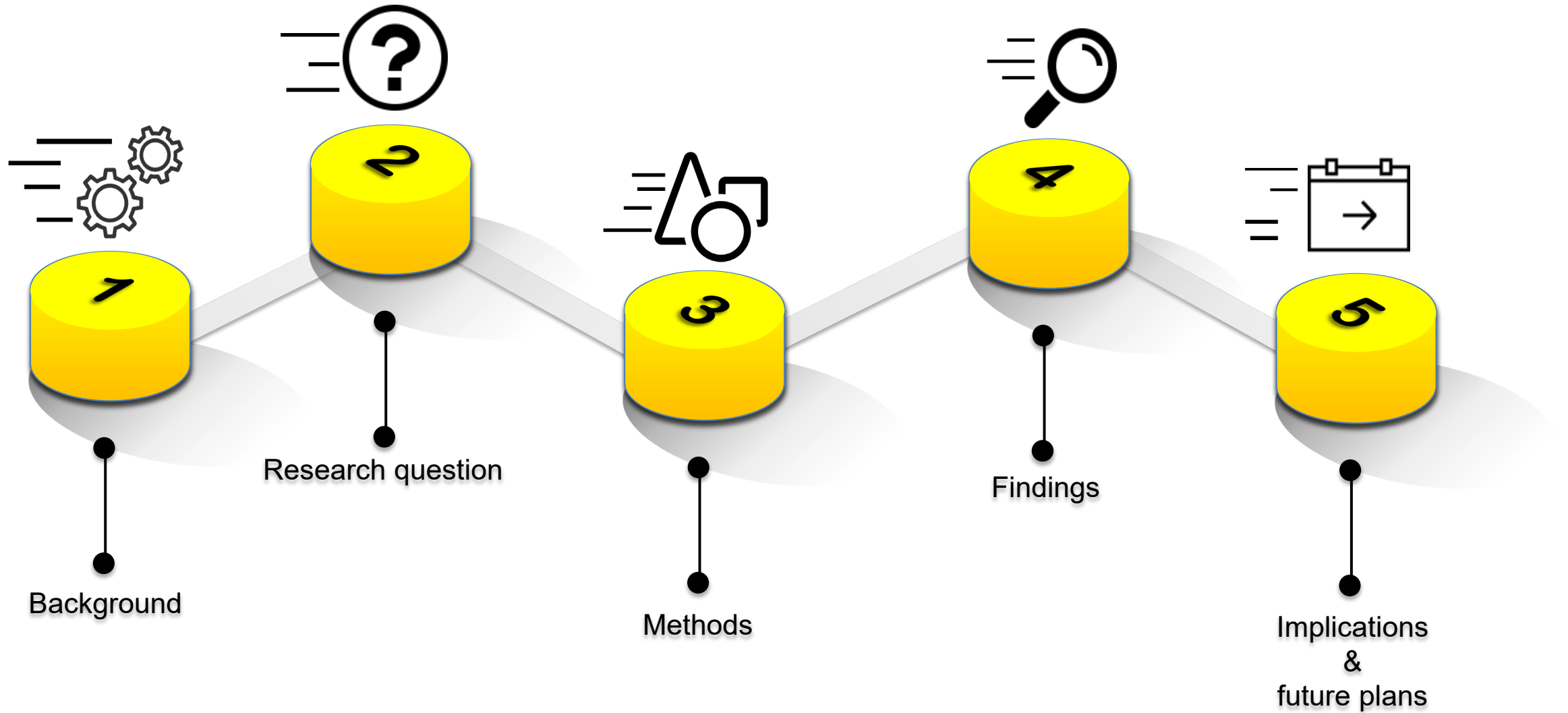
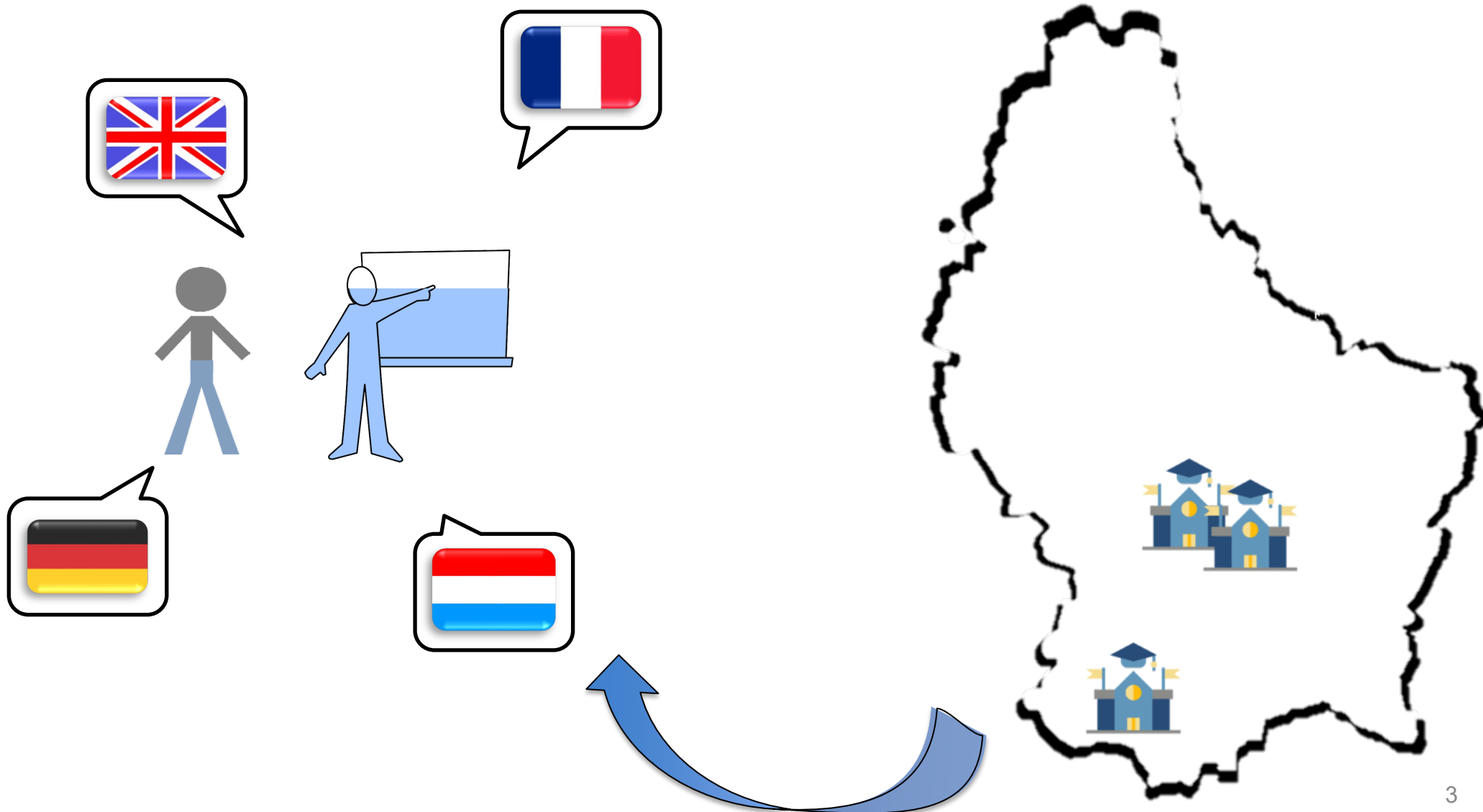
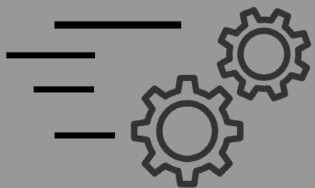


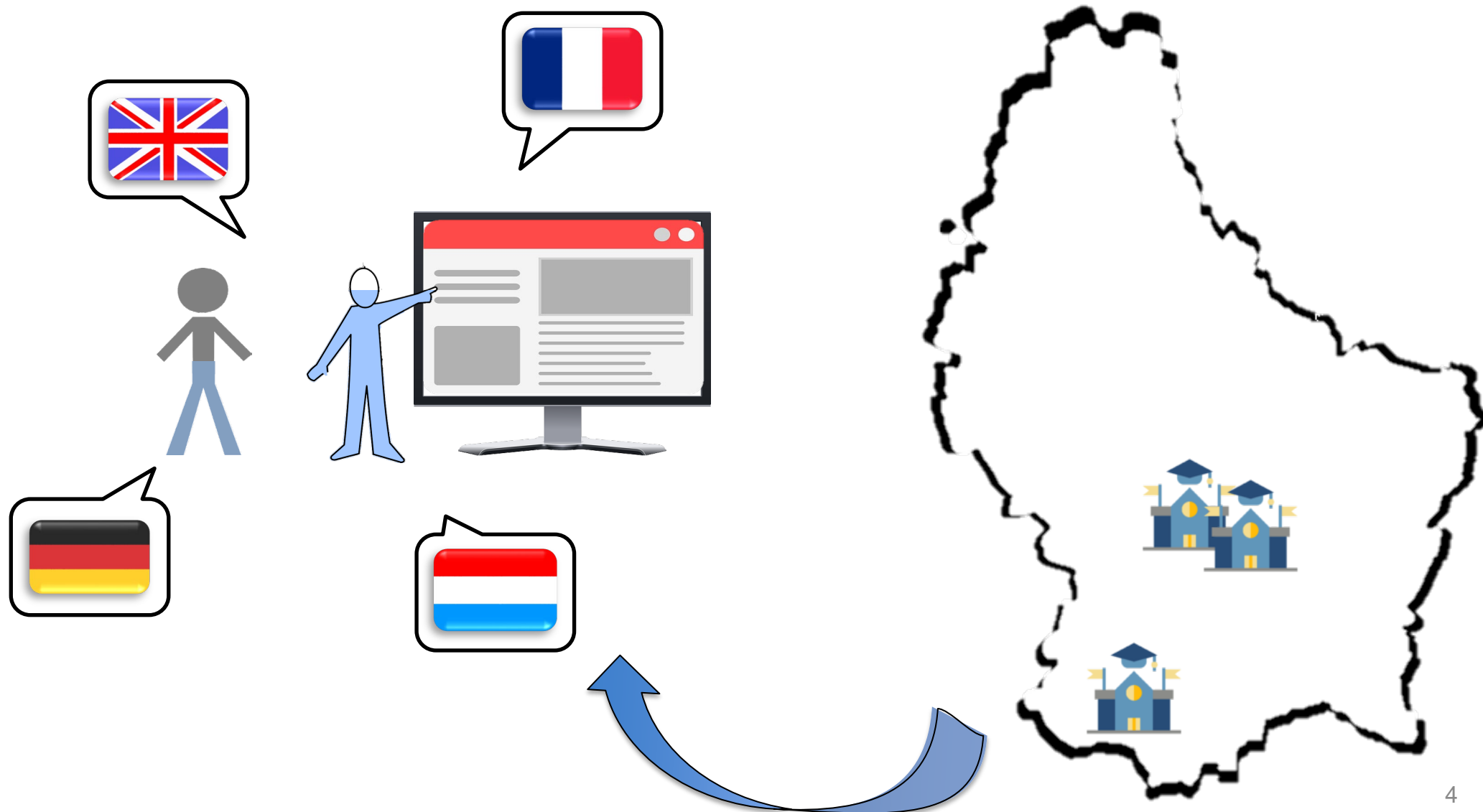
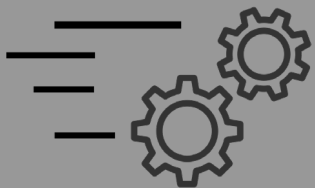
Language and AI in Asia: Challenges and possibilities

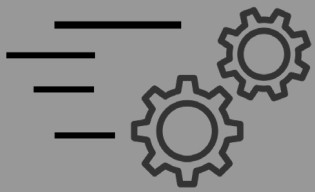
Augmented Reality, an
experiential language learning
encounter
Corine Philippart

Table of contents

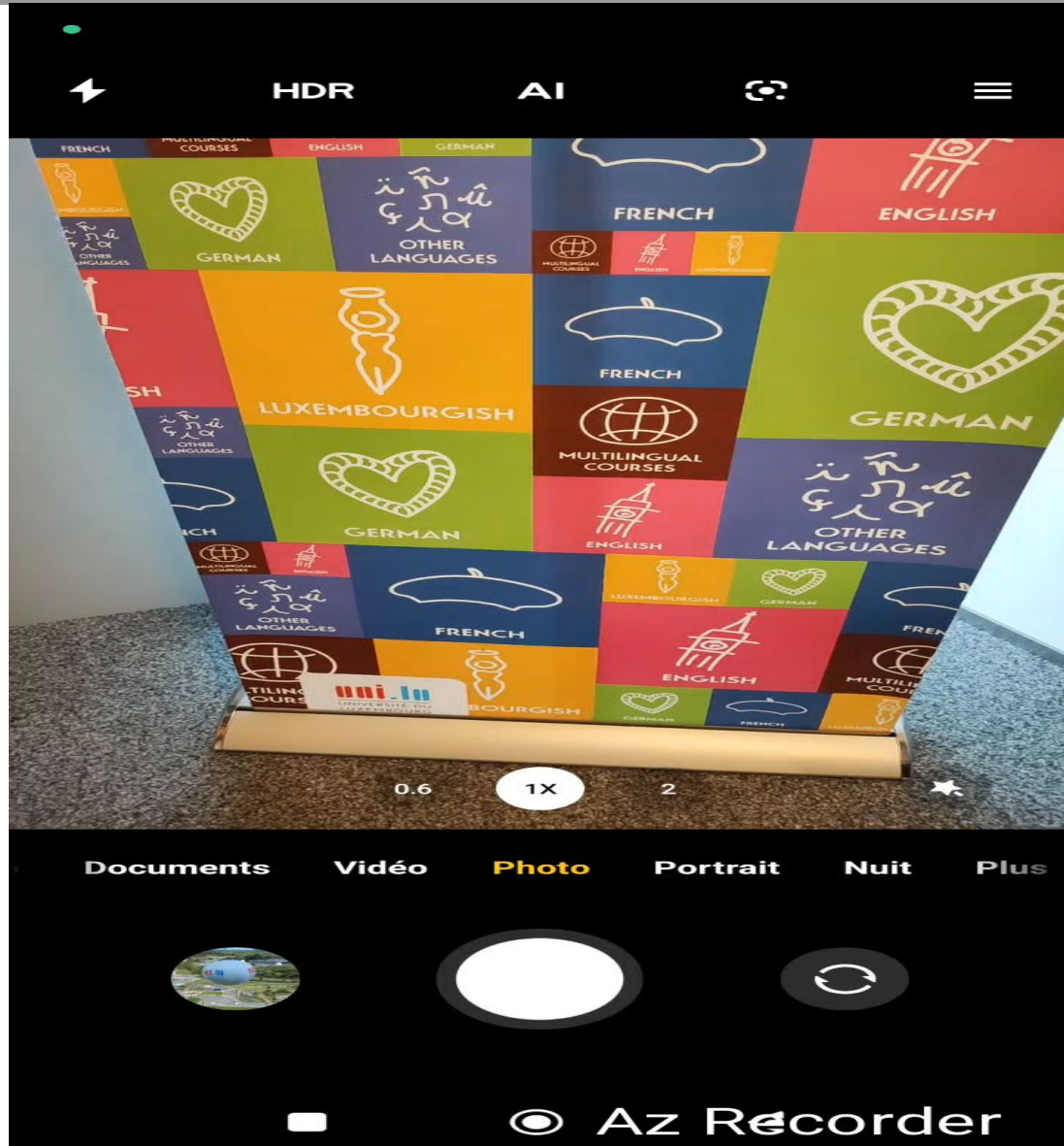






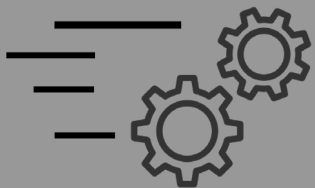


Augmented Reality (AR)

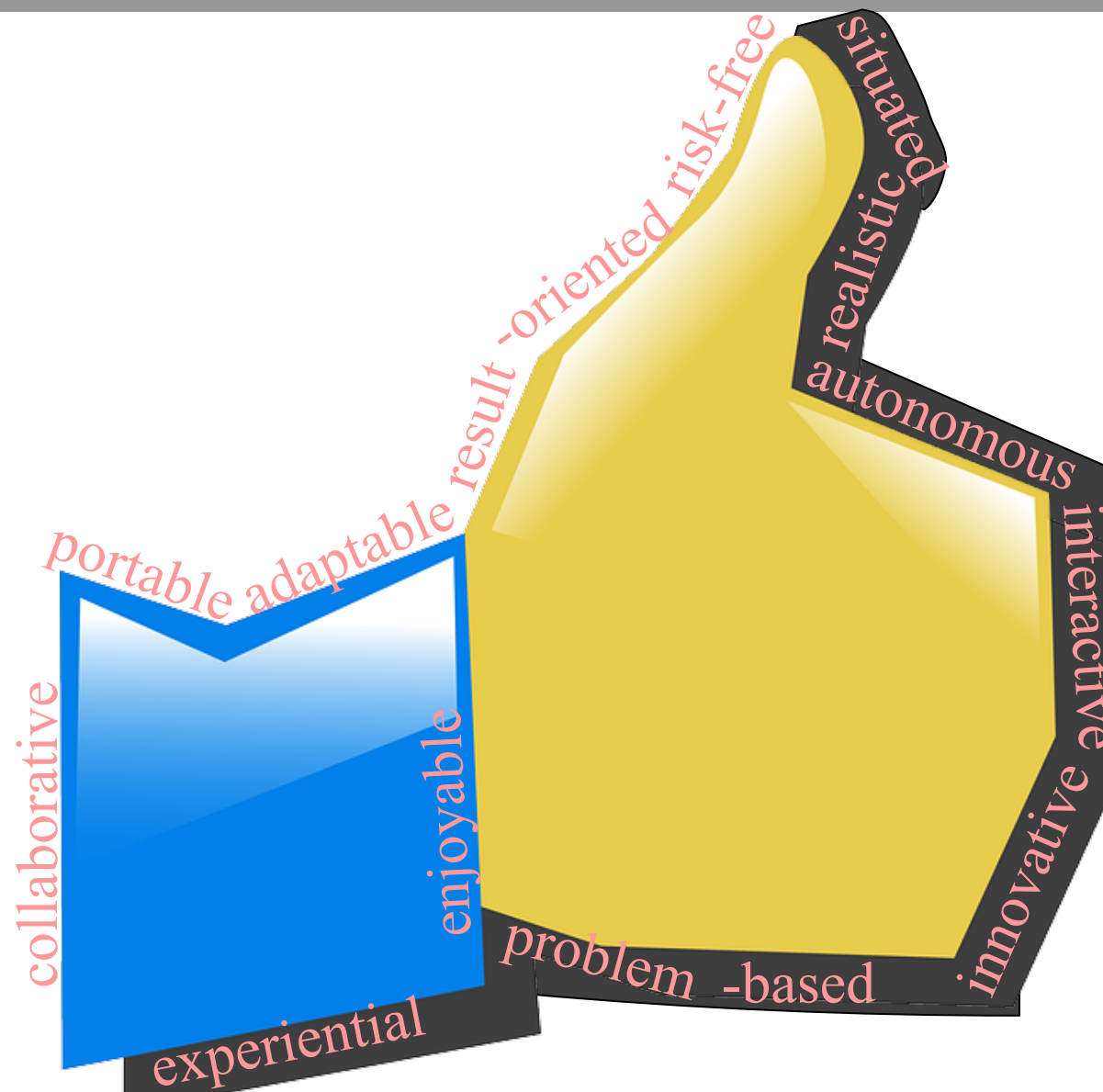


« **Superimposing of computer-generated virtual 3D objects on top of a real environment in real time** »

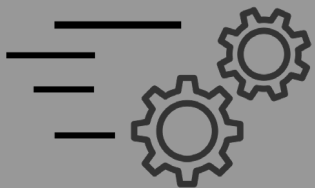
Iqbal et al., 2022



Effectiveness of AR

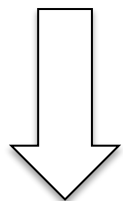


Arneton et al., 2022
Elmezziane & Lecorre, 2021
Hein et al., 2021
Iqbal et al., 2022
Lampropoulos et al., 2022
Punar Özçelik et al., 2022

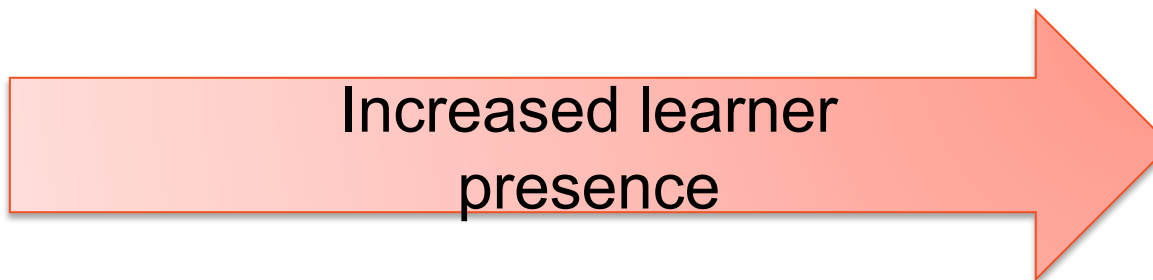


Effectiveness of AR

**Satisfactory
learner perception**



“the experience of learning through AR and
interacting with such an environment” Chen & Wang, 2018: 696



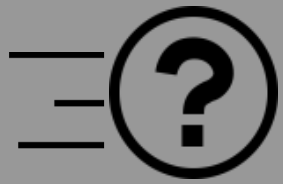
**More successful
learning outcomes**

Accuracy of the virtual
environment

Immersion
(a.o. sensory and
tracking data)

Presence
(a.o. social)

User acceptance
(a.o. useful and easy to
use?)



Statements

- “one of the fastest-growing sectors with an impact on Education” *Belda-Medina & Calvo-Ferrer, 2022: 12124*
- AR is only “timidly (...) introduced in the educational sphere as shown by the view of the students” *Marín-Díaz, 2017: 138*
- “Although AR shows great potential (...), researchers should further address the usefulness of AR from a psychological perspective.” *Chen & Wang, 2018 : 705*

Research question

In a pro-digital educational setting like Luxembourg's, do students perceive AR as an uncommon but effective learning tool?



Case study design



Case study 1

7

Language learners

Input in a writing session

1 questionnaire after

100% 20-30 y. old



Case study 2

17

Pre-service teachers

Lecture & trial uses + autonomous design

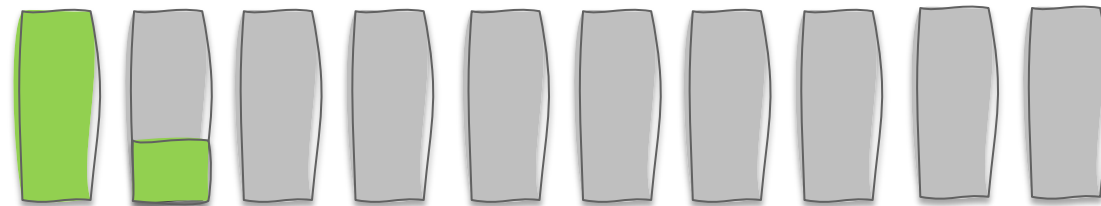
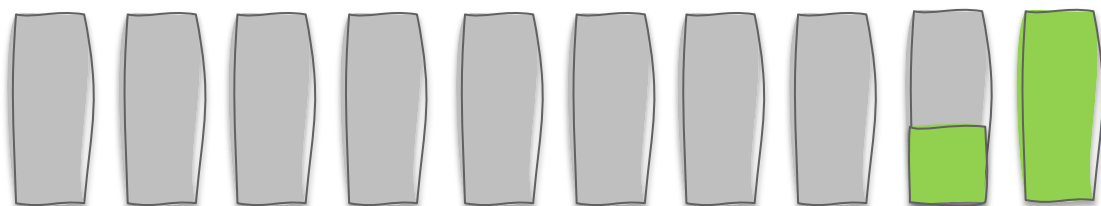
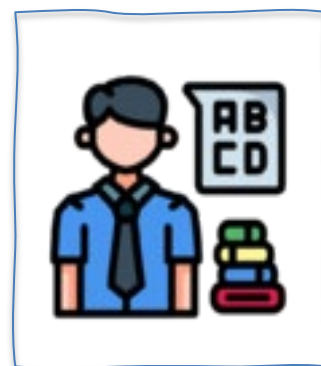
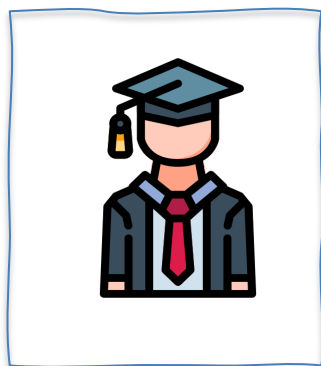
1 questionnaire before & 1 after

88% 20-30 y. old



AR's perception as a(n) (un)common tool

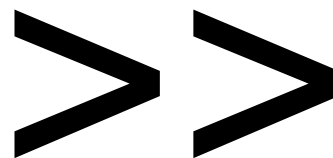
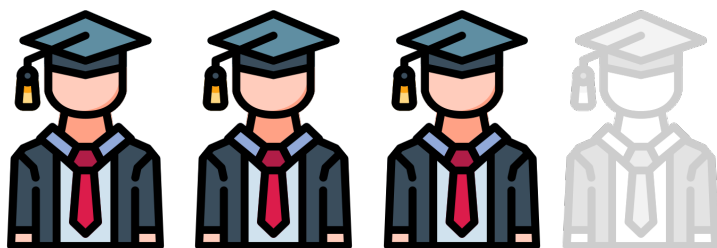
I have already heard of AR or used it before





AR's perception as an effective tool

AR is beneficial in the language classroom



User acceptance
& social presence

More exchanges
Enjoyable/ innovative
Immediately observable
effect

Slow internet
connexion

Incompatibility
with hardware

Little knowledge of
the smartphone

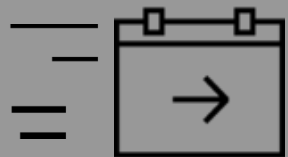
GDPR rights

User acceptance
& immersion

Novelty of AR → doubts
about its effectiveness

Imbalance

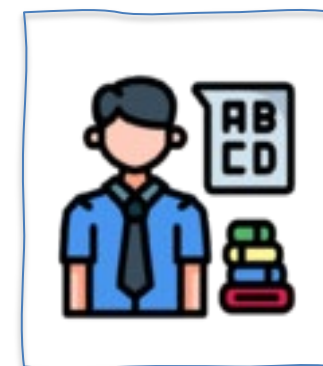
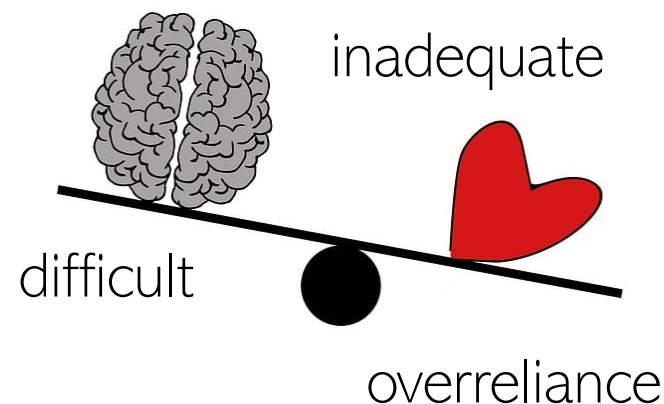
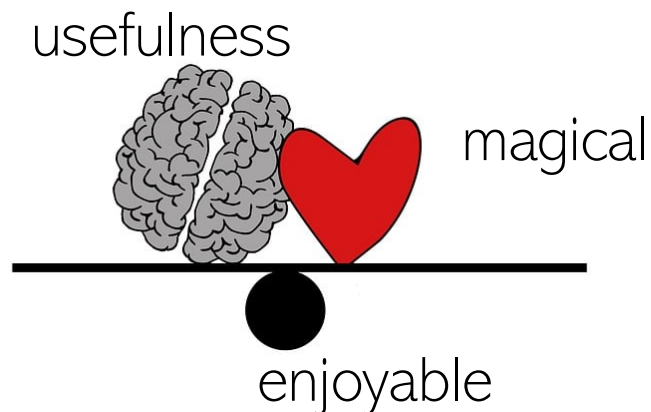
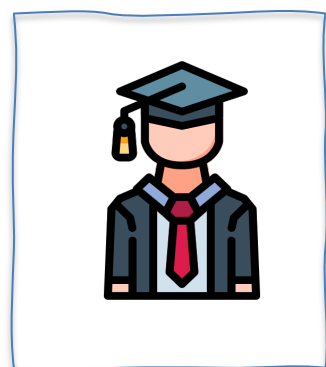
Lack of digital skills/ too
technical

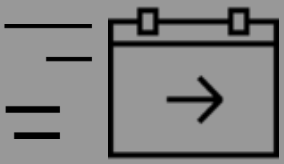


AR as a learning and teaching tool

In a pro-digital educational setting like Luxembourg's, do students perceive AR as an uncommon but effective learning tool?

- Still uncommon educational technology
- Influence of the pedagogical role





Next steps

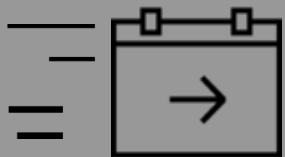


Teaching practices

- 1. Assess the equipment available
- 2. Organize a short technical session focussing on AR only → test learner perception & address technical issues
- 3. Carry out the actual AR activity

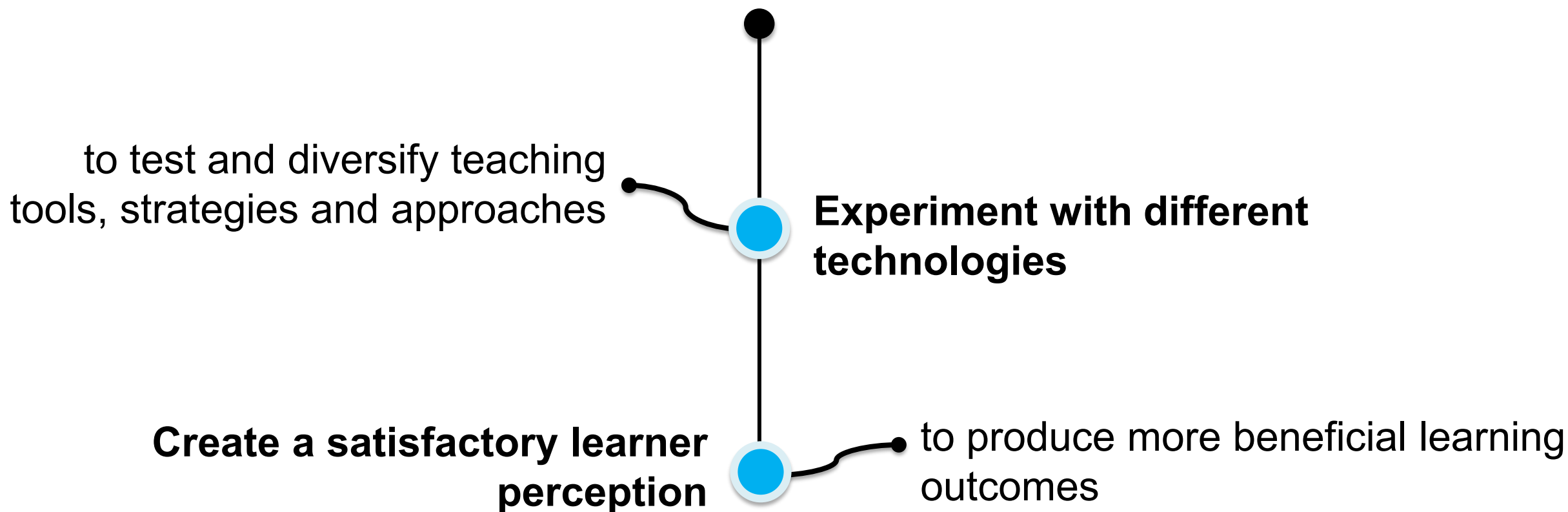
Future pre-service teacher training

- introductory session
+ technical



Next steps

AR is a technology which efficiency is commonly accepted in education



Villmools Merci!
Thank you!

Biblio- / sitography

- Ali, S. (2022). The effectiveness of immersive technologies for future professional education. *Futurity Education*, 2(2). 13-21.
- Arneton, M., Muratet, M., Vanbrugghe, A., Geffroy, V. & Ferrand, M.-H. (2022). Proposer un jeu sérieux pour former à l'inclusion : retour d'expérience en France. *Revue internationale des technologies en pédagogie universitaire*, 19(1), 68-75.
- Bécard, J.-P. (2012). Mieux comprendre l'apprentissage expérientiel. Journée de la pédagogie 19 Avril 2012. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.hec.ca/daip/compte_rendu_evenements/journees_pedagogie/PresentationJPB.pdf. Last consulted 30.08.2023.
- Belda-Medina, J. & Calvo-Ferrer, J. R. (2022). Integrating augmented reality in language learning: pre-service teachers' digital competence and attitudes through the TPACK framework. *Education and Information Technologies*, 27(9), 12123–12146.
- Cabero-Almenara, J., Fernández-Batanero, J. M. & Barroso-Osuna, J. (2019). Adoption of Augmented Reality Technology by University Students. *Heliyon*, 5
- Chen, Y.-H. & Wang, C.-H. (2018). Learner presence, perception, and learning achievements in augmented-reality-mediated learning environments. *Interactive Learning Environments*, 26(5), 695–708
- Elmeziane, A. & Lecorre, T. (2021). Micro-étude de l'impact de l'utilisation de la réalité augmentée sur la performance et les attitudes des apprenants dans le cadre d'un cours sur les techniques boursières. *Revue internationale des technologies en pédagogie universitaire*, 18(2), 1-23.
- Garcia, N. (2014). Monolingisme politique dans une société plurilingue ? Le cas du Luxembourg. *Revue internationale de politique comparée*, 21, 17-36.
- Hein, R. M., Wienrich, C., & Latoschik, M. E. (2021). A systematic review of foreign language learning with immersive technologies (2001-2020). *AIMS Electronics and Electrical Engineering*, 5(2), 117–145.
- Iqbal, M. Z., Mangina, E., & Campbell, A. G. (2022). Current Challenges and Future Research Directions in Augmented Reality for Education. *Multimodal Technologies and Interaction*, 6(9), 75–.
- Kambala, M. (2023). *Nous devons répondre aux grandes questions actuelles*. Virgule.lu, <https://www.virgule.lu/luxembourg/nous-devons-repondre-aux-grandes-questions-actuelles/28722.html> Last consulted 30.08.2023. *Lampropoulos et al., 2022*
- Lampropoulos, G.; Keramopoulos, E.; Diamantaras, K. & Evangelidis, G. (2022). Augmented Reality and Gamification in Education: A Systematic Literature Review of Research, Applications, and Empirical Studies. *Applied Sciences*, 12, 6809.
- Laurent, A. & Doré, L. 2022. Nouveaux arrivants au Luxembourg : guide pratique. Mediaweb. <https://www.guidedesimpots.lu/wp-content/uploads/2022/05/GUIDE-PRATIQUE-2022.pdf> . Last consulted on 04.09.2023
- Lejot, E. (2015). Les pratiques multilingues au cœur des programmes de Master et de Bachelor à l'Université du Luxembourg. *Synergies Pays Germanophones*, (8), 49-64.
- L'équipement numérique des professeurs continue en 2022 (2022). Virgule.lu. <https://www.virgule.lu/luxembourg/l-equipement-numerique-des-professeurs-continue-en-2022/42931.html>. Last consulted on 29.04.2023.
- Marín-Díaz, V. (2017). The Relationships Between Augmented Reality and Inclusive Education in Higher Education. *Bordón. Revista de Pedagogía*, 69 (3), 125-142.
- Ministère de l'Education nationale, de l'Enfance et de la Jeunesse (MENJE) (2022). L'enseignement au Luxembourg en chiffres 2021-2022. <https://men.public.lu/fr/publications/statistiques-etudes/themes-transversaux/21-22-enseignement-chiffres.html> . Last consulted on 29.04.2023.
- Punar Özçelik, N., Eksi, G. & Baturay, M. H. (2022). Augmented Reality (AR) in Language Learning: A Principled Review of 2017-2021. *Participatory Educational Research*, 9(4), 131-152.
- Reuter, R. (2022). Preparing future teachers to strategically integrate digital media and technologies into their teaching practices: An insight into higher education practices at the University of Luxembourg. *Education Technology Insights Europe*, <http://hdl.handle.net/10993/53936>
- Suh, A. & Prophet, J. (2018). The state of immersive technology research: A literature analysis. *Computers in Human Behavior*, 86, 77-90.
- University of Luxembourg (2022). Welcome new PhDs.
- University of Luxembourg. Programme du master en éducation, langues et littératures françaises. <https://www.uni.lu/fhse-en/study-programs/master-en-enseignement-secondaire-langue-et-litterature-francaise/programme/> Last consulted on 01.09.2023.