

# A whole new world: Bridging the gap between critical digital pedagogies and the (new) automated virtual T&L environment

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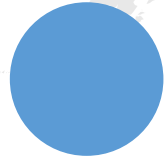
LTE T&L Seminar: October 2021



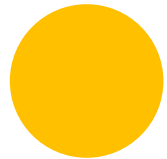
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Introduction, disclaimer,  
acknowledgement



Increasingly automated  
world



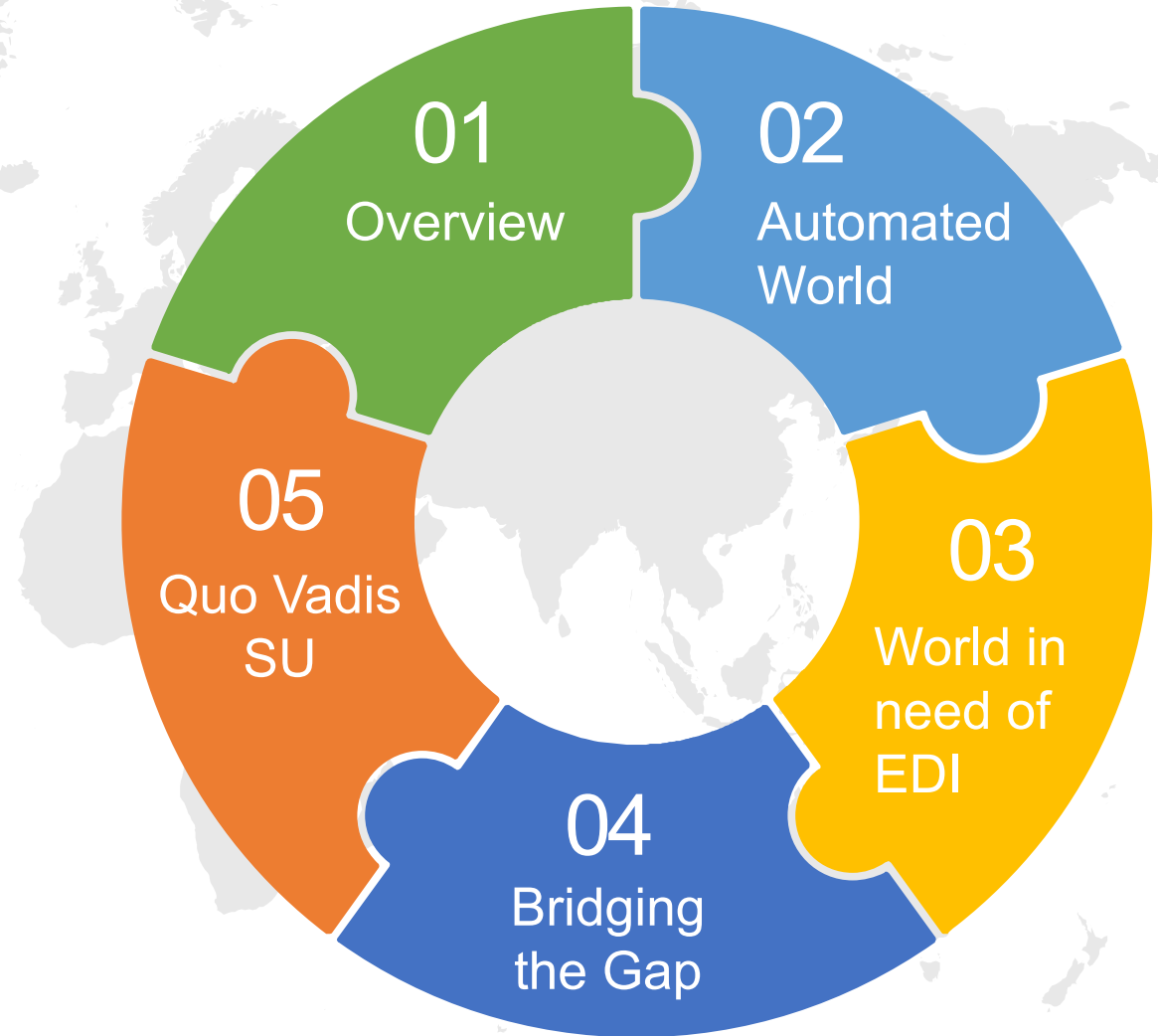
World in continuous need of  
equality, diversity &  
inclusivity



Bridging the gap between  
these two worlds



The way forward for SU



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# Introduction & Disclaimer

- Multidisciplinary perspective
- Inclusive approach
- Informed dialogue



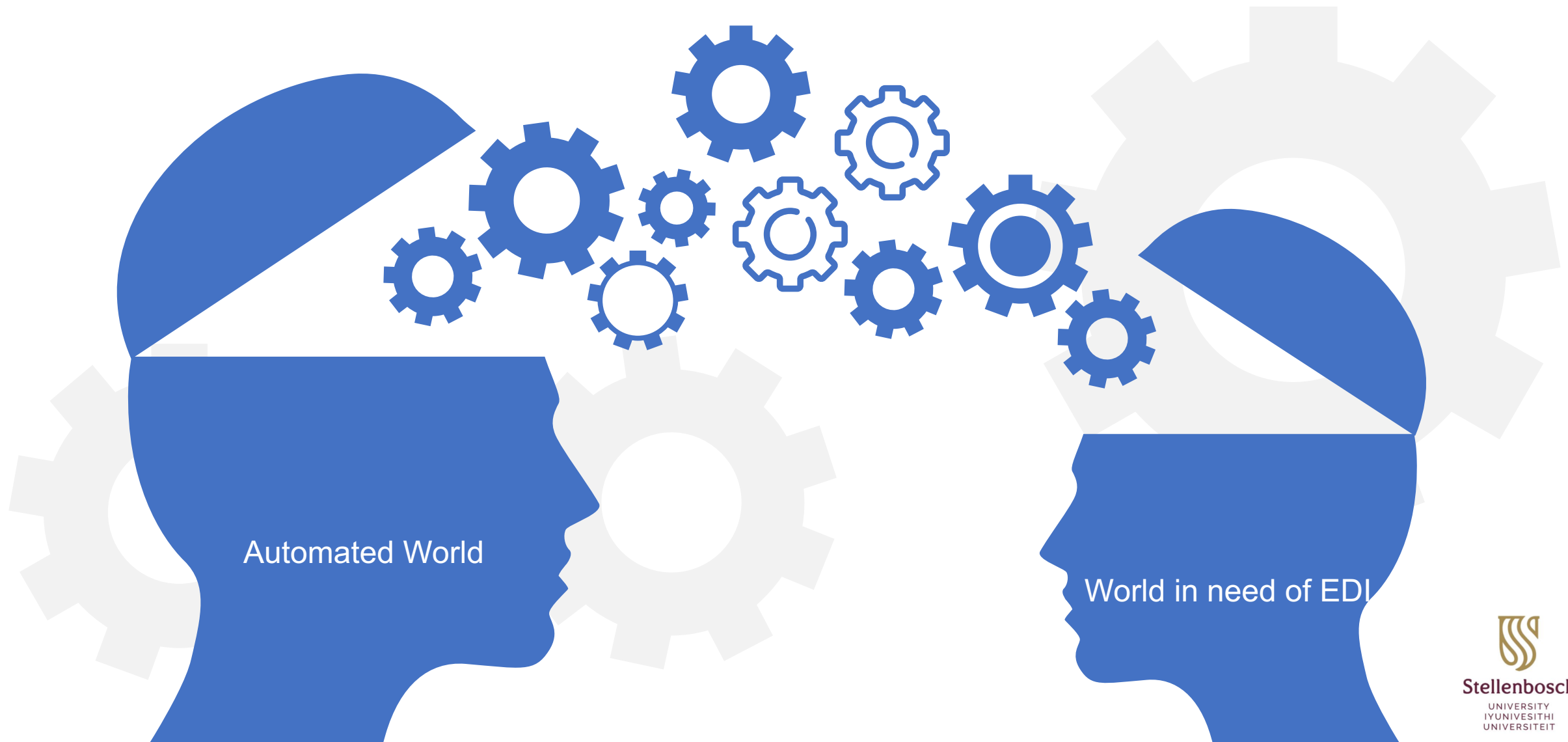
# Acknowledgements

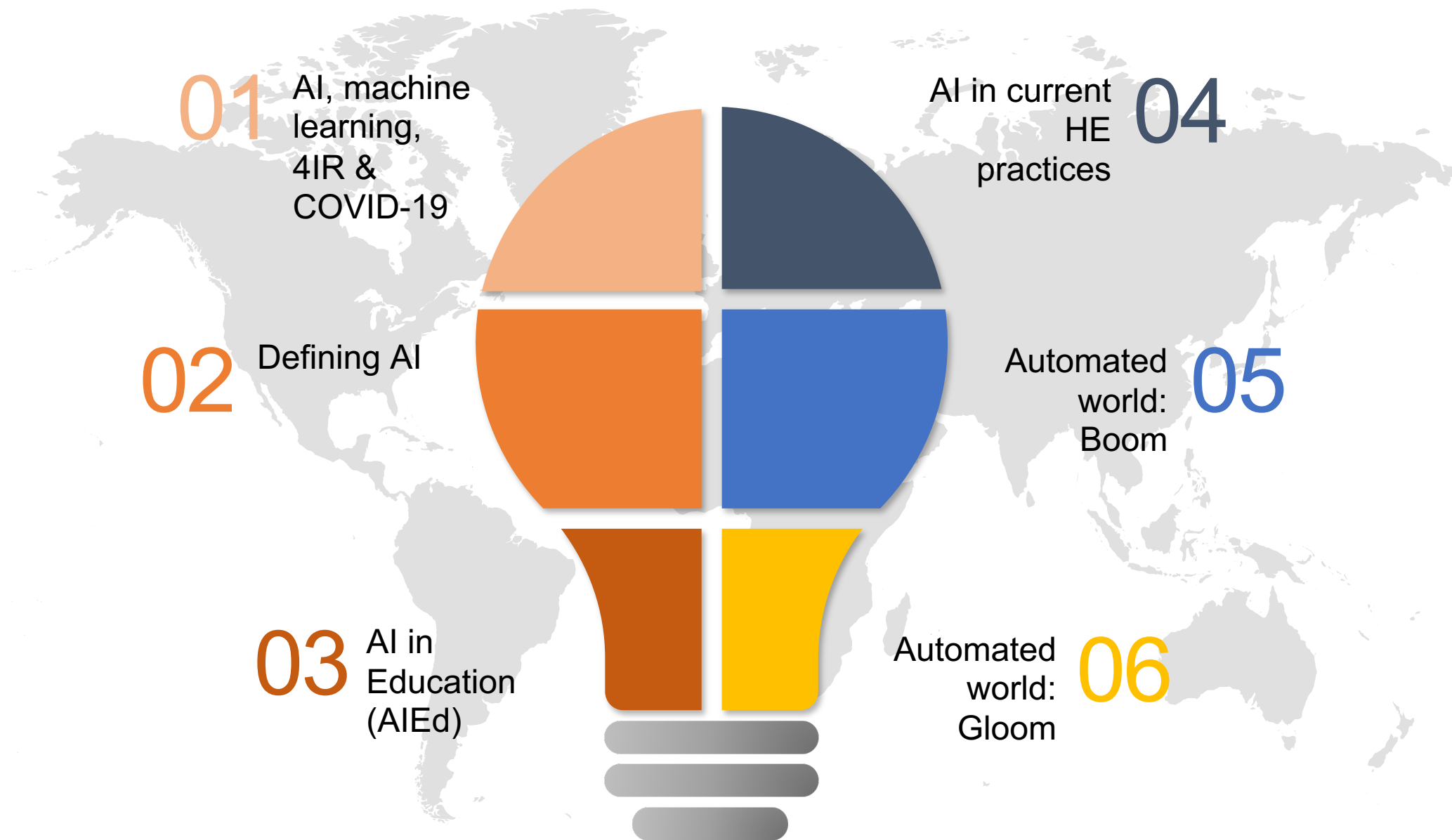
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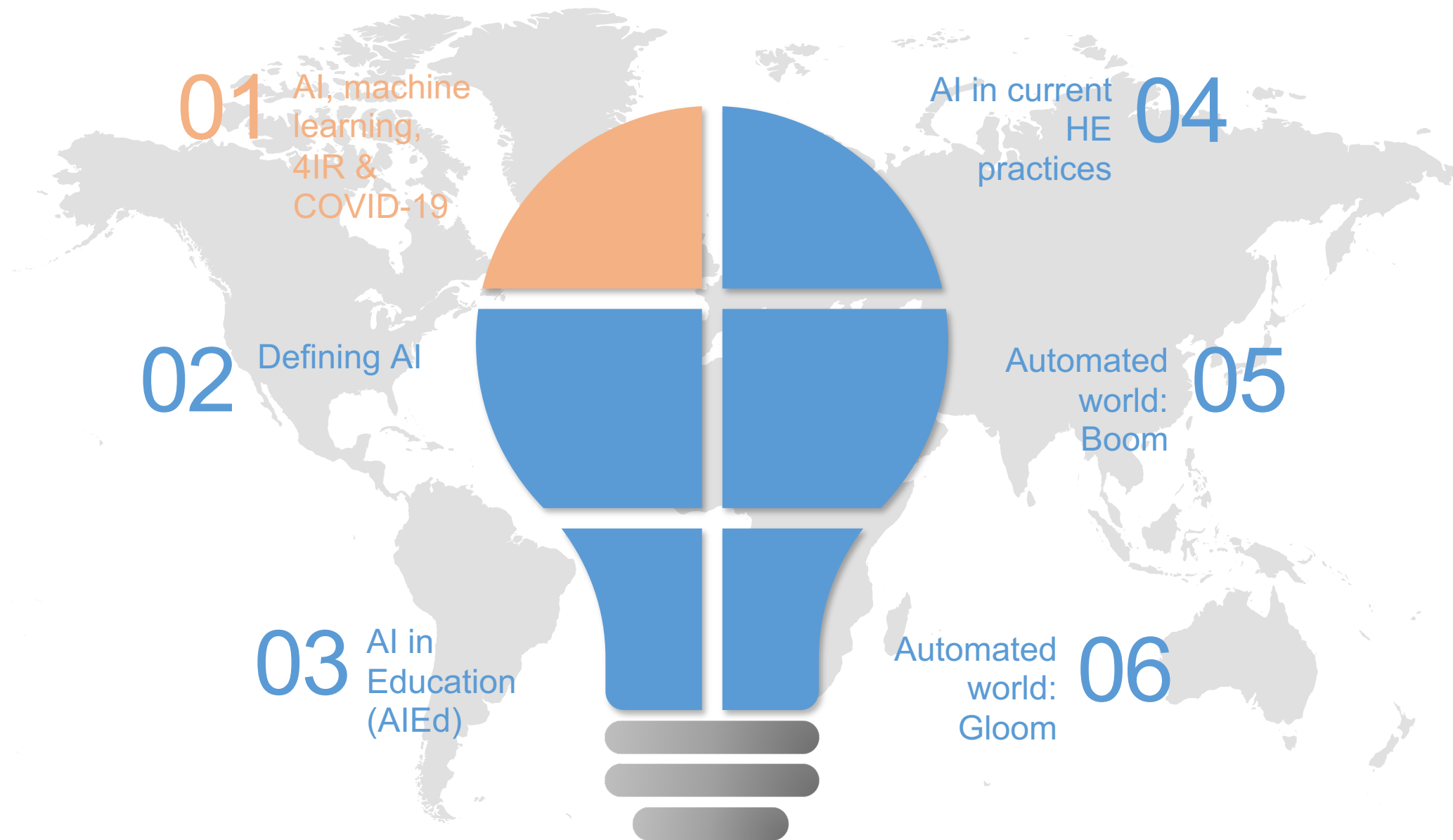




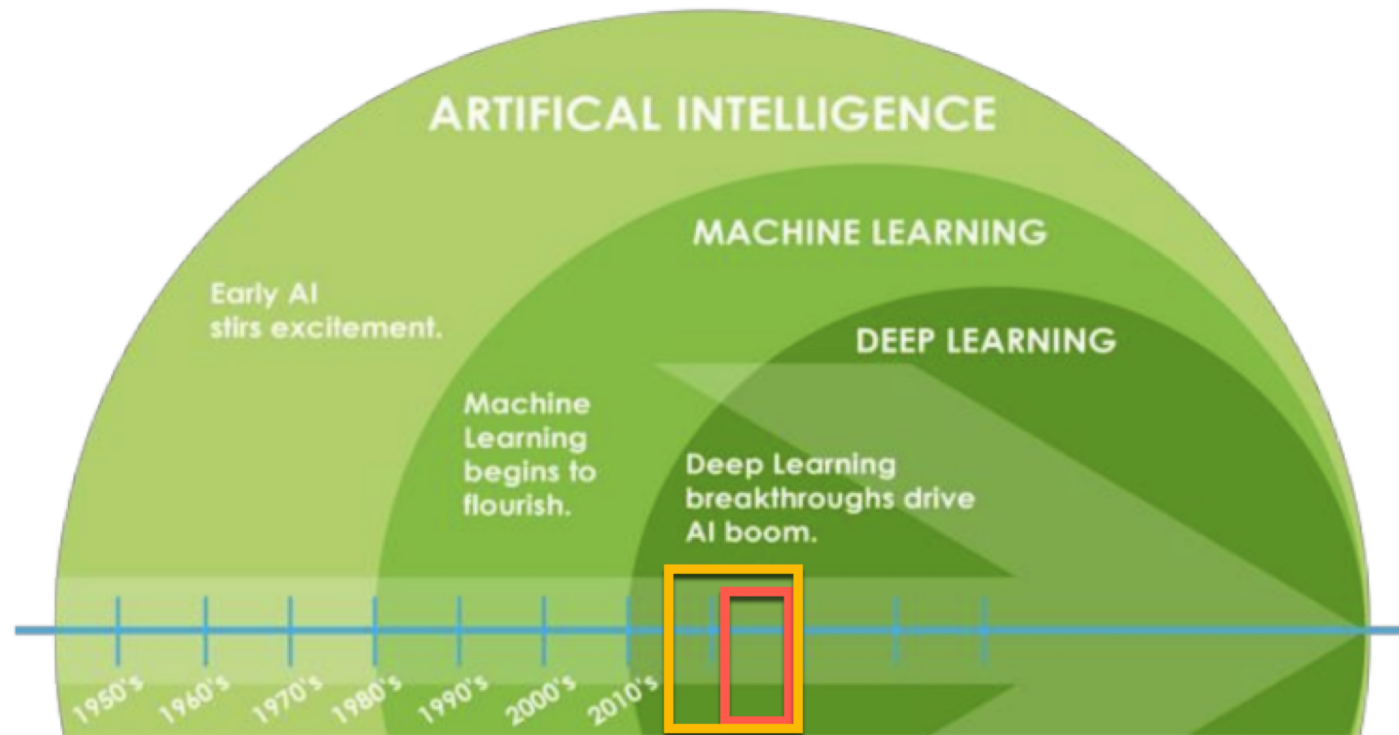
# Increasingly Automated World







# AI, Machine Learning, 4IR & Post-COVID



Adapted from Bozkurt et al., (2021, p.2)

01 AI, machine learning, 4IR & COVID-19

AI in current HE practices 04

02 Defining AI

Automated world: Boom 05

03 AI in Education (AIEd)

Automated world: Gloom 06

**Defining AI:**  
“machine-based systems that can, for a given set of human-defined objectives, make predictions, recommendations, or decisions influencing real or virtual environments”

(OECD, 2019 cited in Southgate, 2020, p.2)

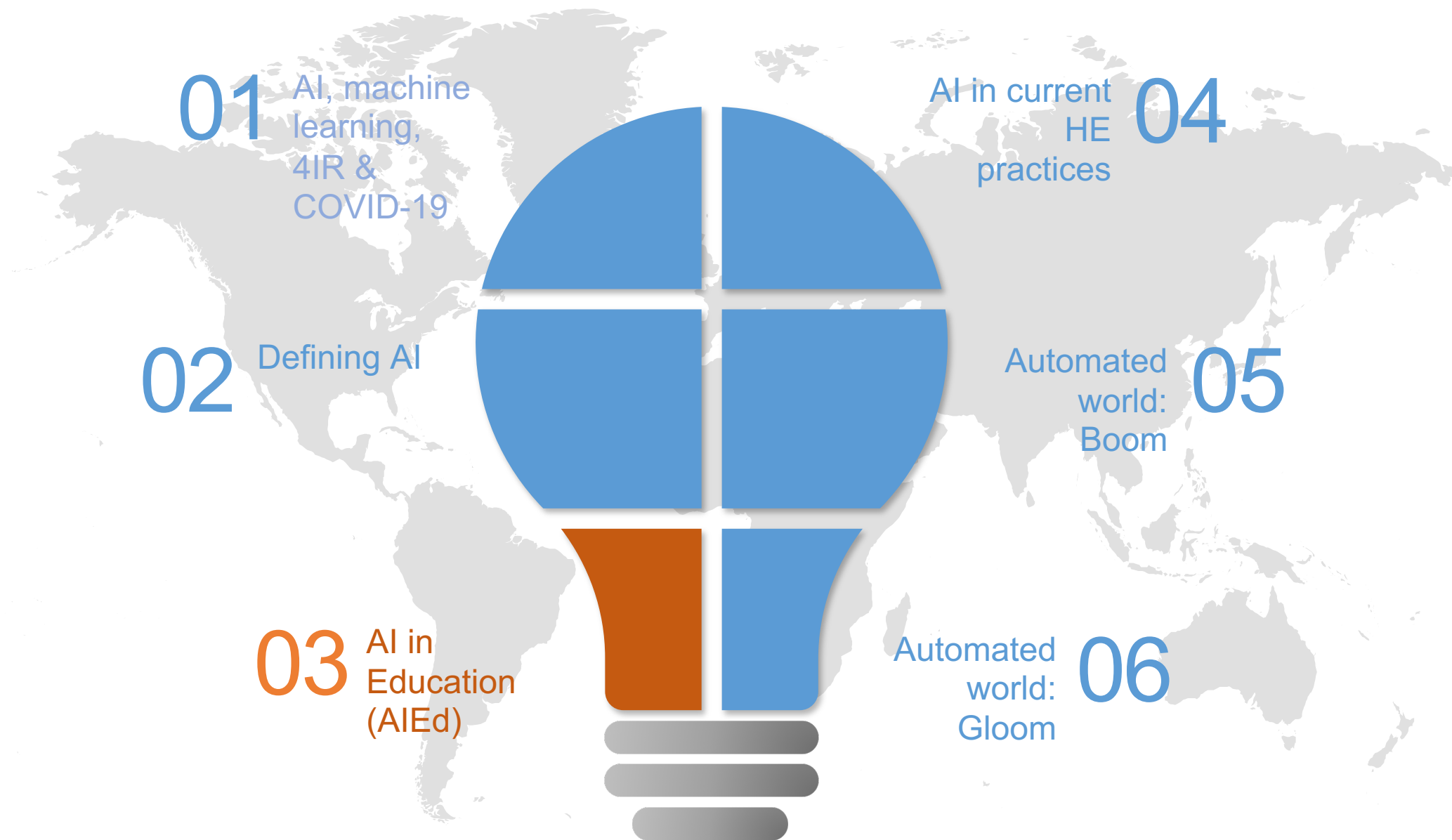
# AI Distinctions

## Weak AI

- Artificial narrow intelligence
- Focused on a restricted job
- Enable less experienced human to act at a more advanced level

## Strong AI

- Can do most mental functions
- Can apply intelligence to more than one scenario
- Meant to replace activity previously performed by competent human
- “Existential threat to human kind”



# AIEd Typologies

## **Types of AIEd** (Cox, 2021, p.8)

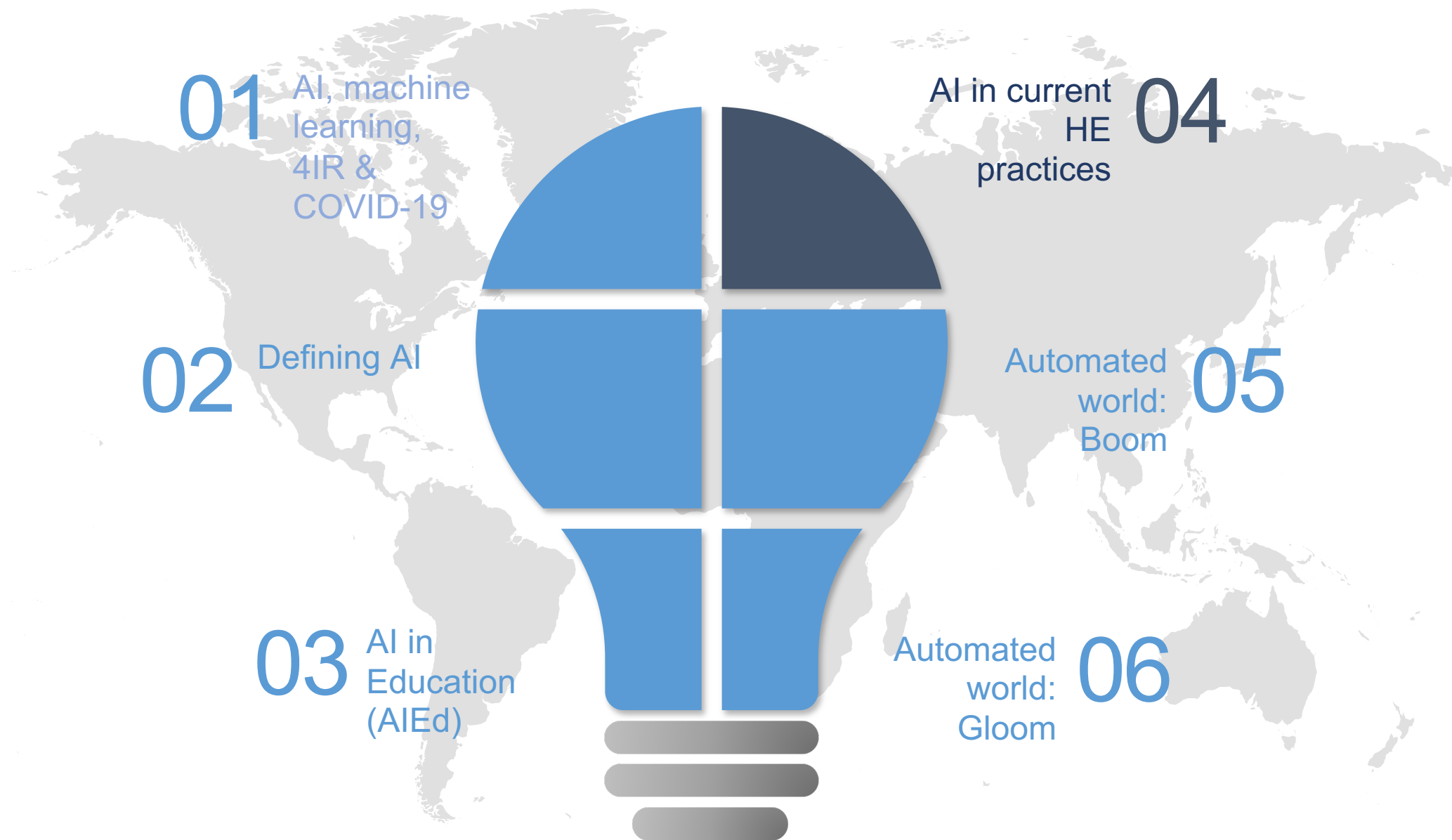
- Learner-facing (e.g. tutoring systems)
- Teacher-facing (e.g. automation of tasks such as plagiarism detection)
- System-facing (e.g. reference to administrative data)

## **Learner-centered paradigms** (Ouyang, 2021, p. 2-4)

- AI directed: learner as recipient
- AI-supported: learner-as-collaborator
- AI-empowered: learner-as-leader

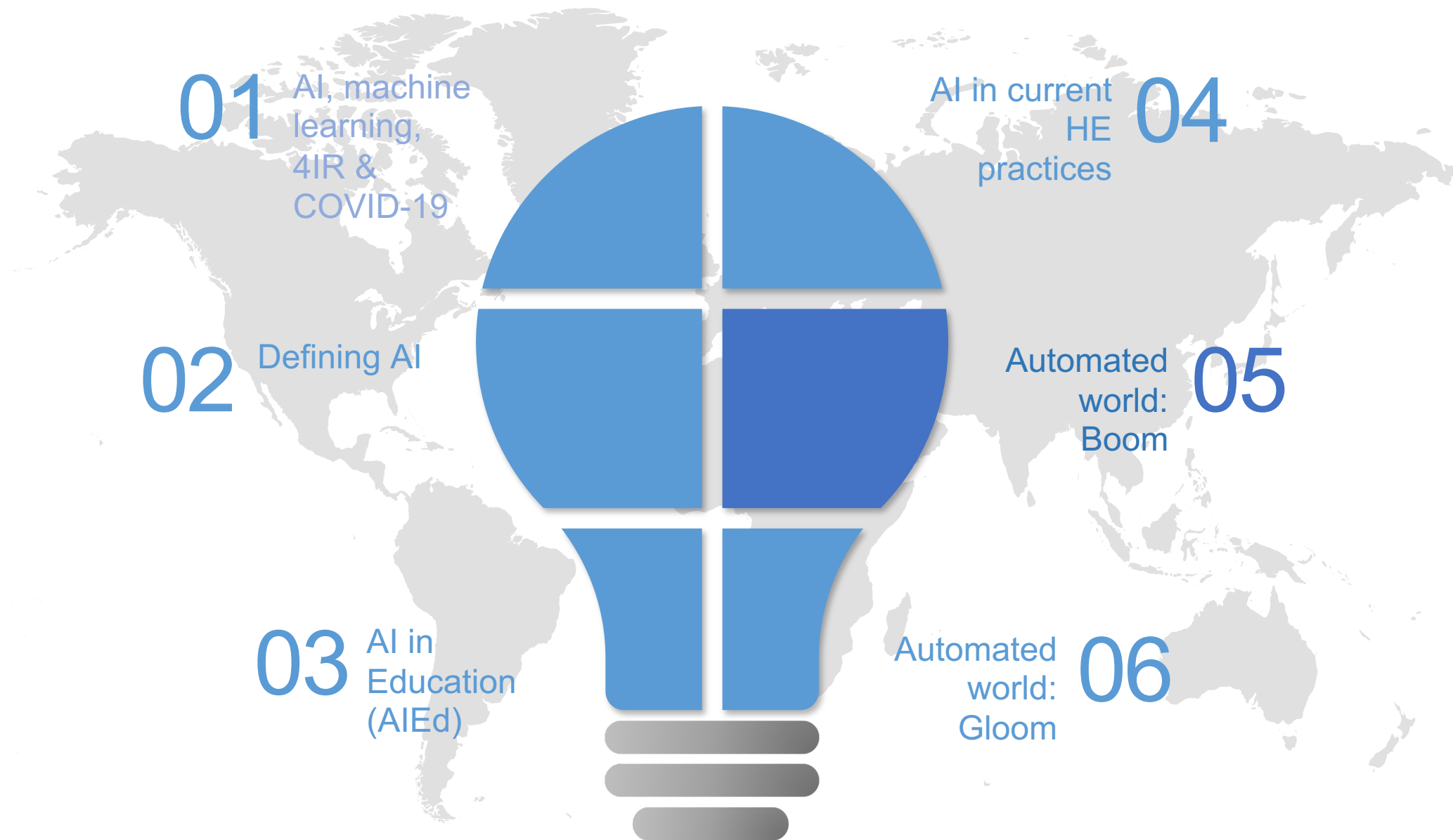








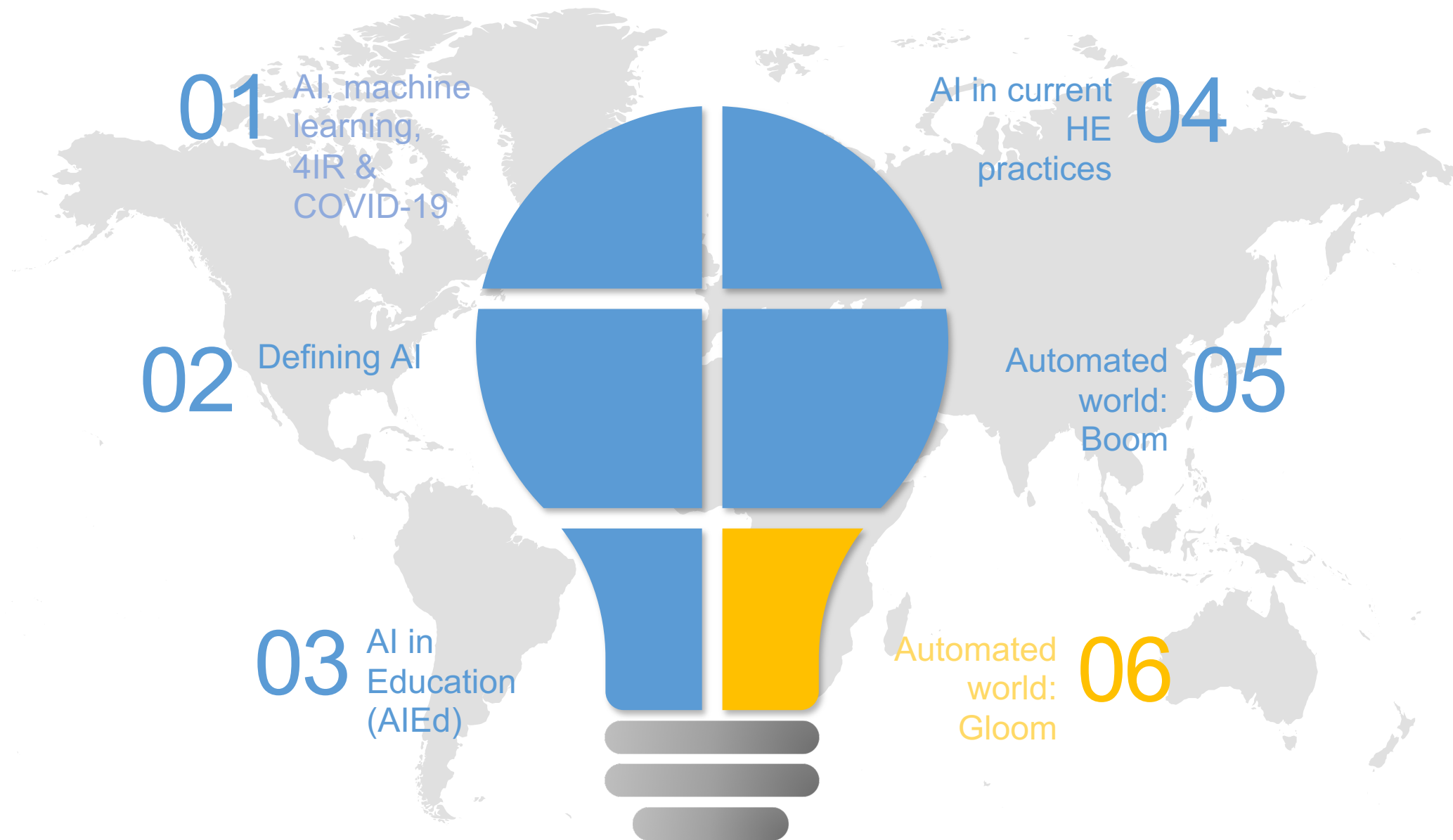
Source: Aldosari, (2020); Bozkurt et al., (2021); Crompton et al., (2021); Cox (2021)



# Automated World: Boom

[AI] help learners gain 21<sup>st</sup> century skills, support a *renaissance in assessment*, embody new insights from the learning sciences, and give us *lifelong learning partners* (Becker, 2017, p. 45)

“...the importance of [AI] does not stop at this point but rather contributes to *improving education* for all different levels, while *improving the qualitative process* of education by providing students with feedback for their learning according to their requirements....” (Aldosari, 2020, p. 147)



# Critique

Techno-scepticism	Social justice	Current HE: Freirean perspective
<ul style="list-style-type: none"><li>• Literature</li><li>• Dehumanise</li><li>• Loss of agency</li><li>• Neo-liberal ideologies</li></ul>	<ul style="list-style-type: none"><li>• 'Fair distribution of resources</li><li>• Non-dominant cultural ways</li><li>• Representation'</li></ul>	<ul style="list-style-type: none"><li>• Development of student critical consciousness</li><li>• Uncovering of student worlds</li></ul>
Cox (2021, p. 11)	Southgate (2020, p.2)	Broughan & Prinsloo (2019)

World in Continuous  
need of Equity,  
Diversity & Inclusivity



01 Current SA context

02 Humanising pedagogies

03 Towards the digital:  
Critical digital pedagogies

Current HE practices 04

Critical digital pedagogies: Boom 05

Critical digital pedagogies: Gloom 06



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# Current SA Educational Context

Zinn & Rodgers  
(2012)

"South Africa's societal legacy of disempowerment and dehumanisation, particularly within education contexts, is long and in critical need of repair. Despite years of struggle, and solidarity of the majority of its citizens that resulted in the transition to a more democratic political order in South Africa, the educational arena remains a battlefield, in which the struggle to build voice, agency and community continues. Beyond the rhetoric of describing and analysing that struggle, a powerful praxis related to citizenship and social justice within the contextual realities of South African education is required. We believe a humanising pedagogy is one such form of praxis". (p. 76)

Czerniewicz &  
Rother (2018)

"Inequality in higher education has, unfortunately, received a great deal of attention in recent years as has inequality in general: South Africa ranks as the most unequal countries in the world in terms of the Gini Index (World Bank 2016)"....

....." the argument was made that blended learning was for the privileged who could teach themselves if they had access to the required resources" (p. 1)

Czerniewicz  
et al., (2020)

"The current crisis has made it impossible not to recognise the historical, geospatial, economic inequalities of the country and the world students live in. In a certain sense, the pandemic, and the pivoting to online made visible, the invisible, or ignored manifestations and mechanisms of inequality". (p. 949)

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pedagogies:  
Gloom 06

# Brief Introduction to HP



Paulo Freire 1921-1997

- Education still controlling the oppressed
- Ignoring their viewpoints
- Unique contexts of students & teachers
- Not 'one size fits all'

Source: <https://paulofreirefinland.wordpress.com/2017/08/19/inauguration/>

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Gloom 06



# Critical Digital Pedagogies: Boom

Qualification	Attempting to assist in students obtaining qualification Raising awareness of professional development in chosen fields
Socialisation	Students developing into conscious, active and contributing community members
Subjectification	Considering and creating opportunities for enactment of democracy, freedom & equality Focusing on the contextual self that is embedded in the wider society students live in



01 Current SA context

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Pedagogy  
Inclusive  
Freire

# Bridging the Gap between the Two Worlds



- Limited critical reviews focusing on AIEd (Aldosari, 2020)
- Ethics of AI (Becker, 2017; Zawacki-Richter et al., 2019)
- Research in different subject areas (Bozkurt et al., 2021)
- Lack of alignment between AI & theory (Ouyang, 2021)
- Emphasis in interdisciplinary work – role of educationalists (Bozkurt et al., 2021)

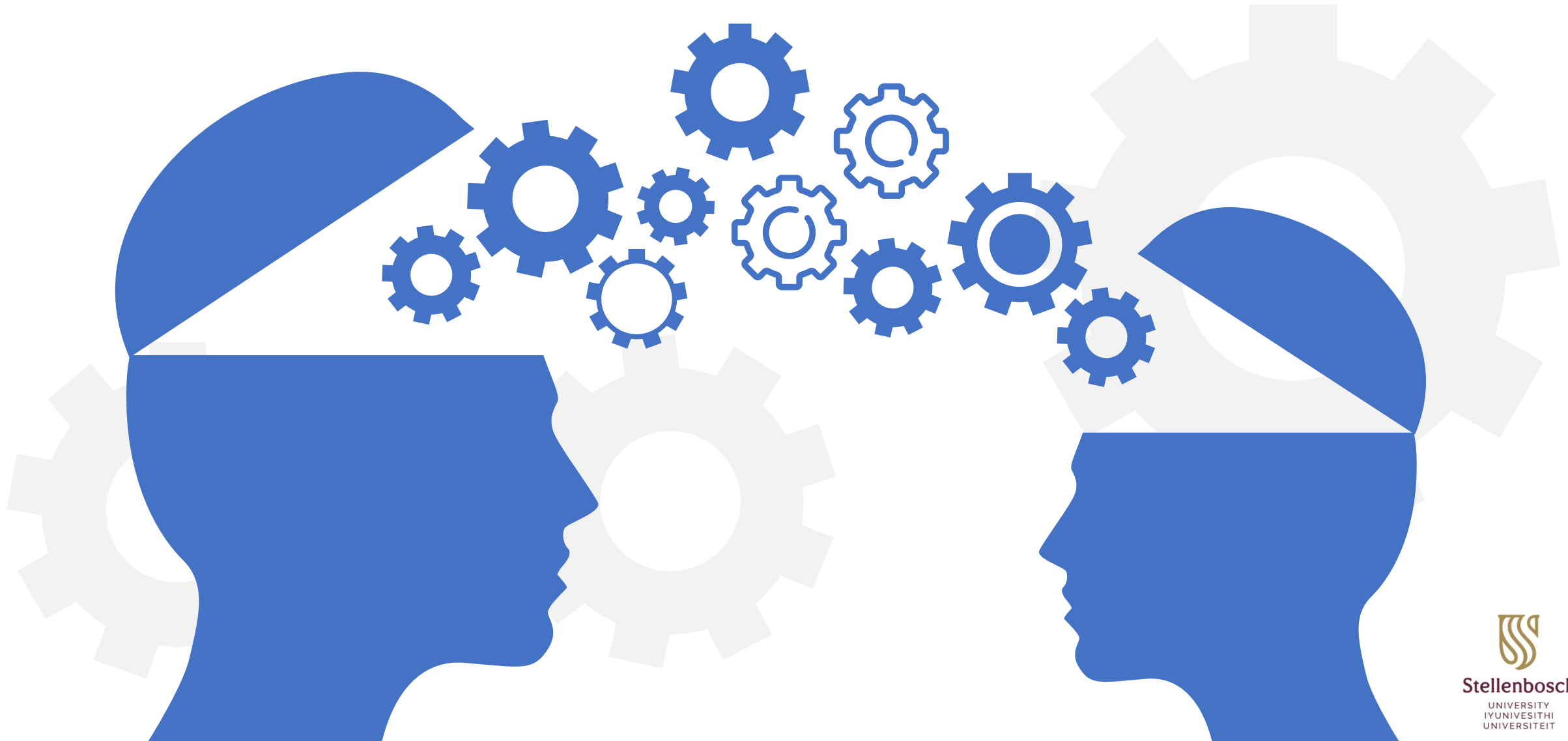
# Quo Vadis SU?



- Professional Development
- Collaboration between different divisions
- Understanding pedagogy
- Institutional policy
- Not being driven by technological offers – a critical perspective

“[Educational technology] needs to be understood as a knot of social, political, economic and cultural agendas that is riddled with complications, contradictions and conflicts”

Selwyn (2014, p. 6)



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