

„Fair Enough“ (BMBF, 2021 – 2024)

Learning Analytics is...

“the measurement, collection, analysis and reporting of data about learners and their contexts, for purposes of understanding and optimising learning and the environments in which it occurs” (LAK 11).

Learning Analytics in schools and higher education

Data-based methods for analyzing, predicting, and evaluating learning processes can reproduce biases in the data and lead to unfair outcomes. The project "Fair Enough?" aims to investigate how the fairness of Learning Analytics systems can be checked and audited.

“This student needs to stay back”: To what degree would instructors rely on the recommendation of Learning Analytics?

Study 1: Conjoint-Analysis

372 instructors: We analyze whether and to what degree instructors are influenced by the provided data and recommendations of an unknown LA system.

Table 1 shows the relative importance of the attributes.

→ Recommendation has an impact, although the participants had no information about the underlying system (black box).

Study 2: Experimental Design

95 teachers: We describe the differences in the use of data between learners and the influence of early-warning systems.

Figure 1 shows the LMS output (information about the learners).

Result: Learner B received a lower grade because of the warning.

A positive recommendation had no impact.

→ Teachers tend to view a warning as a bad sign (although it can also indicate problems or need for support).

Tab. 1: Relative importance of learner’s attributes

Attributes	R	I
Passed exams	1	32.56 [12.11]
Platform’s recommendation	2	26.32 [13.14]
Learning behavior	3	20.73 [9.10]
Parental support	4	12.48 [9.82]
Name and picture	5	7.91 [6.59]

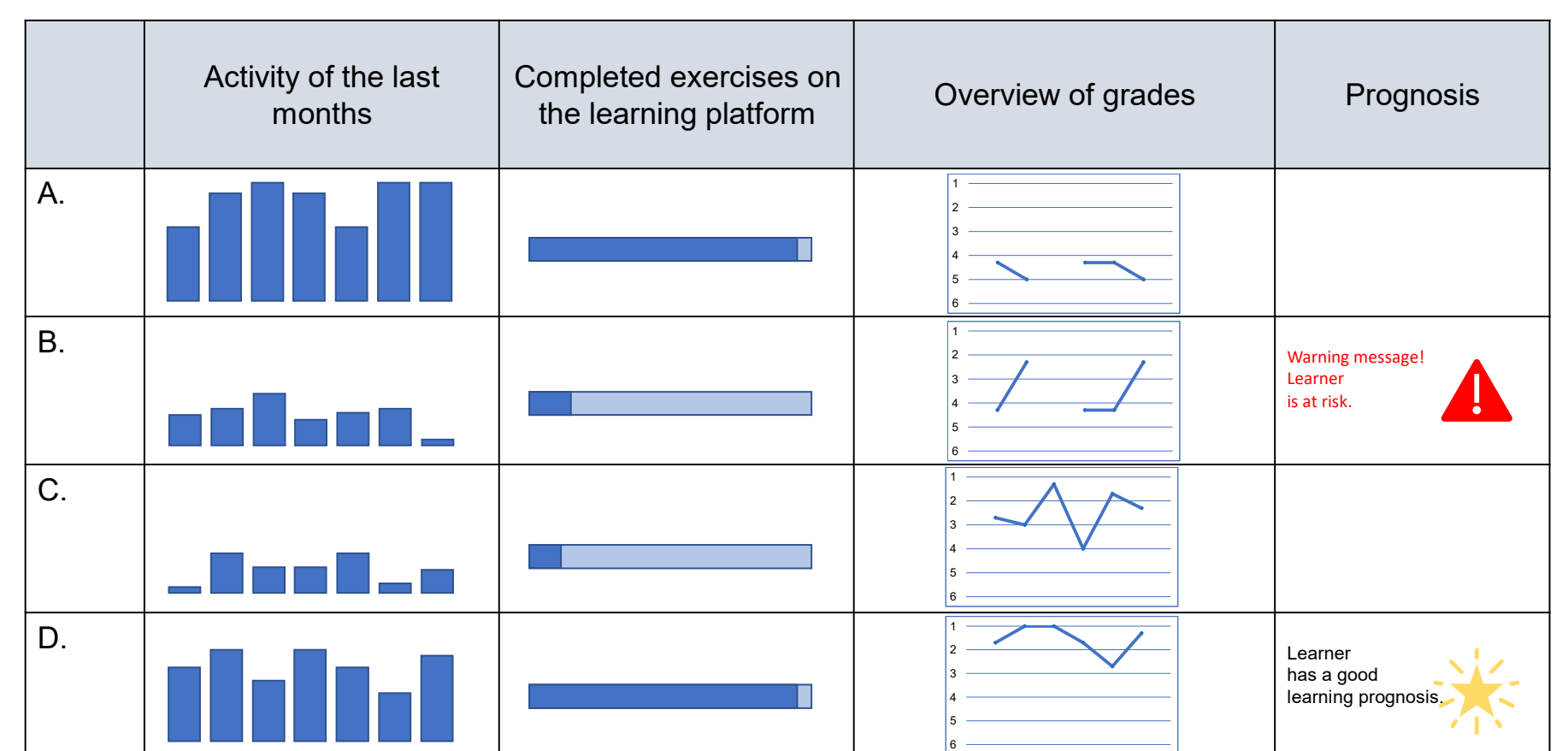


Fig. 1: Output of the Learning Management System with recommendation

Digital transformation in educational institutions: scrutinizing the debate and highlighting success factors

A qualitative study on the current use of Learning Management Systems and Learning Analytics in Germany

27 interviews June - October 2021 with experts from German (higher) education institutions (81 % ♂ 19 % ♀), use of LMS in higher education institutions for \varnothing 13.5 years, in schools for \varnothing 7 years

We find different obstacles, including lack of digital competencies, necessity of technical equipment, concerns about replacing traditional lessons, but also enthusiasm for new possibilities.

Figure 2 shows the different aspects that are important for the ongoing debate, both high expectations and worries about data safety and ethical barriers.

→ Development of LA usage is still in progress and the handling of concerns is inconsistent.

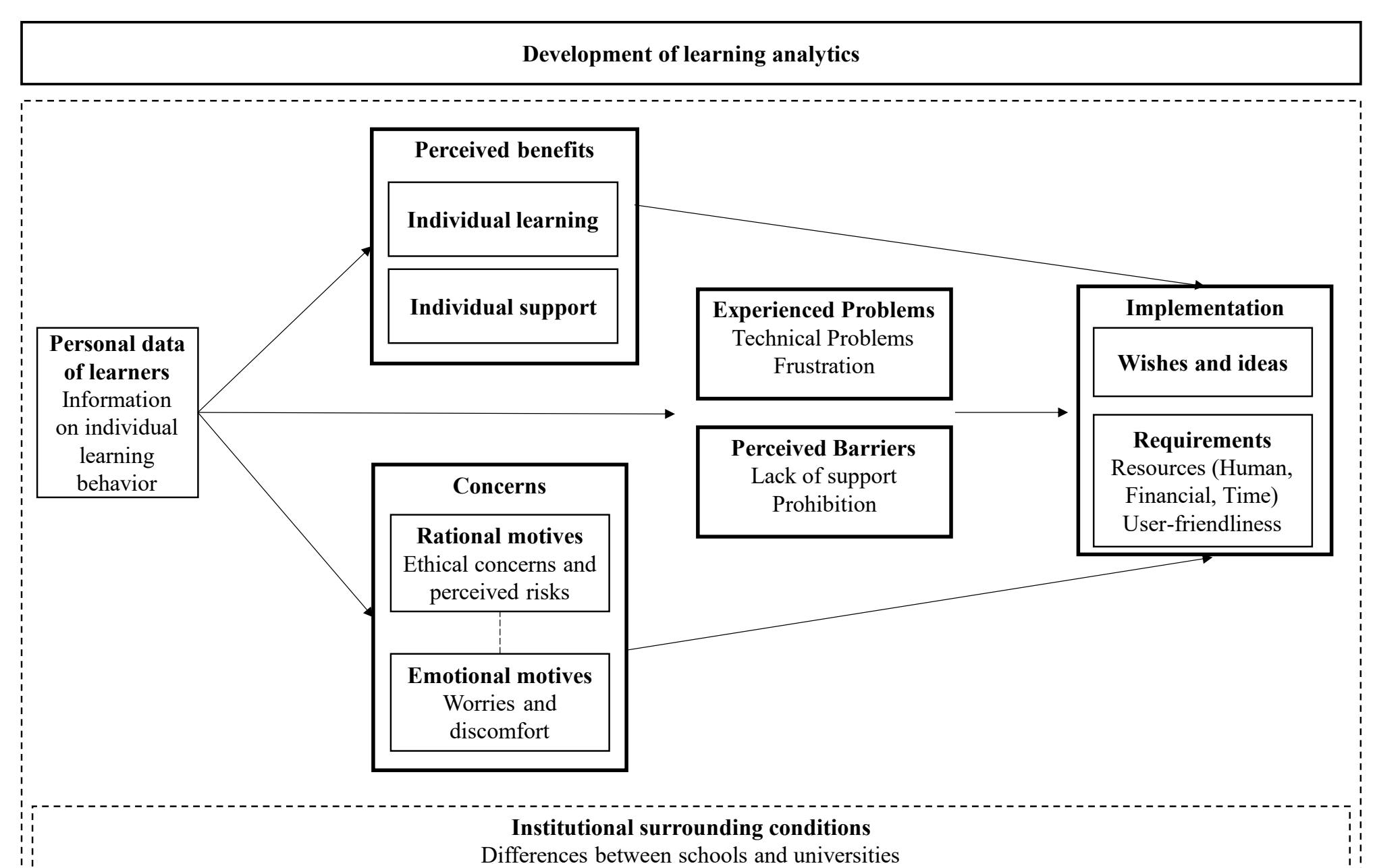


Fig. 2: Influences of LA usage in institutions