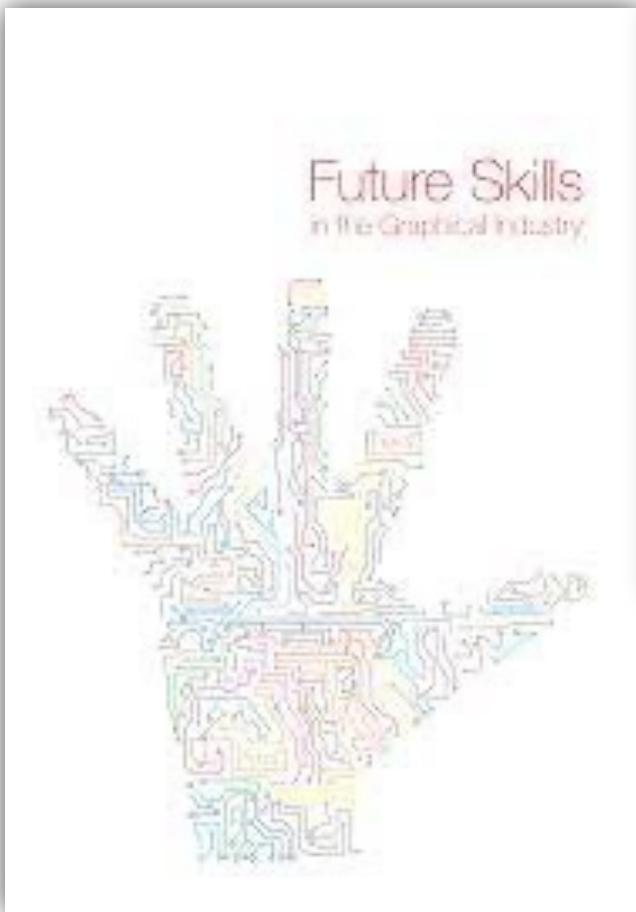
Future Skills Triple Helix Model

of the Capacity to Act in Emergent Practical Contexts

Source: Ulf-Daniel Ehlers, Future Skills: The Future of Learning and Higher Education. Infographic by Alina Timofte (CC BY 4.0)

A hand is shown adjusting a balance scale. The scale has several weights of different colors (green, orange, red) on its pans. The background is dark and out of focus.

Future Skills: Eine Metanalyse 2022



Deutschlands Arbeitsmarkt 2030
Wo am meisten gesucht wird

Fachkräftemangel: Bereiche, in denen 2030 die meisten Arbeitnehmer benötigt werden

IT	1.074.000
Top-Management	341.000
Lehrkräfte	256.000
<small>Vorschulen, Grundschule, Sekundarstufe und Förderschulen</small>	
Automatisierung von Geschäftsprozessen	235.000
Ärzte	226.000
Ingenieure	185.000
Pflegeberufe und -dienstleistungen	147.000
Werbung, PR, Marketing und Vertrieb	144.000
Operatives Management	129.000
<small>z.B. IT, Finanzen, Personal, Logistik</small>	
soziale Berufe und Berater	82.000

Annahme: normale bis schnelle Erholung von der Coronakrise bei mittlerer Technologieeinsatz in Unternehmen
 Quelle: BCG





(Mai 2022)

Free download (D&EN)

www.nextskills.org

Vier Szenarien für die Universität der Zukunft

The 'future skill' university scenario

An emerging focus on future skills radically changes the current definition of graduate attributes in higher education.



The "My-University" Scenario

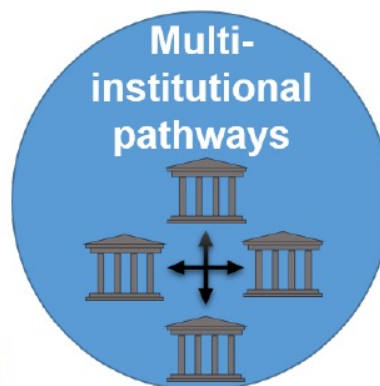
Students build their own personalized curriculum



Baseline Scenario Today: Business as usual HE institutionally bound – students enroll in the institution in which they later also graduate from, usually directly after leaving high school. Pre-defined curricula and content for study in order to achieve pre-described learning outcomes, which are related to/ derived from a system of fixed professions. Study programs rooted in academic disciplines and schools.

Multi-institutional pathways

Higher education increasingly becomes a multi-institutional study experience.



Lifelong higher learning

Higher education institutions turn towards providing offerings for lifelong higher learning services.

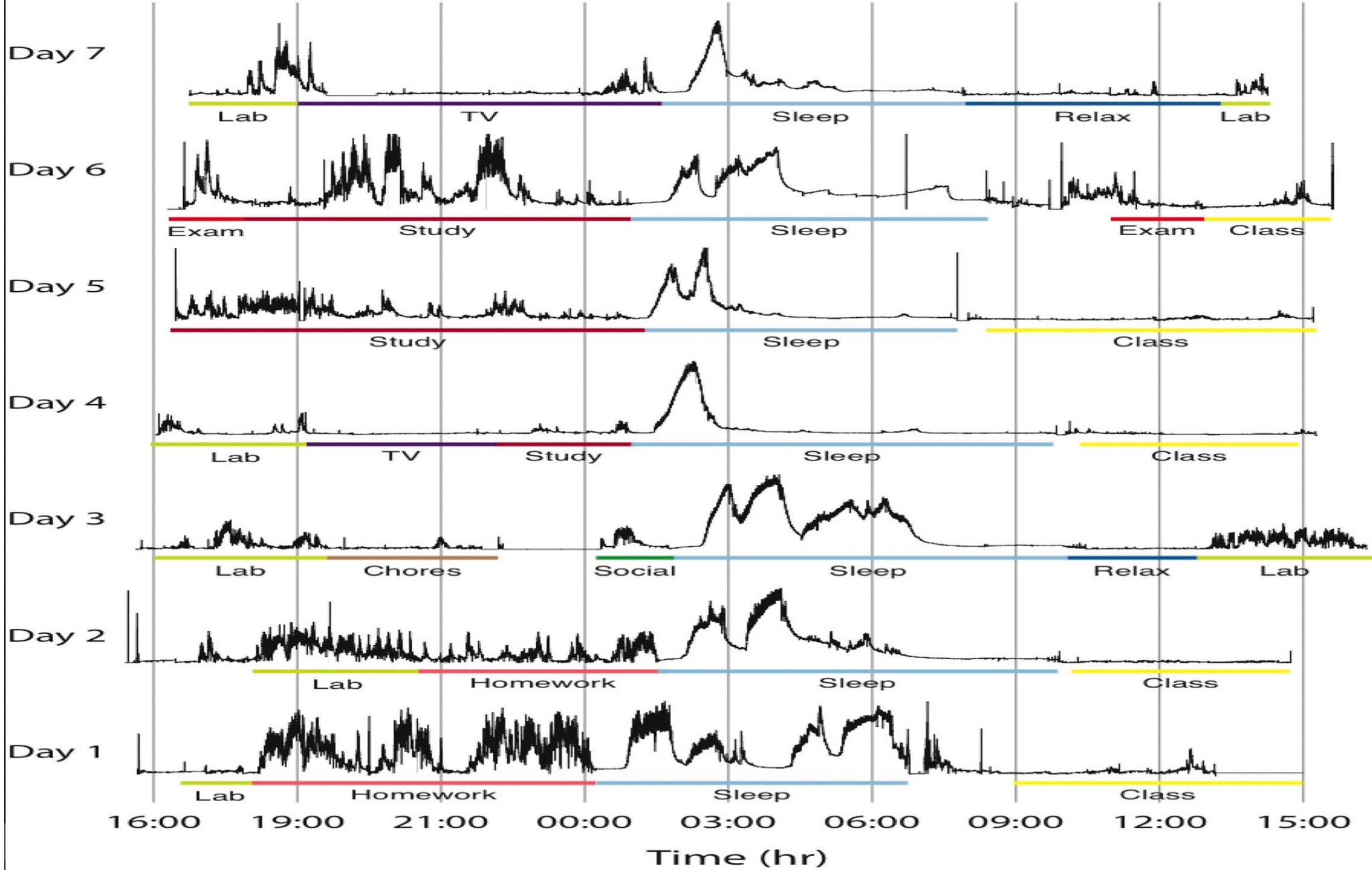


The Networked multi-institutional scenario

The Lifelong Higher Learning Scenario

Wie können
Hochschulen darauf
reagieren?

A hand is shown adjusting a pendulum on a white metal stand. The stand has several horizontal arms of varying lengths. A hand is holding a small green ball on a thin rod that is part of the pendulum. In the background, other pendulums with different colored balls (orange, blue, red) are visible, all hanging from the same stand. The background is dark and out of focus.



(Source: Poh, Swenson, Picard 2010)

projects



passion



play



peers





ACADEMIC

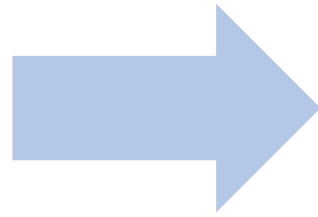
Mitchel Resnick

LEGO® Papert Professor of Learning Research,
MIT Media Lab



“Success in the future – for individuals, for companies, for communities, for nations as a whole – will be based on the ability to think and act creatively.”

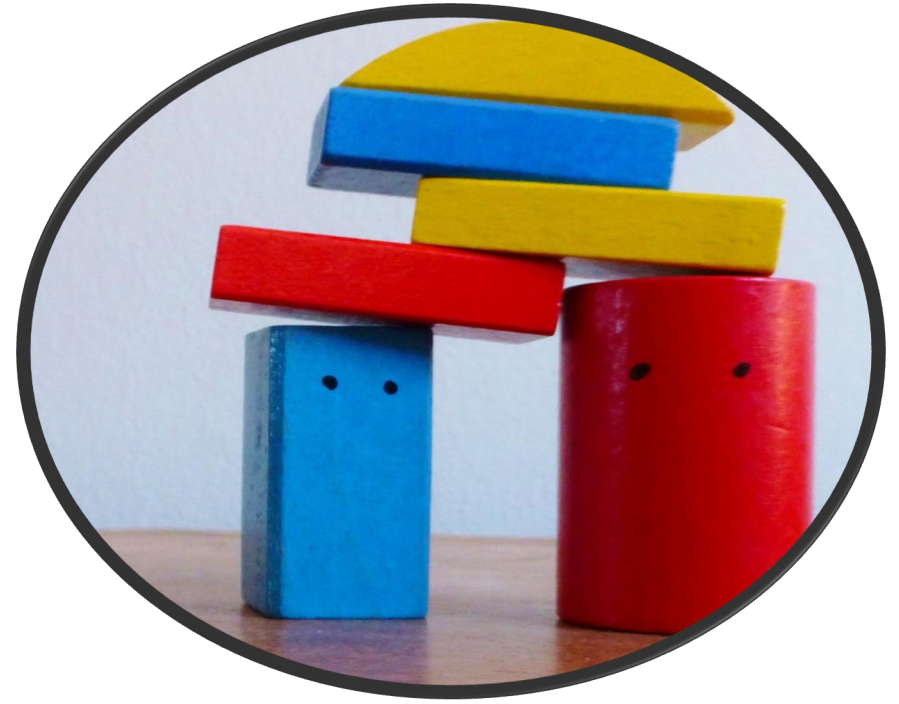
Response of Higher Education



Future of Higher Education



Add-on



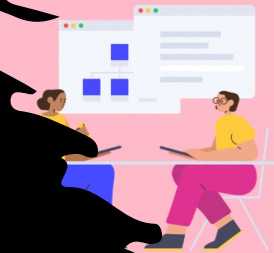
Integration

Future4

Teaching and Learning Future Skills

1. FS Universe erkunden
2. FS Profil entwickeln
3. FS Lernmaterialien
4. FS Assessment

<https://nextskills.org/future-skills-learning-space/>



3. Future Skills bewerten und Methoden

Suchen Sie Materialien, mit denen Sie individuell und im Austausch Ihre Future Skills konkret weiterentwickeln und anwenden können.



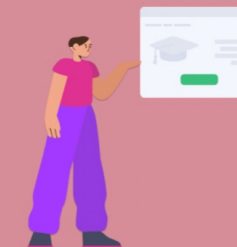
4. Future Skills bewerten

Sie finden hier Materialien und Konzepte, die Sie dabei unterstützen, Future Skills in Ihre Lehrmethoden zu integrieren.



1. Future Skills erkunden

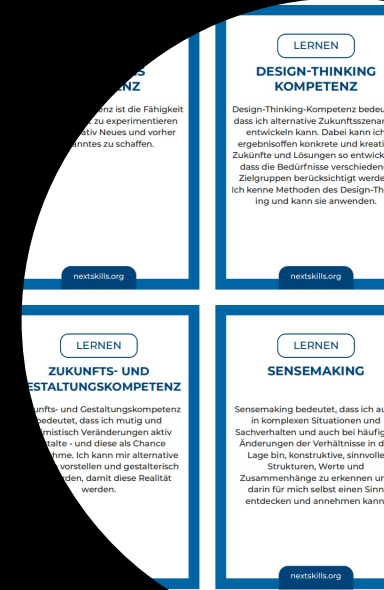
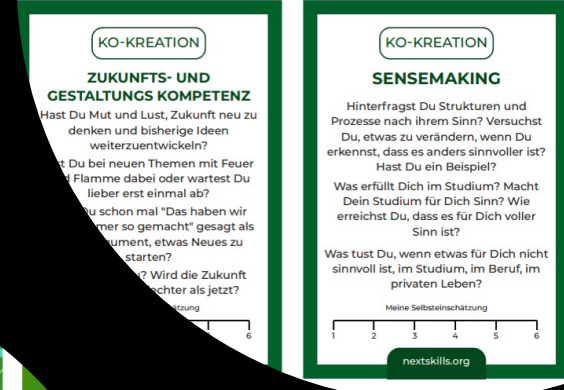
Was sind Future Skills eigentlich? Gehen Sie mehr zu den Grundlagen von Future Skills und lernen Sie, wie Sie Future Skills zu identifizieren.



2. Future Skills-Profil

Erarbeiten Sie sich Ihre eigene Learning Journey anhand verschiedener Materialien, die Sie dabei unterstützen, Ihre Future Skills-Entwicklung zu verstehen und reflektieren.

Future Skills erkunden



Future Skills Positionierungs- & Profilierungs- tool

(Situativer
Handlungs Test)



FUTURE SKILL KOMPASS

HERZLICH WILLKOMMEN!

Der **Future Skills Kompass** bietet eine gezielte Möglichkeit, sich mit Future Skills zu beschäftigen ([mehr zu FutureSkills](#)). Das Onlinetool basiert auf dem NextSkill Future Skills Modell der der **Next-Education Forschungsgruppe** an der DHBW Karlsruhe.

DER FUTURE SKILLS KOMPASS

Im Future Skills Kompass können Sie gezielte Schritte bei der Entwicklung Ihrer Future Skills machen. Das Onlinetool basiert auf dem NextSkills Modell, welches 17 wissenschaftlich entwickelte **Future Skill Profile** enthält. Wie mit jedem gute Kompass können Sie hier eine Positionsbestimmung vornehmen. Das Tool hilft Ihnen auch dabei, herauszuarbeiten, welche Future Skill Entwicklungspräferenzen Sie haben.

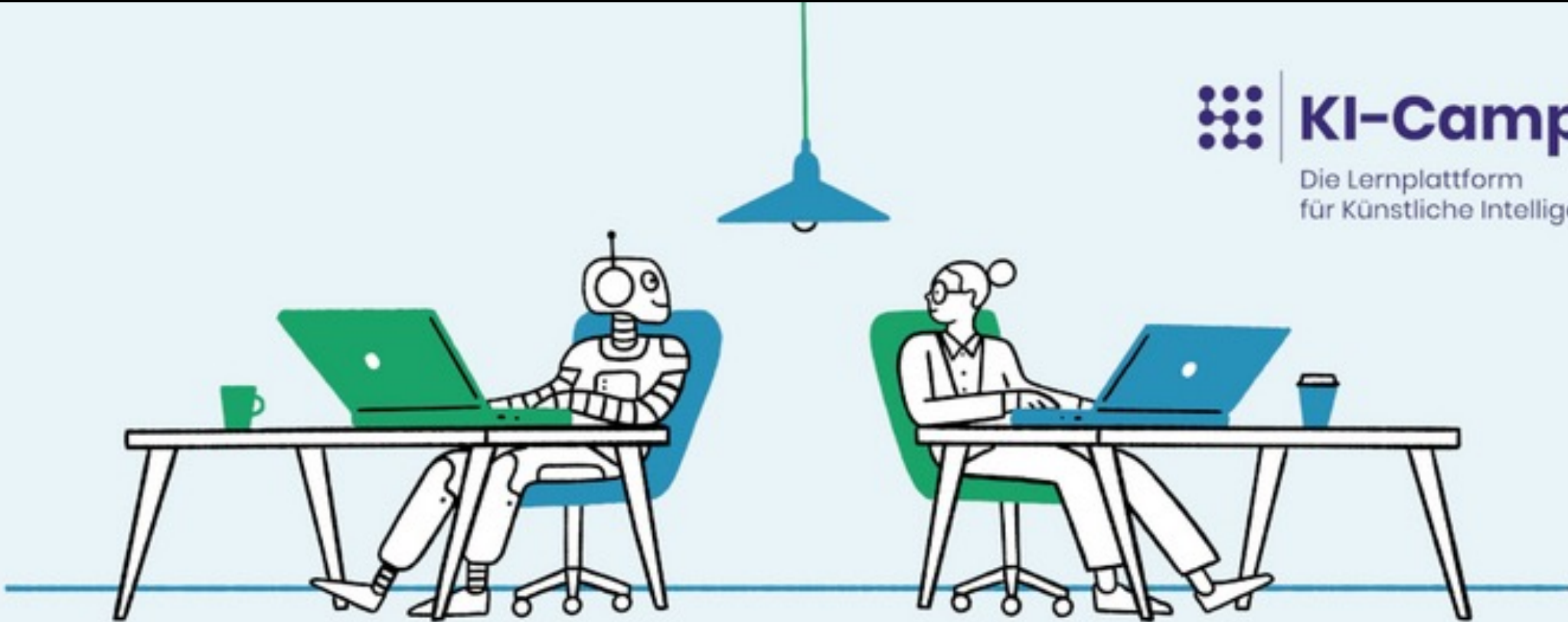
#positionsbestimmung: Mit der Positionsbestimmung können Sie sich selber einschätzen. Dabei versetzen sie sich in 17 unterschiedliche Handlungssituationen hinein und überlegen, wie gut sie bereits jetzt mit den dort beschriebenen Herausforderungen zurecht kommen. Das Ergebnis zeigt Ihnen grafisch ihr persönliches Future Skill Profil.

- 01 POSITIONSBESTIMMUNG
- 02 ENTWICKLUNGSPRÄFERENZEN
- 03 WAS NUN? (FUTURESKILLS SPIEL)



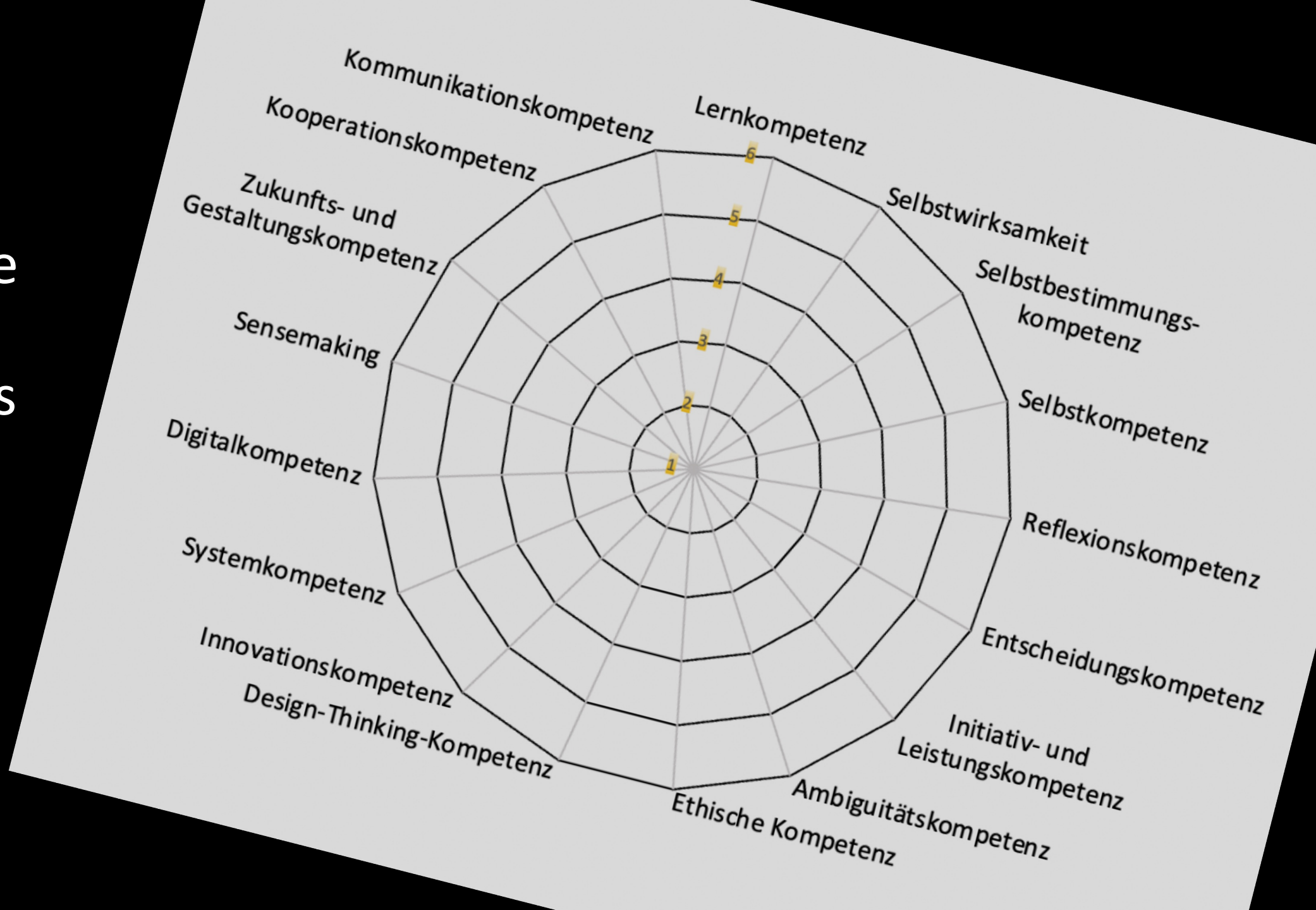
KI-Campus

Die Lernplattform
für Künstliche Intelligenz



ki-campus.org

KI Future Skills Kompass (2023)



KOMPETENZLERNEN IM THEORIE-PRAXIS- STUDIUM

Report 1 für das Projekt „DIRK Dual –
Digitales Reflexionstool zur
Kompetenzentwicklung im dualen
Studium“

CHANGING FUTURES IN HIGHER EDUCATION: ASSESSMENT OF FUTURE SKILLS LEARNING

Report 2 for the project „DIRK Dual – Digitales
Reflexionstool zur Kompetenzentwicklung im
dualen Studium“

Ulf-Daniel Ehlers
Sarah A. Meertens *Hrsg.*

Studium der Zukunft – Absolvent(inn)en der Zukunft

Future Skills zwischen Theorie und
Praxis

 Springer VS

open access

www.next-education.org

A large white banner with black text is stretched across the front of a multi-story building. The banner reads "MORGEN IST DIE FRAGE" in bold, uppercase letters. The building has a light-colored facade and several windows. The scene is set against a clear blue sky, with some green foliage visible in the foreground and to the right.

MORGEN IST DIE FRAGE

Danke

A group of colorful human figures in the background, including blue, green, red, yellow, and black figures, standing on a light-colored surface.

Fragen Diskussion

questions, answers, comments and inspirations
@ ulf-daniel.ehlers@dhw-karlsruhe.de
@ www.nextskills.org