

## Utilization of learning analytics in the various educational levels for supporting self-regulated learning

- Learning analytics (LA) is often defined as “the measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimizing learning and the environments in which it occurs” (LAK, 2011).
- It is assumed that LA may be potentially effective way to support learners’ self-regulated learning (SRL), e.g., supporting planning and organizing as well as giving an opportunity for self-evaluation (Schumacher & Ifenthaler, 2018).
- Also, LA visualizations may give tools for learners to monitor their learning processes and teachers to monitor students’ learning in order to support their learning when needed. In this project, LA is approached as a tool for support and diagnostic or formative assessment rather than tool for rigorous summative assessment or evaluation.
- Thus, the use of LA in teaching and learning should be critically evaluated as part of the pedagogical design of the teaching and learning environment.

### AIM OF THE PROJECT

- Identify through learning analytics the key elements of learning processes that support the development of high-quality learning and development of know-how.
- Examine the development of learners’ skills, the learning process, learning outcomes and the key elements in the pathway in multiple learning contexts utilizing similarly designed learning analytics tools and visualizations.
- Contexts:
  - 1) Vocational school study path (WP1)
  - 2) University study modules (WP2)
  - 3) Primary school phenomenon-based study modules (WP3)

### RESULTS AND OUTCOMES

- Vocational school students’ who come directly from primary school may run into trouble in completing their studies due to learning environment which requires too much independence in their studies (López-Pernas et al., 2022).
  - Among in-service teachers, there is various profiles of interaction with the professional development courses: efficient, moderate and clickers (Saqr et al., 2022).
  - Preservice teachers experience quantitative methods courses challenging and even scary, but those negative emotions seem to be activating them to work even harder, if the pedagogical design is experienced supportive (Sointu et al., 2022a; 2022b).
  - Primary education pupils experience LA and LA visualizations positively and as additional resource of guidance, however, they need much support and consistent guidance in utilizing them functionally (Hirsto et al., 2022; Väisänen et al., 2022).
- As the result of the project, a model is constructed for an effective learning and pedagogical processes in flexible learning environments optimized for the learners’ *learning processes, self-regulation* and *LA pedagogy*.

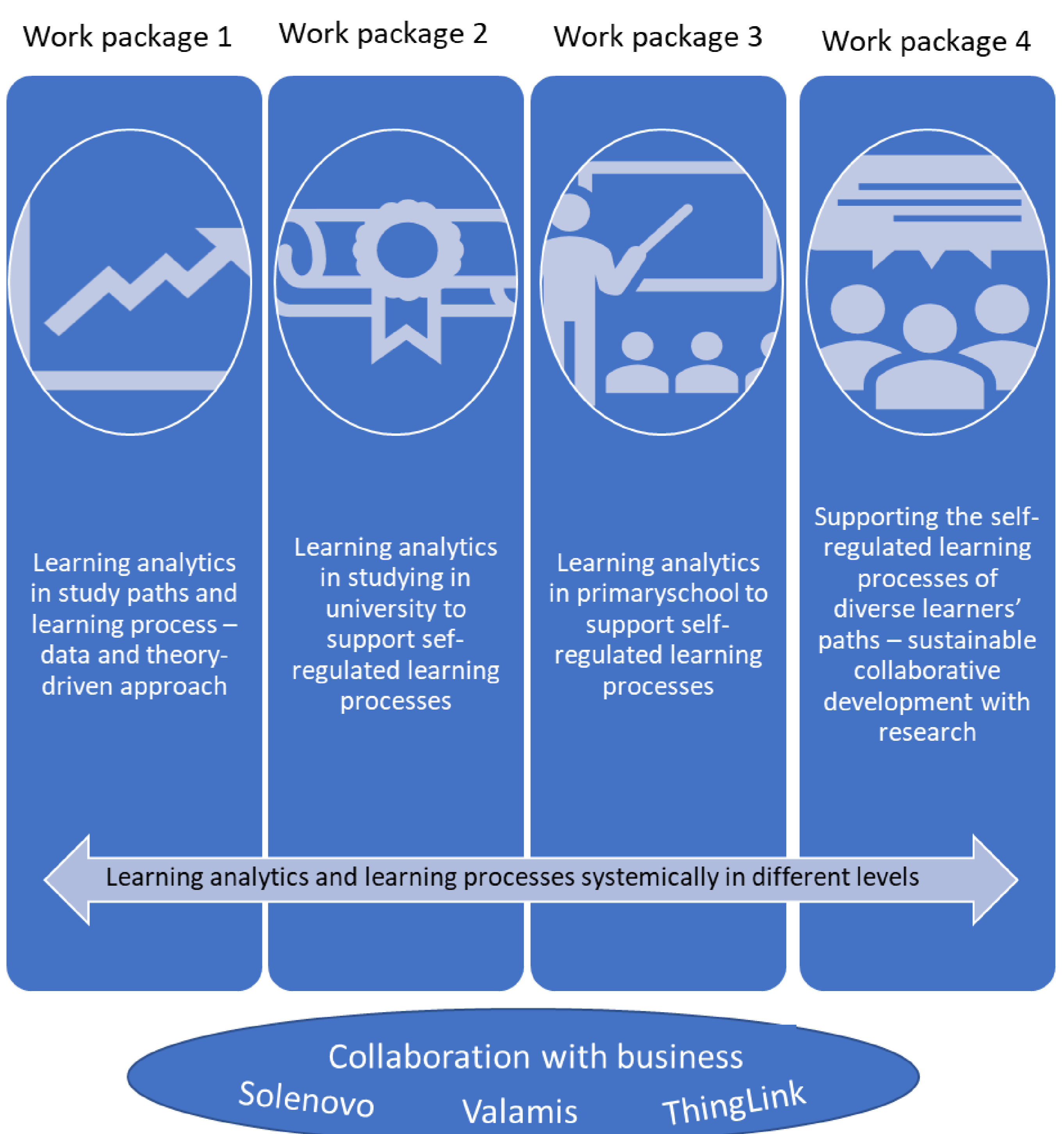


Figure 1 Work packages of OAHOT

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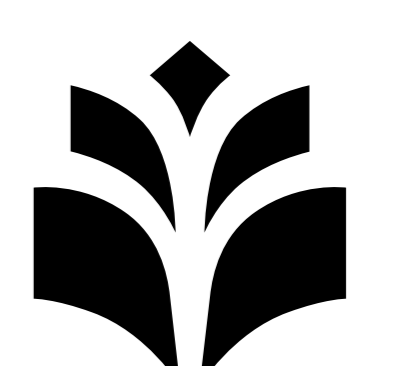
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