

DIGITAL MATHEMATICAL STACK PROBLEMS AT THE MAGDEBURG-STENDAL UNIVERSITY OF APPLIED SCIENCES

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Abstract

Digital mathematical STACK problems with automated feedback offer students opportunities to consolidate their mathematical skills anywhere and anytime. Regular online tests for further integration into mathematics courses have been tested since the winter term of 2022/23 in the "Mathematics for Civil Engineers" module at the Magdeburg-Stendal University of Applied Sciences. Usage behaviour and learning success of the students have been evaluated statistically and by accompanying surveys and used to further improve the course setting and materials using a Design-Based Implementation Research approach.

Preparation for use

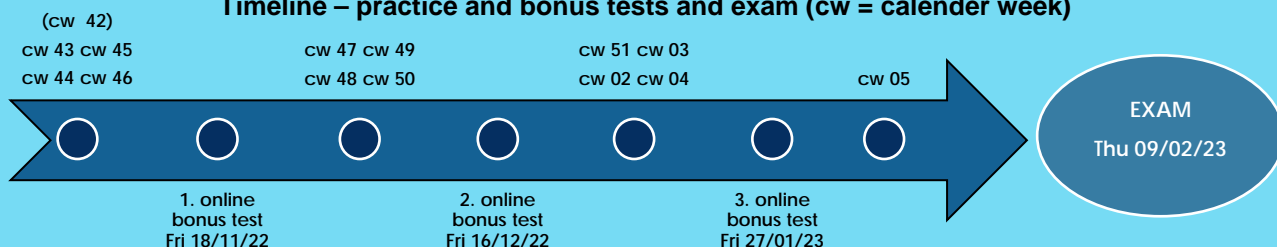
Import and use of the (selected) STACK questions from DOMAIN¹ (Uni Bochum) and DIGITALE AUFGABENPOOL MATHEMATIK² (TH Köln)

Use of STACK

- Digital Mathematics Learning Support Center (MLSC) and
- Moodle course areas for selected Mathematics courses

Example: Mathematics 1 for Civil Engineers, Winter Term 2022/23 (Fundamental Concepts and Linear Algebra)

Timeline – practice and bonus tests and exam (cw = calender week)



Contact

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**Projekt h²d² –
didaktisch und digital
kompetent Lehren
und Lernen**

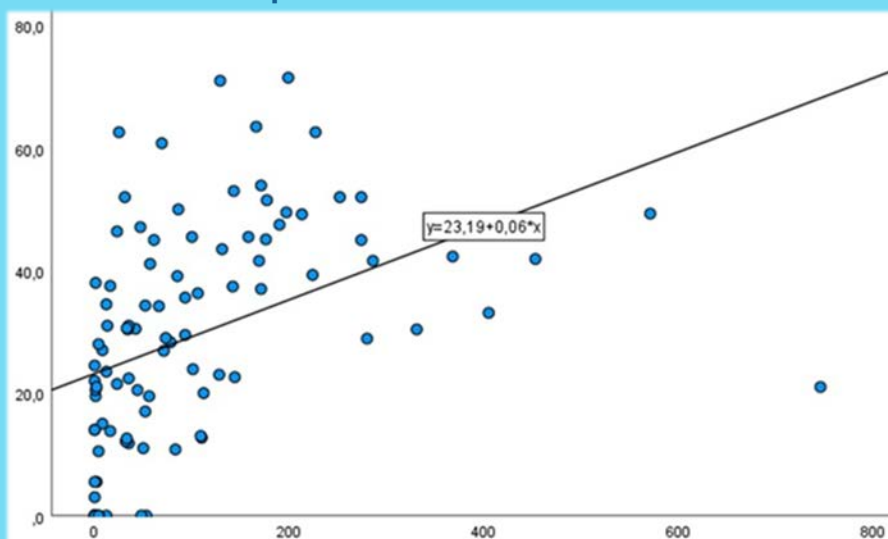
Information in german:
<https://h2.de/h2d2>

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Positive correlation: use of practice tests & total score



use of digital STACK problems vs. learning success



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Links:

1. <https://db.ak-mathe-digital.de/>
(retrieved on 03/16/2023)
2. <https://aufgabenpool.th-koeln.de/>
(retrieved on 03/16/2023)



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