Digitales Schriftliches Prüfen

24. Workshop Videokonferenzen im Wissenschaftsnetz

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RWTH AACHEN UNIVERSITY

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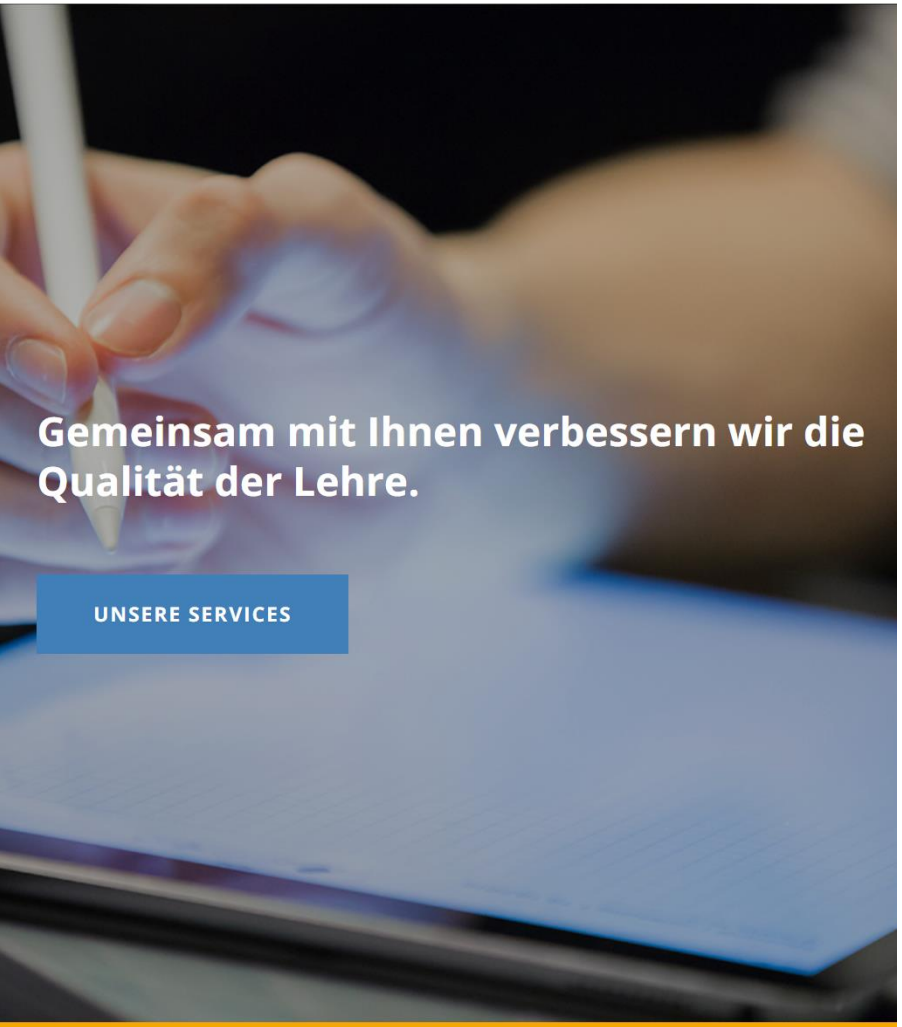


Gemeinsam mit Ihnen verbessern wir die Qualität der Lehre.

UNSERE SERVICES

Informationen und Handreichungen zu den Themen Distanzprüfungen und Fernlehre im Corona-Semester an der RWTH Aachen finden Sie unter:

https://video.cls.rwth-aachen.de/

Services

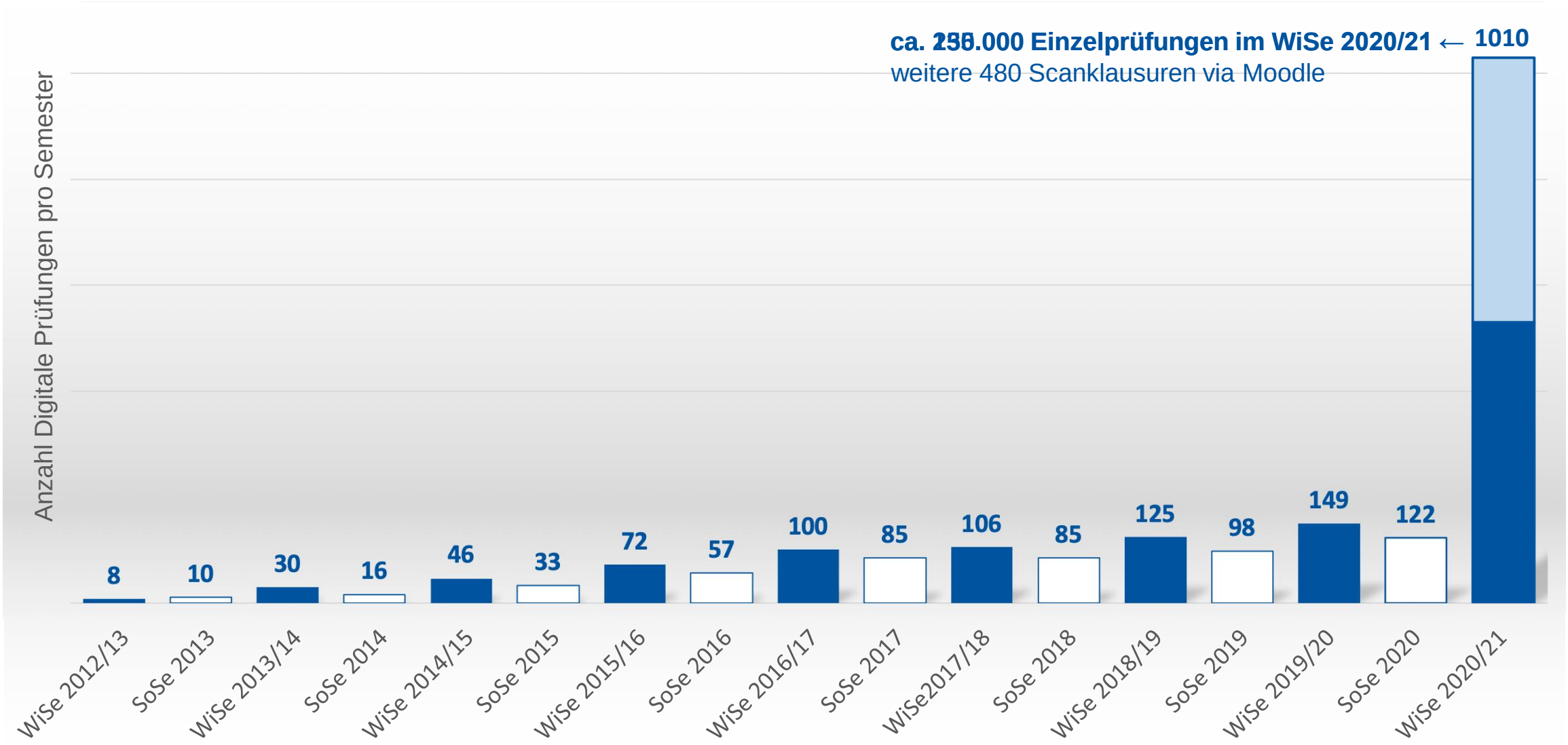
- Beratung
- Betreuung von RWTHmoodle
- Elektronische Prüfungen
- Evaluation und Begleitforschung
- Hochschuldidaktische Zertifikate
- Kollegiale Vernetzung
- Lehrveranstaltungsevaluation
- Lehrveranstaltungskonzeption
- Lunch Lehre
- Massive Open Online Courses (MOOCs)
- Mentoring
- SelfAssessments
- Seminare und Workshops
- Serious Games
- Videoproduktion

Projekte

- Hörsaal 4.0
- Deutsch-Assessment
- Data Literacy
- HydroOER
- Digitales Semester
- RWTH Analytics
- ORCA.nrw

Alles anders in den Digitalen Semestern?

Digitale Prüfungen an der RWTH



Menü

DE | EN

Suche

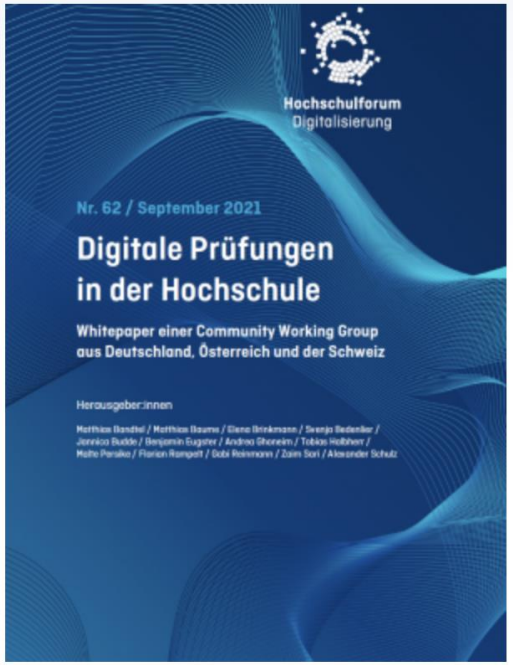
Hochschulforum Digitalisierung

"DIGITALE PRUFUNGEN IN DER HOCHSCHULE" - NEUES WHITEPAPER

29.9.2021

Die Community Working Group "Prüfungsszenarien für die digitale Hochschulbildung" des Hochschulforums Digitalisierung veröffentlicht das Whitepaper "Digitale Prüfungen in der Hochschule".

WHITEPAPER "DIGITALE PRÜFUNGEN IN DER HOCHSCHULE"



Leseempfehlungen: https://hochschulforumdigitalisierung.de/de/news/digitale-pruefungen-hochschule-whitepaper

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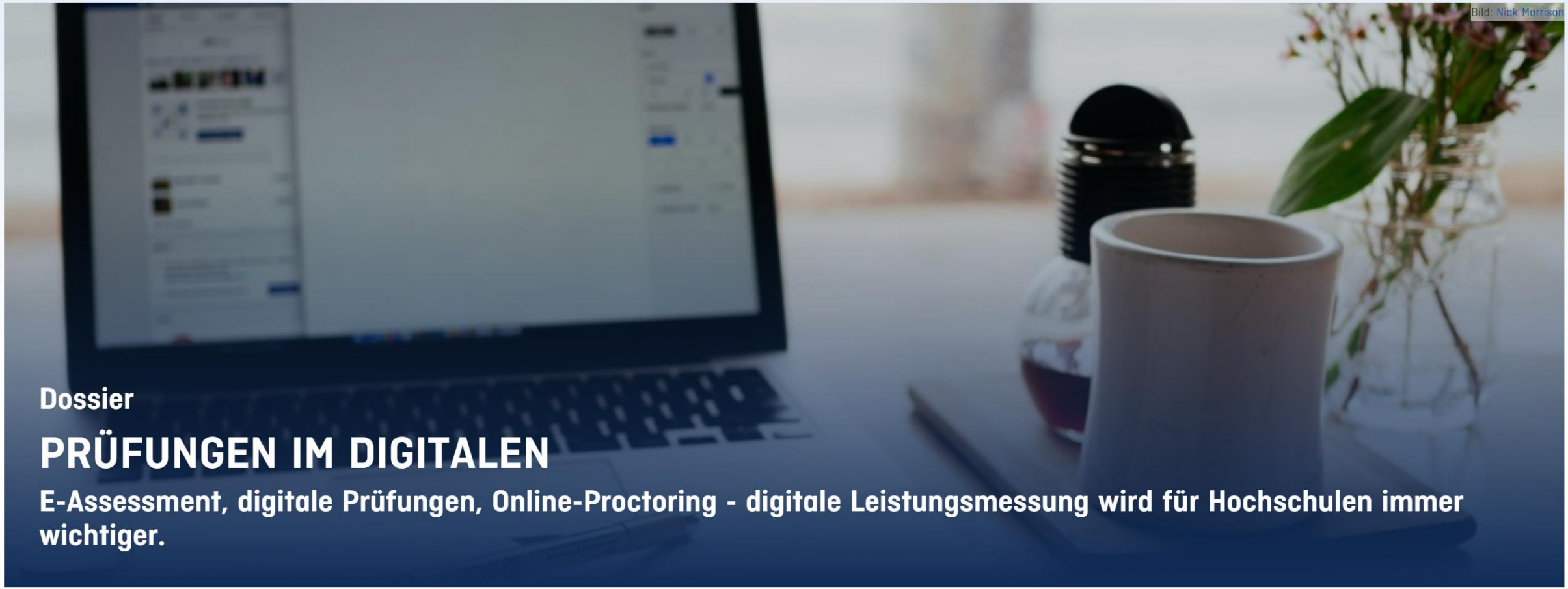
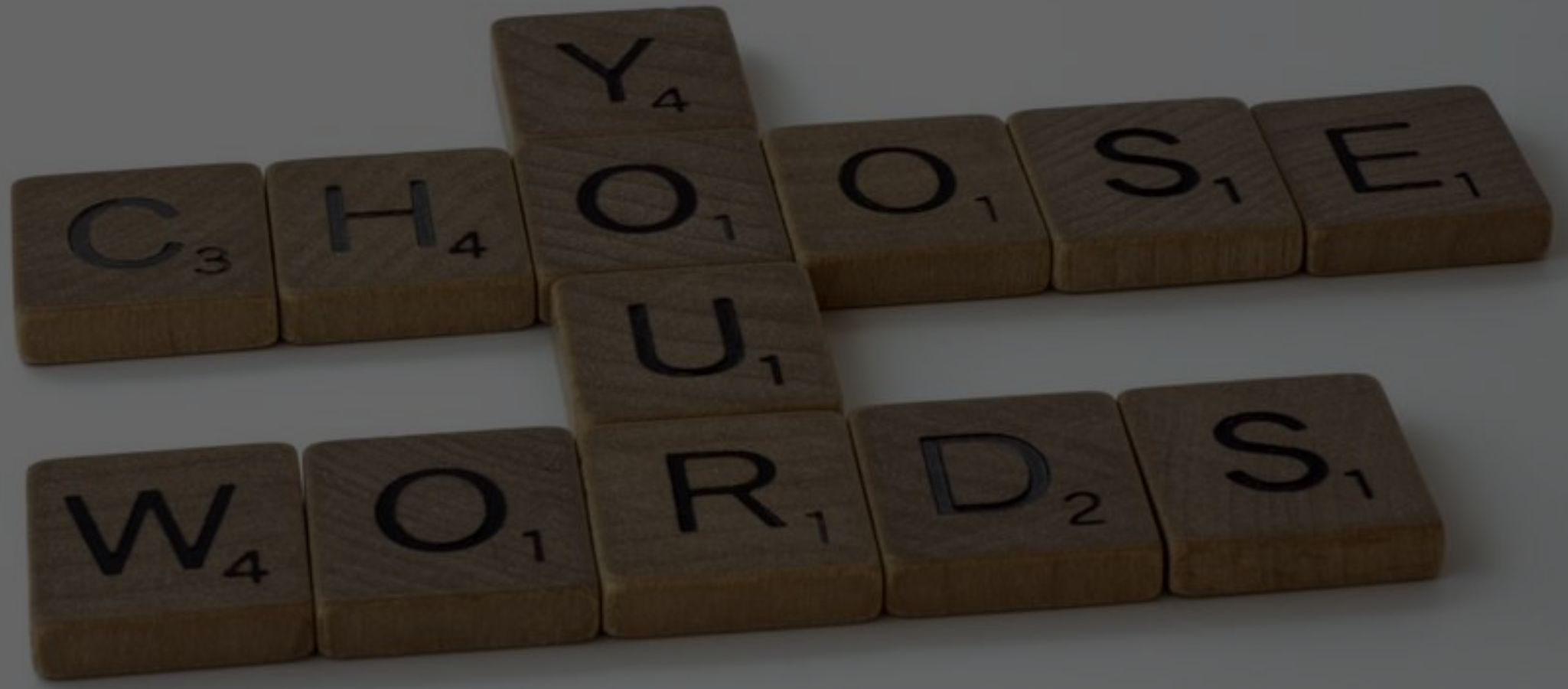


Leseempfehlungen: https://hochschulforumdigitalisierung.de/de/dossiers/pruefungen-im-digitalen

Persike, M. (2021). Digitales Prüfen. In: Neiske et al. (Hg.). Hochschule auf Abstand. Ein multiperspektivischer Zugang zur digitalen Lehre. Bielefeld: transcript.

Begrifflichkeiten

im Kontext digitaler Prüfungen



Digitale Prüfungen

E-Assessments

E-Prüfungen

E-Tests und Quizzes

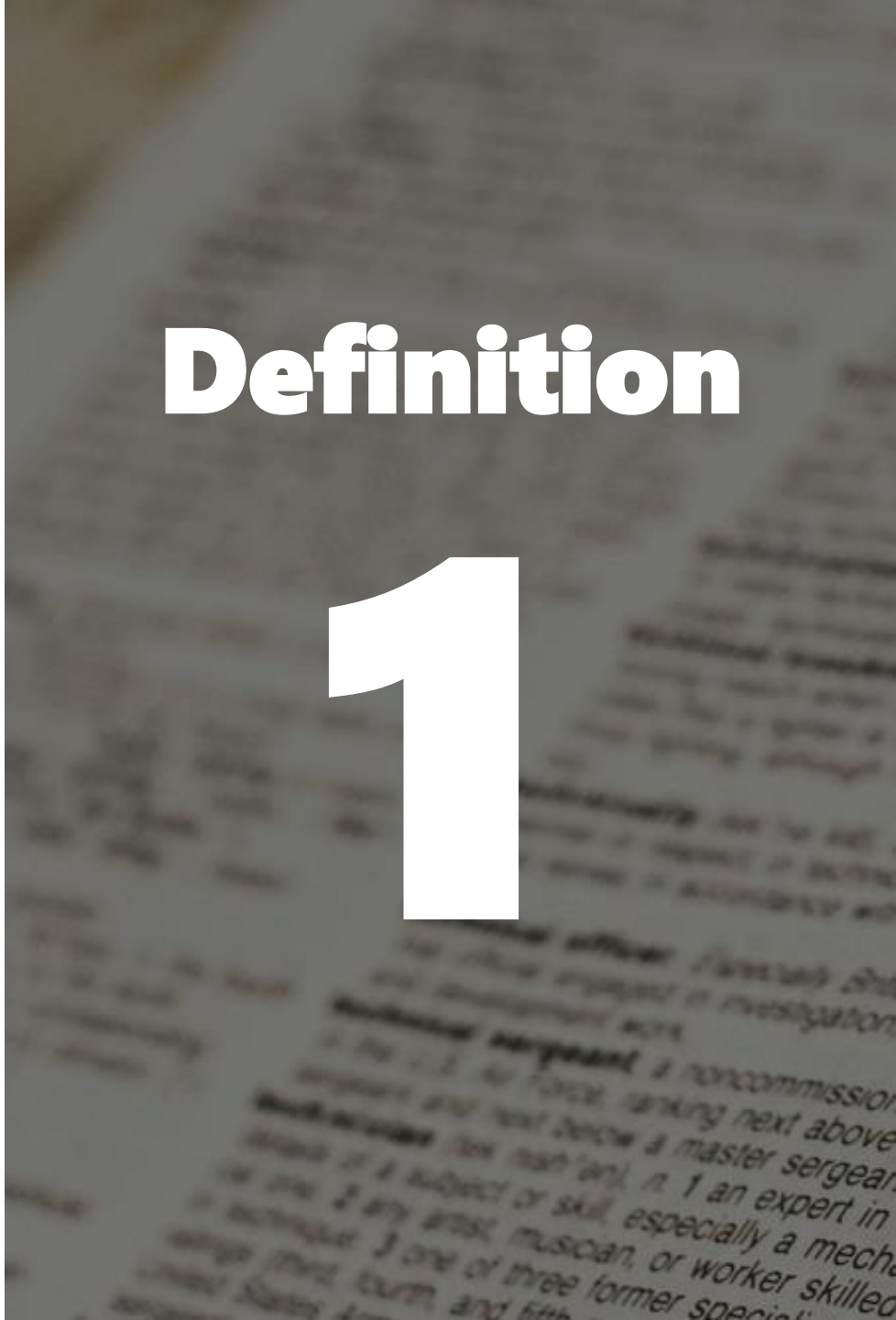
Fernprüfungen

Scanprüfungen

Hybride Prüfungen

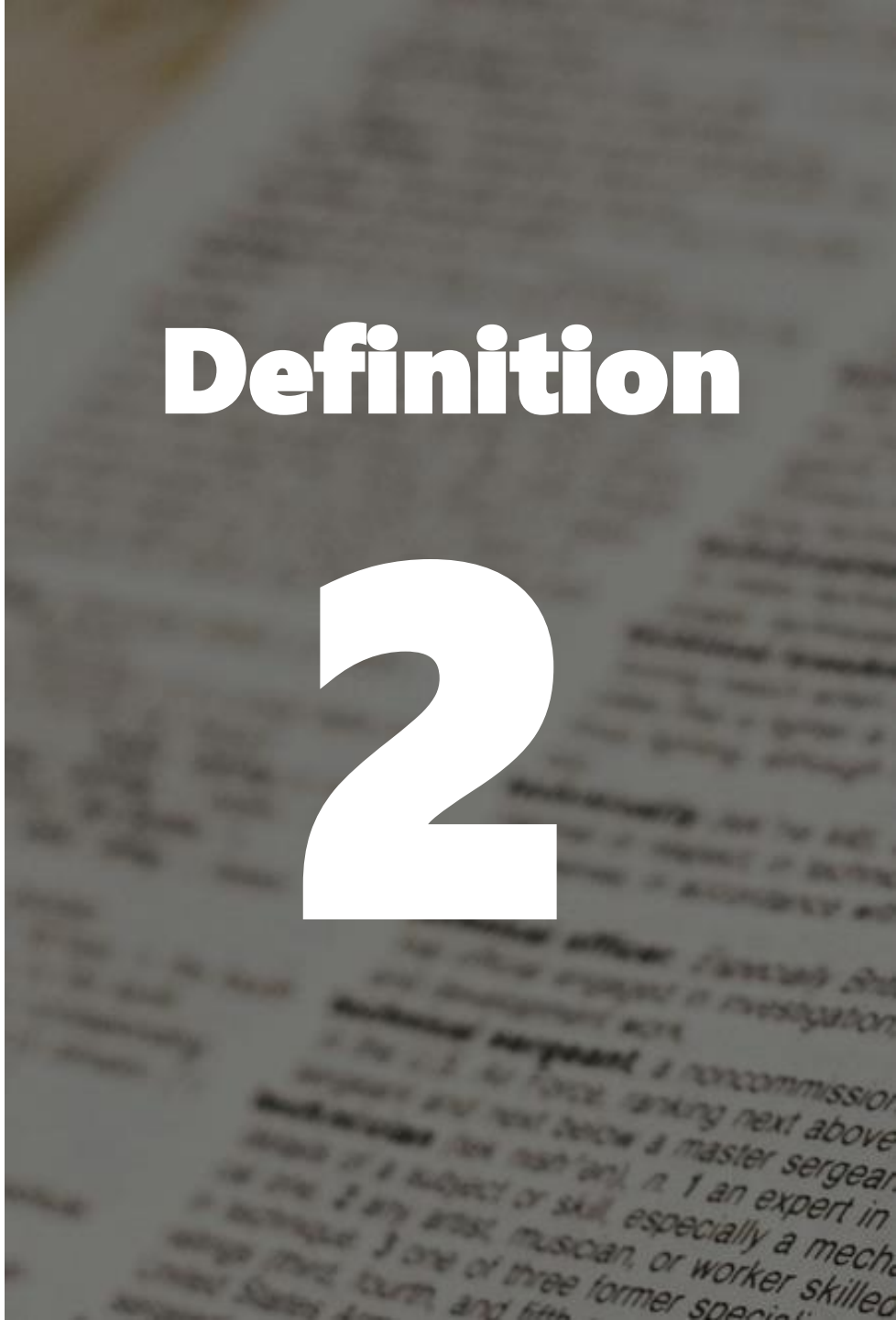
Digitale Prüfung

Jede Form der kognitiven Leistungsmessung, bei der mindestens Teile der Durchführung in digitaler Form ablaufen. Im Englischen als E-Assessment bezeichnet.



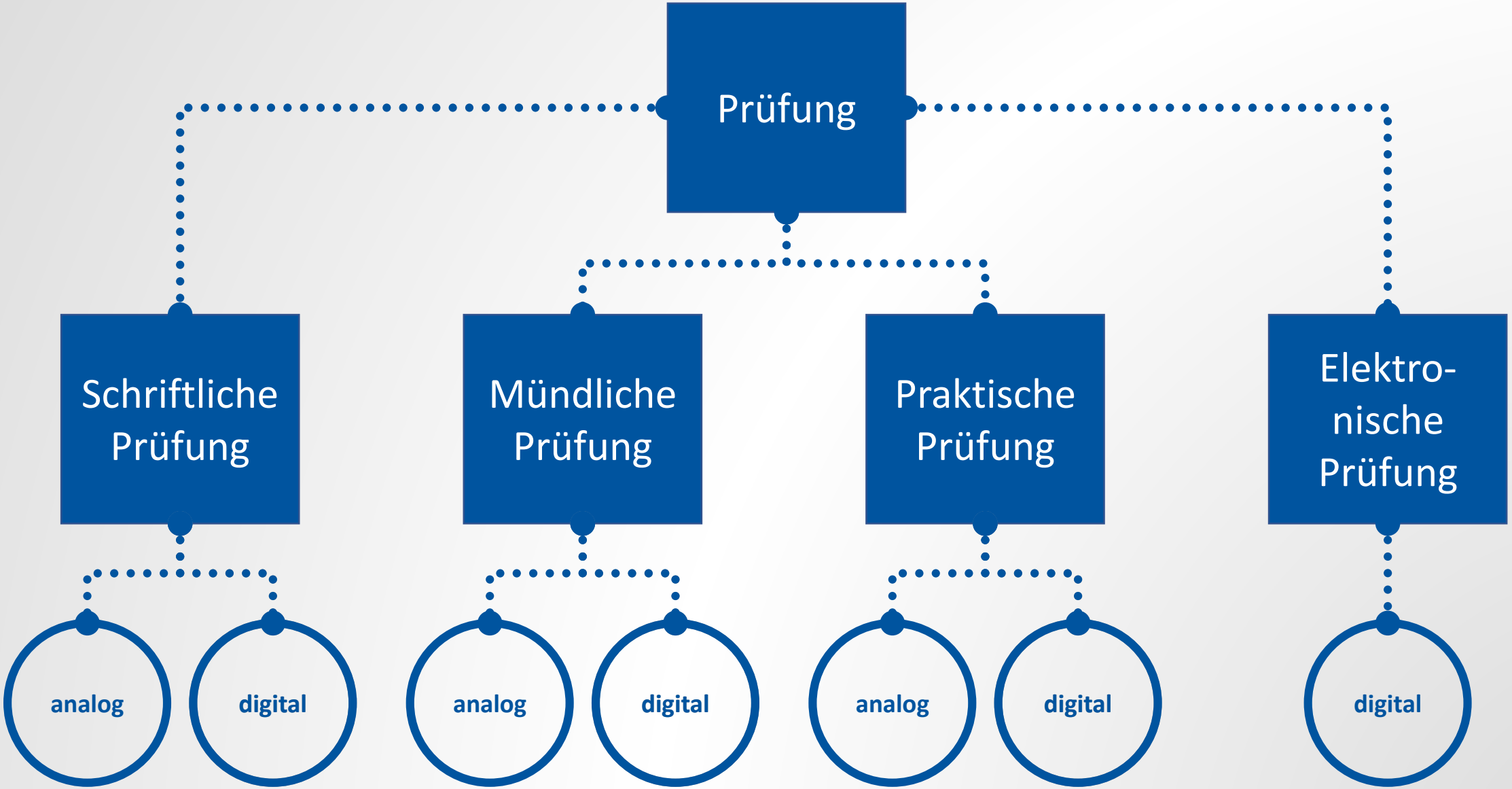
Elektronische Prüfung

Digitale Prüfung, bei der Vorbereitung, Durchführung und Korrektur im selben Softwaresystem erfolgen, meist “E-Prüfungssystem“ genannt.



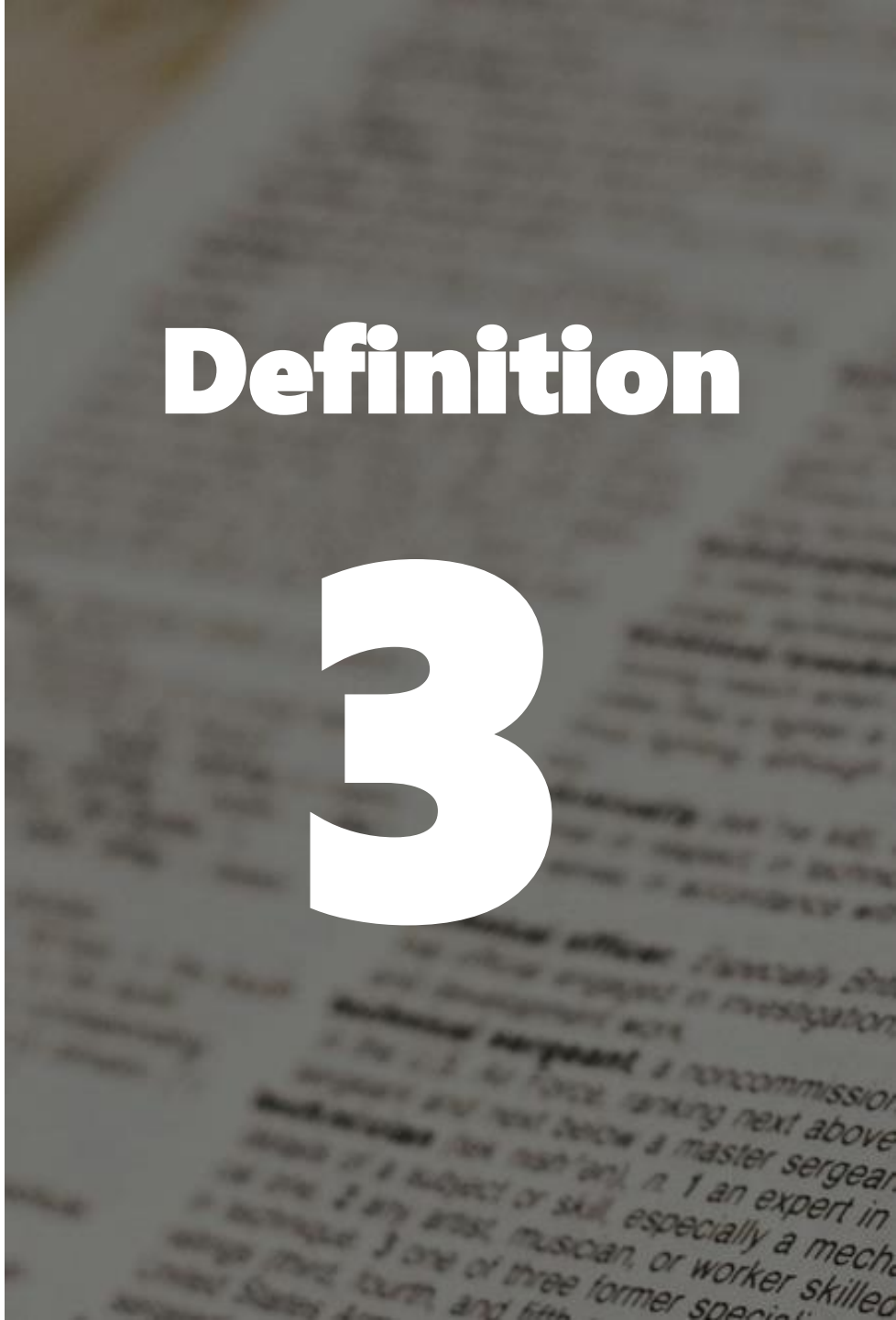
Elektronische Prüfung

Die E-Prüfung ist ein prüfungsrechtlich fest-stehender Begriff, dessen Auslegung der rasanten Entwicklung des digitalen Prüfens noch nicht entspricht.


Prüfung
Schriftliche Prüfung
Mündliche Prüfung
Praktische Prüfung
Elektro-nische Prüfung
analog
digital
analog
digital
analog
digital
digital

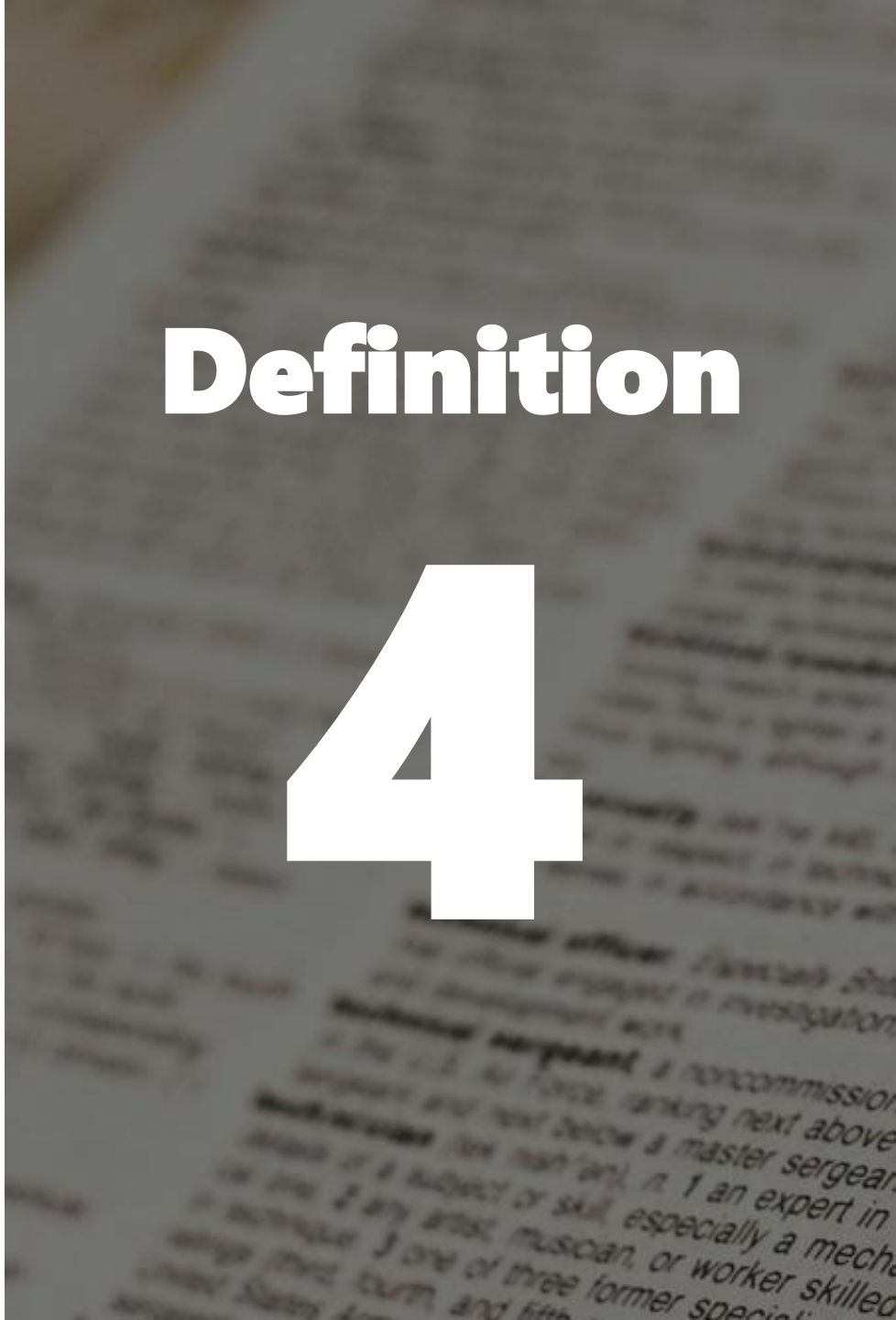
E-Test und Quiz

Formative Form der Digitalen Prüfung, die semester-begleitend stattfindet, oft unter Nutzung eine E-Prüfungssystems oder spezieller Software.



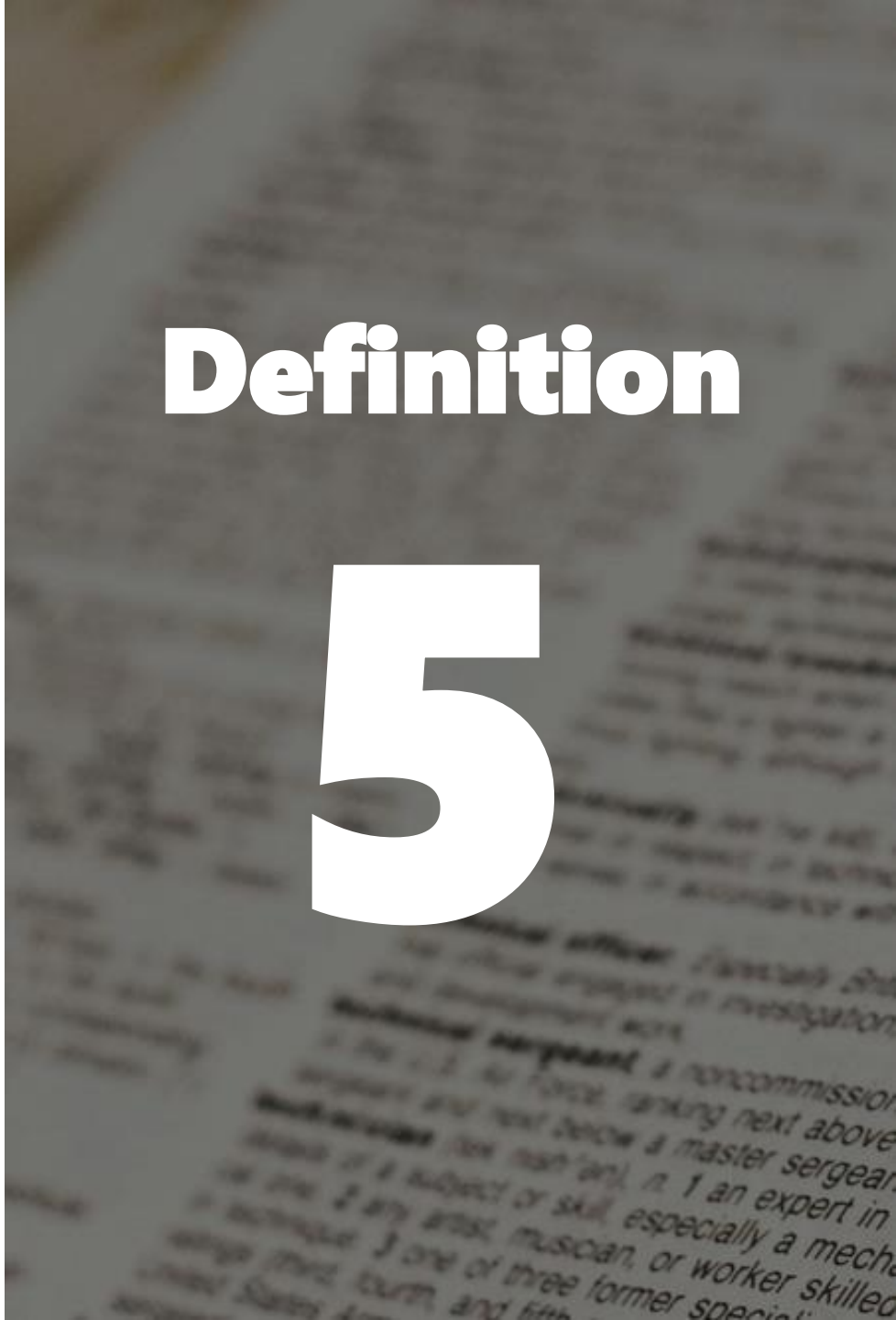
(Online-)Fernprüfung

Eine (digitale) Prüfung, deren Durchführungsort von den Geprüften beliebig gewählt werden kann. Im Englischen als Take-Home Prüfung bezeichnet.



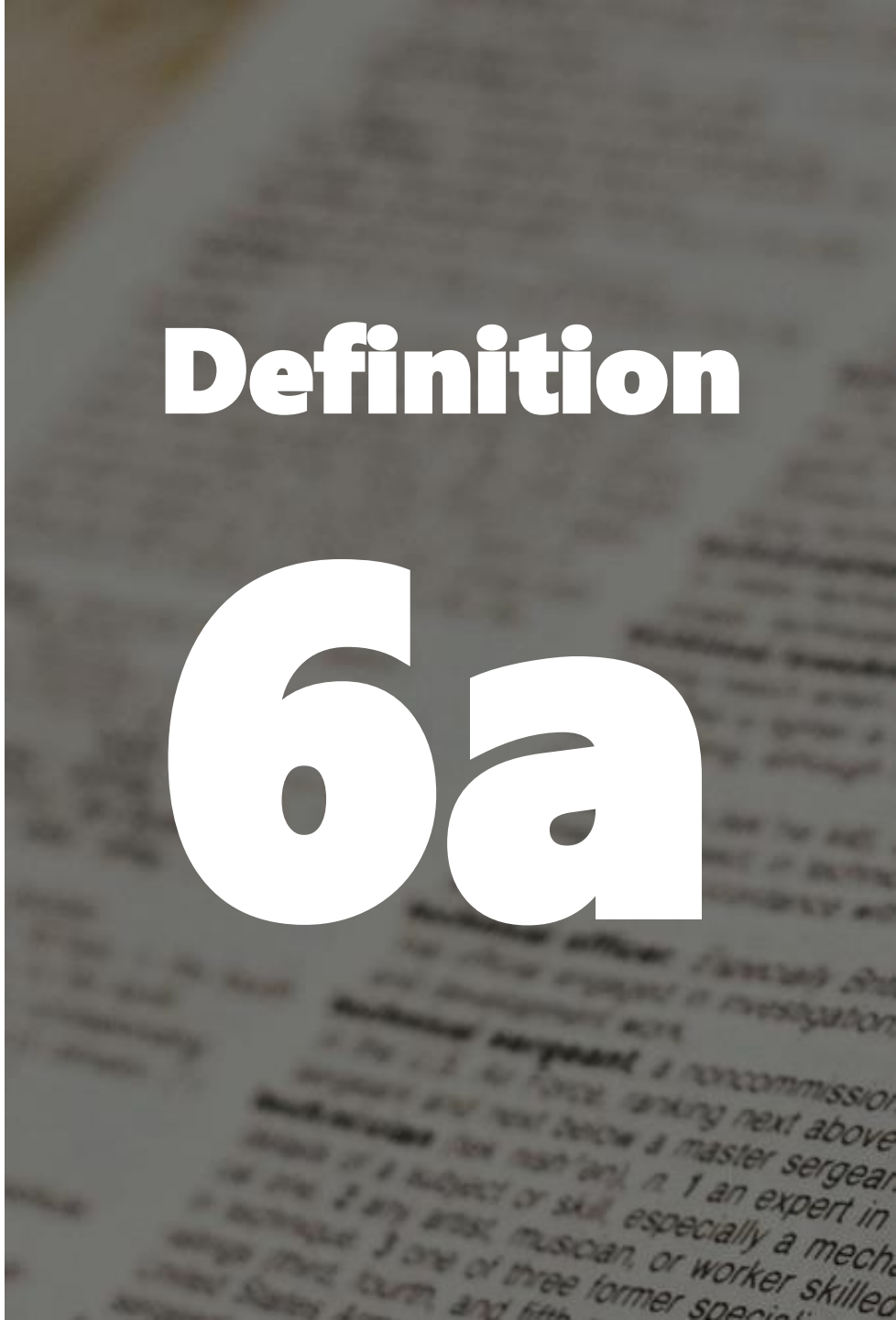
Scanprüfung

Eine Prüfung, bei der die Prüfungsmaterialien nach der Ablegung durch Einscannen digitalisiert werden, entweder durch die Studierenden selbst oder durch Servicepersonal.



Hybride Prüfung

1. Gleichzeitiges Angebot derselben Prüfung in analoger und digitaler Form, wobei die Geprüften eine der beiden Varianten wählen.



Hybride Prüfung

2. Mischung von digitaler und analoger Bearbeitung innerhalb derselben Prüfung.

Hybride Prüfung

3. Mischung mehrerer digitaler Bearbeitungs-formen in derselben Prüfung (z.B. E-Prüfungs-System plus Drittapplikation).

Diagnostische Gütekriterien von Prüfungen sollen unverändert bleiben

Repräsentativität: Bildet eine Prüfung ihren Gegenstand umfassend ab?

Validität: Wie gut misst eine Prüfung das, was sie messen soll?

Reliabilität: Wie zuverlässig misst eine Prüfung das, was sie misst?

Objektivität: Kommen verschiedene Prüfende bei derselben Leistung zum gleichen Ergebnis?

Ökonomie: Wie effizient misst eine Prüfung das, was sie misst?

Transparenz:: Haben alle Beteiligten Einblick in den Prüfungsprozess?

technisch

didaktisch/
psychometrisch

4 Anforderungsdimensionen digitalen Prüfens

rechtlich

organisatorisch

Digitale Prüfungen in Präsenz

Einsatz von Prüfungspools

Rauminfrastruktur: Platzbedarf, Sichtschutz, Klimatisierung, Lichtverhältnisse

Personal: IT-Administration, Prüfungsbetreuung, Fachaufsicht, Hausmeister

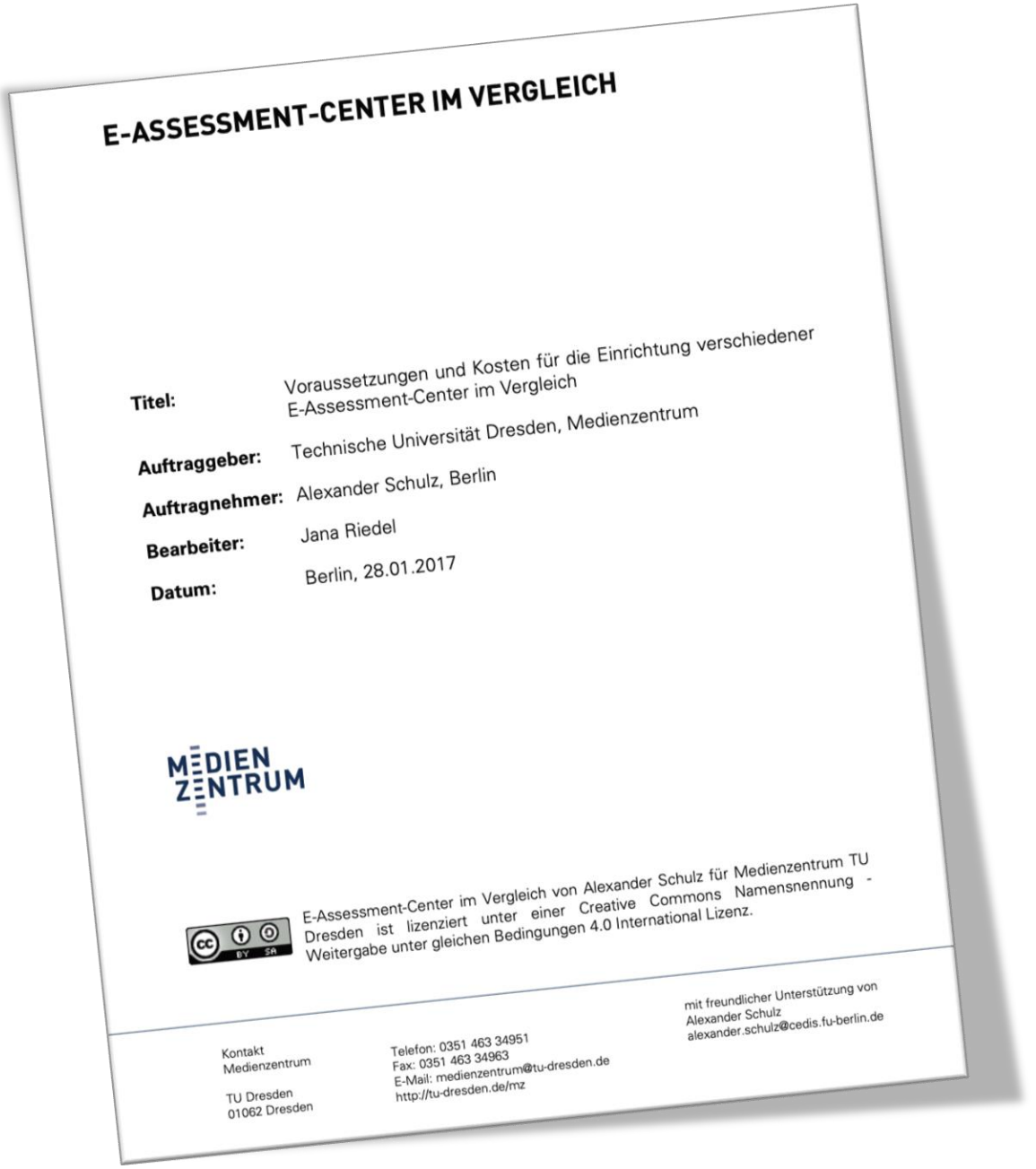
Hardware: Endgeräte, Bildschirme, Bediengeräte, Netzanschlüsse, Präsentationshardware (oder doch BYOD?)

Software: Betriebssystem, E-Prüfungssystem, Drittapplikationen, Proctoring-Software, Sicherheitsarchitektur

ca. 1,2 Mio. €
Erstinvestition für 150 Prüfungsplätze

ca. 200.000 €
Personalkosten p.a.

ca. 230.000 € für
Erneuerung alle 5 Jahre



E-ASSESSMENT-CENTER IM VERGLEICH

Titel: Voraussetzungen und Kosten für die Einrichtung verschiedener E-Assessment-Center im Vergleich

Auftraggeber: Technische Universität Dresden, Medienzentrum

Auftragnehmer: Alexander Schulz, Berlin

Bearbeiter: Jana Riedel

Datum: Berlin, 28.01.2017

MEDIEN ZENTRUM

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Telefon: 0351 463 34951
Fax: 0351 463 34963
E-Mail: medienzentrum@tu-dresden.de
http://tu-dresden.de/mz

mit freundlicher Unterstützung von
Alexander Schulz
alexander.schulz@cedis.fu-berlin.de

Die Durchführung von Präsenz-prüfungen an Hochschulen ist weiterhin eingeschränkt.

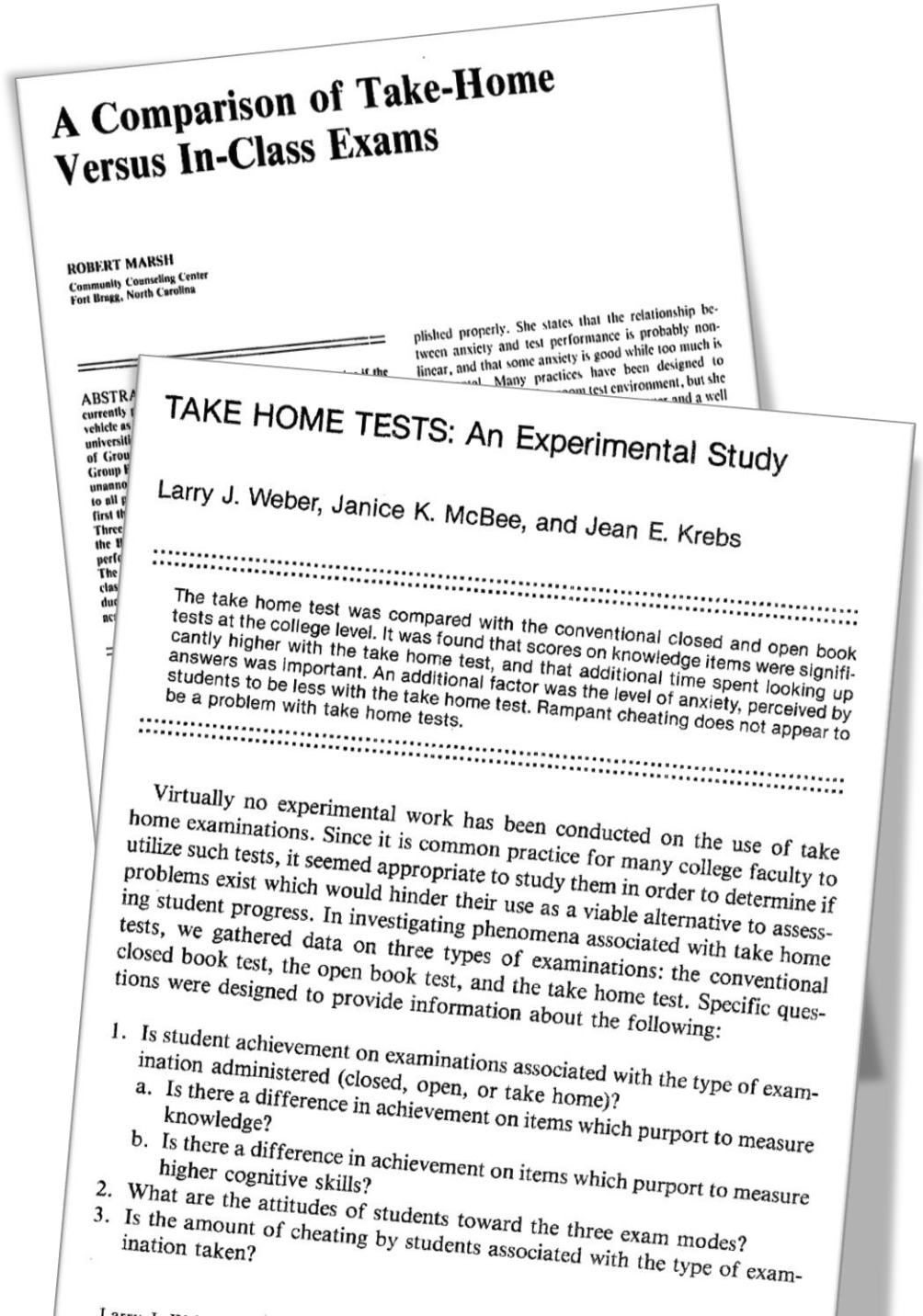
Fernprüfungen und alternative Prüfungsformate sind häufig elektronisch gestützt.

Fernprüfungen

Vorbereitungsintensität ist niedriger für Take-Home-Prüfungen

Leistungszeit und Leistungen in Take-Home-Exams sind höher

Studierende zeigen bessere Leistungen in Kontrollprüfungen bei überwachten als bei Take-Home Prüfungen



A Comparison of Take-Home Versus In-Class Exams

ROBERT MARSH
Community Counseling Center
Fort Bragg, North Carolina

TAKE HOME TESTS: An Experimental Study

Larry J. Weber, Janice K. McBee, and Jean E. Krebs

The take home test was compared with the conventional closed and open book tests at the college level. It was found that scores on knowledge items were significantly higher with the take home test, and that additional time spent looking up answers was important. An additional factor was the level of anxiety, perceived by students to be less with the take home test. Rampant cheating does not appear to be a problem with take home tests.

Virtually no experimental work has been conducted on the use of take home examinations. Since it is common practice for many college faculty to utilize such tests, it seemed appropriate to study them in order to determine if problems exist which would hinder their use as a viable alternative to assessing student progress. In investigating phenomena associated with take home tests, we gathered data on three types of examinations: the conventional closed book test, the open book test, and the take home test. Specific questions were designed to provide information about the following:

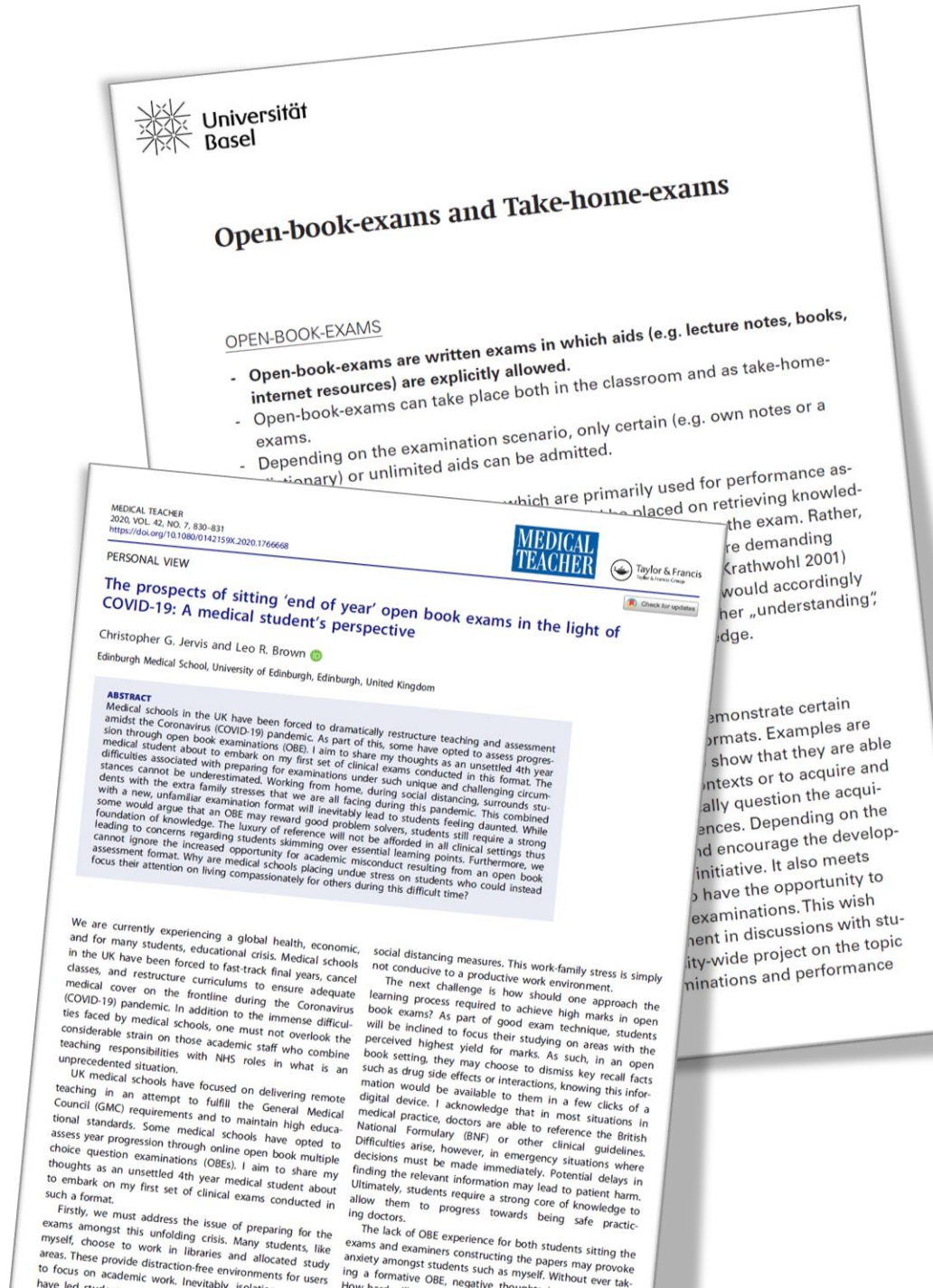
1. Is student achievement on examinations associated with the type of examination administered (closed, open, or take home)?
   a. Is there a difference in achievement on items which purport to measure knowledge?
   b. Is there a difference in achievement on items which purport to measure higher cognitive skills?
2. What are the attitudes of students toward the three exam modes?
3. Is the amount of cheating by students associated with the type of examination taken?

Erheblich höherer Aufwand bei der Erstellung von Auf-gaben für Take-Home-Exams

Sorgfältige Wahl des Zeitrahmens notwendig

Kritische Bewertung durch Studierende

Nutzen von Ehrenerklärungen?



Universität Basel

Open-book-exams and Take-home-exams

OPEN-BOOK-EXAMS

- **Open-book-exams are written exams in which aids (e.g. lecture notes, books, internet resources) are explicitly allowed.**
- Open-book-exams can take place both in the classroom and as take-home-exams.
- Depending on the examination scenario, only certain (e.g. own notes or a ...tionary) or unlimited aids can be admitted.

...which are primarily used for performance as-... placed on retrieving knowled-... the exam. Rather, ...re demanding ...Krathwohl 2001) ...would accordingly ...her „understanding", ...dge.

...emonstrate certain ...rmats. Examples are ... show that they are able ...ntexts or to acquire and ...ally question the acqui-...ences. Depending on the ...nd encourage the develop-...initiative. It also meets ...o have the opportunity to ... examinations. This wish ...nent in discussions with stu-...ity-wide project on the topic ...minations and performance

MEDICAL TEACHER
2020, VOL. 42, NO. 7, 830–831
https://doi.org/10.1080/0142159X.2020.1766668

MEDICAL TEACHER — Taylor & Francis

PERSONAL VIEW

The prospects of sitting 'end of year' open book exams in the light of COVID-19: A medical student's perspective

Christopher G. Jervis and Leo R. Brown

Edinburgh Medical School, University of Edinburgh, Edinburgh, United Kingdom

ABSTRACT

Medical schools in the UK have been forced to dramatically restructure teaching and assessment amidst the Coronavirus (COVID-19) pandemic. As part of this, some have opted to assess progression through open book examinations (OBE). I aim to share my thoughts as an unsettled 4th year medical student about to embark on my first set of clinical exams conducted in this format. The difficulties associated with preparing for examinations under such unique and challenging circumstances cannot be underestimated. Working from home, during social distancing, surrounds students with the extra family stresses that we are all facing during this pandemic. This combined with a new, unfamiliar examination format will inevitably lead to students feeling daunted. While some would argue that an OBE may reward good problem solvers, students still require a strong foundation of knowledge. The luxury of reference will not be afforded in all clinical settings thus leading to concerns regarding students skimming over essential learning points. Furthermore, we cannot ignore the increased opportunity for academic misconduct resulting from an open book assessment format. Why are medical schools placing undue stress on students who could instead focus their attention on living compassionately for others during this difficult time?

We are currently experiencing a global health, economic, and for many students, educational crisis. Medical schools in the UK have been forced to fast-track final years, cancel classes, and restructure curriculums to ensure adequate medical cover on the frontline during the Coronavirus (COVID-19) pandemic. In addition to the immense difficulties faced by medical schools, one must not overlook the considerable strain on those academic staff who combine teaching responsibilities with NHS roles in what is an unprecedented situation.

UK medical schools have focused on delivering remote teaching in an attempt to fulfill the General Medical Council (GMC) requirements and to maintain high educational standards. Some medical schools have opted to assess year progression through online open book multiple choice question examinations (OBEs). I aim to share my thoughts as an unsettled 4th year medical student about to embark on my first set of clinical exams conducted in such a format.

Firstly, we must address the issue of preparing for the exams amongst this unfolding crisis. Many students, like myself, choose to work in libraries and allocated study areas. These provide distraction-free environments for users to focus on academic work. Inevitably, isolating social distancing measures. This work-family stress is simply not conducive to a productive work environment.

The next challenge is how should one approach the learning process required to achieve high marks in open book exams? As part of good exam technique, students will be inclined to focus their studying on areas with the perceived highest yield for marks. As such, in an open book setting, they may choose to dismiss key recall facts such as drug side effects or interactions, knowing this information would be available to them in a few clicks of a digital device. I acknowledge that in most situations in medical practice, doctors are able to reference the British National Formulary (BNF) or other clinical guidelines. Difficulties arise, however, in emergency situations where decisions must be made immediately. Potential delays in finding the relevant information may lead to patient harm. Ultimately, students require a strong core of knowledge to allow them to progress towards being safe practicing doctors.

The lack of OBE experience for both students sitting the exams and examiners constructing the papers may provoke anxiety amongst students such as myself. Without ever tak-
ing a formative OBE, negative thoughts

"students' aberrant behaviors such as cheating still presents the biggest challenge to the instructors who intend to implement take-home testing."

Tao & Li, 2012

Tao, J., & Li, Z. (2012). A case study on computerized take-home testing: Benefits and pitfalls. *International Journal of Technology in Teaching and Learning, 8*(1), 33-43.

A Case Study on Computerized Take-Home Testing: Benefits and Pitfalls

Jinyuan Tao
Florida Hospital College of Health Sciences
Zhigang Li
University of Central Florida

This paper explores the benefits and pitfalls of computerized take-home testing in an undergraduate curriculum. A case study of how health science course "nutrition" utilized computerized take-home testing is presented. A survey was conducted after the implementation of computerized take-home testing program. After detailed data analysis on students' feedback, advantages and disadvantages of computerized take-home testing are discussed. It is concluded that the biggest advantage of computerized take-home tests is the convenience it brings to both instructors and students, however students' aberrant behaviors such as cheating still presents the biggest challenge to the instructors who intend to implement take-home testing.

Keywords: computerized take-home testing, cheating, advantage, disadvantage, undergraduate curriculum, health science

INTRODUCTION

Since testing consumes such a large amount of instructor and student time in college level courses, it is important to learn as much as possible about the effects of different testing formats (computerized or paper-and-pencil, in-class or take-home) on learning. Computerized testing has become a reality on many campuses with the introduction of robust learning management systems (LMS) such as Blackboard Learn, Moodle, Instructure Canvas and others. Instructors have two options of delivering computerized testing: (a) each student takes the computerized exam in the classroom with the instructor as the proctor; (b) the instructor implements computerized take-home exams. The first option is executable if every student brings his or her laptop to the classroom or the exam has to be administered in a computer lab. The advantage is that the instructor is right there to answer questions and proctors during the test, which makes it highly secure. In the meantime, the instructor can fully enjoy the benefits of computerized testing such as reduced cost of delivery, improved efficiency of administration, and immediate scoring

Jinyuan (David) Tao is the Assistant Director for Center for Educational Technology at the Florida Hospital College of Health Sciences. Zhigang Li received a PhD degree from University of Central Florida. Jinyuan Tao can be reached at david.tao@fhchs.edu.

"there is still a lot of research missing concerning take-home exams in higher education and some of this research may be urgent"

Bengtsson, 2019

education sciences

MDPI

Review

Take-Home Exams in Higher Education: A Systematic Review

Lars Bengtsson

Physics Department, University of Gothenburg, SE-405 30 Gothenburg, Sweden; lars.bengtsson@physics.gu.se

check for updates

Received: 19 September 2019; Accepted: 1 November 2019; Published: 6 November 2019

Abstract: This work describes a systematic review of the research on take-home exams in tertiary education. It was found that there is some disagreement in the community about the virtues of take-home exams but also a lot of agreement. It is concluded that take-home exams may be the preferred choice of assessment method on the higher taxonomy levels because they promote higher-order thinking skills and allow time for reflection. They are also more consonant with constructive alignment theories and turn the assessment into a learning activity. Due to the obvious risk of unethical student behavior, take-home exams are not recommended on the lowest taxonomy level. It is concluded that there is still a lot of research missing concerning take-home exams in higher education and some of this research may be urgent due to the emergence of massive online open courses (MOOCs) and online universities where non-proctored exams prevail.

Keywords: take-home exam; in-class exam; higher-order cognitive skills; unethical student behavior

1. Introduction

Assessment is a necessary part of academic studies on all levels. With few exceptions, an in-class, closed-book, invigilated pen-and-paper exam is the traditional assessment method [1]. There are certainly other assessment methods in use, but the main assessment method at prominent universities is still a proctored, in-class exam (ICE). ICEs are typically characterized by hard time limits (2–6 h) and the stress this imposes on the students. The main reason for advocating ICEs seems to be that it minimizes the risks of the exam being compromised by unethical student behavior [1,2], but it has been criticized for several reasons: it deludes students to superficial learning [1], it does not promote students' 'generic skills' [3], it imposes an unnatural pressure on the students that has an adverse impact on their performance [4], it is not consonant with the prevailing theory of 'constructive alignment' in higher education [1,5,6] and it is not suitable for assessing students' performance on the higher levels of Bloom's taxonomy scale [7–9]. Bloom's taxonomy scale [9] is a hierarchical description of students' learning (revised by Anderson et al. in 2001 [7]). This taxonomy comprises all learning domains (cognitive, affective and sensory), but in this context (as in most higher education contexts) we are only considering the cognitive domain. At the lowest level, students' learning is characterized by root learning ('remember'). The succeeding levels are 'understanding', 'applying', 'analyzing', 'evaluating' and 'creating'; students move from root learners to true scholars where they create knew knowledge. The idea of Bloom's taxonomy is that it describes what phases learning undergoes and as teachers, it is paramount to understand on what level the present students are since this has direct consequences for the curriculum (objectives and activities), but, most of all, it has direct consequences for the design of the exam. An in-class, multiple-choice test (MCQ) may be justified on the lowest levels, but may not be appropriate on the highest levels; the higher levels require that students can define problems, predict, hypothesize, experiment, analyze, conclude and are capable of reflective thinking [10] and they also indicate an "intrinsic creativity or an ability to express ideas in their own

Täuschungskontrolle

Technologische Aufrüstung für ein altes Phänomen

Täuschungskontrolle

Täuschungsvermeidung:

Maßnahmen zur Erschwerung von Täuschungen *vor* einer Prüfung.

Täuschungsüberwachung:

Maßnahmen zur Beobachtung von Täuschungen *während* einer Prüfung.

Täuschungsaufdeckung:

Maßnahmen zum Nachweis von Täuschungen *nach* einer Prüfung.

The Philadelphia Inquirer

SIGN IN / SIGN UP

Education

Cheating scandal at Duke grows

Woes at business school go beyond one exam.

by By Martha Waggoner, Associated Press, Inquirer
Published May 2, 2007

The Mercury News

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NEWS › CALIFORNIA NEWS

Stanford University looks into allegations of cheating by students

By TRACY SEIPEL | Bay Area News Group
PUBLISHED: March 27, 2015 at 7:22 a.m. | UPDATED: August 12, 2016 at 3:25 a.m.

STANFORD — Stanford University is investigating allegations of academic cheating by students during the winter quarter.

The Sydney Morning Herald

National NSW Education

MyMaster essay cheating scandal: More than 70 university students face suspension

EXCLUSIVE:

Two university students have been expelled and a further 70 are facing severe penalties, including expulsion, from five of NSW's most prestigious universities after being identified in connection with a widespread cheating scandal centred around an online essay writing company.

Süddeutsche Zeitung

SZ.de Zeitung Magazin

Coronavirus Politik Wirtschaft Meinung Panorama Sport München Bayern

Home > Bayern > Bayern > Bildung in Bayern > Hochschule Neu-Ulm: Studierende betrügen im Hom...

21. September 2020, 18:56 Uhr Hochschule Neu-Ulm

Studierende schreiben im Homeoffice ab und fallen durch

Dass ihre Prüfung zuhause stattfand, sollen 35 Studenten genutzt haben, um zu betrügen. Manchen droht nun sogar die Exmatrikulation.

The take-home lesson from the Harvard cheating scandal

Posted on February 3, 2013 by Adriana Salerno

Last Friday, Reuters reported that more than half of the students involved in last year's cheating scandal at Harvard have been suspended. This was even labeled "the largest academic scandal to hit the Ivy League school in recent memory". In this post, I wanted to discuss my own thoughts on the matter, and more importantly on the general idea of giving take-home exams in a mathematics class.

Posted by u/MrZer 1 year ago

387

Do profs know that students cheat on take-home exams?

Most classes have multiple choice question tests and they're generally given through our online service (blackboard, moodle, canvas, etc. I'm mentionning this b/c if it was a normal online exam there are anti-cheat measures) But my prof has a complicated test with a lot of diagrams and drawings that students have to complete so they gave us a printed out exam for us to take home. Prof says it's supposed to be closed note but realistically nobody actually listens. I don't know anybody in my class so i won't copy other people's stuff, but I can't help but wonder if they're aware that we'll use our notes and the internet.

74 Comments Share Save Hide Report 98% Upvoted

SORT BY BEST

navahan 513 points · 1 year ago

Yes, they are very aware. Despite this, whether you know the material or not will become very evident as you take higher-level courses where a foundation is essential. So, it is always in your best interest to at least try without notes. Of course, it'd be foolish to not take advantage, but I would use the take-home test as a measurement of your understanding in the field. And one that

Täuschungsanalyse

Anwendungskontext
(Präsenz oder Distanz)

Prüfungsform
(mündlich oder schriftlich)

Aufwand für Studierende
(Niedrig, mittel, hoch)

Kontrollmöglichkeiten

Sicherstellungsmöglichkeiten

https://t1p.de/om6rn

Täuschungsversuche ohne Beteiligung Dritter

Unerlaubte analoge Materialien (Spickzettel, manipulierte Unterlagen)

Täuschung während einer Pause

Digitale Einblendungen (Haupt-Zweitbildschirm, anderes Endgerät)

Simulation der Bearbeitung durch Video

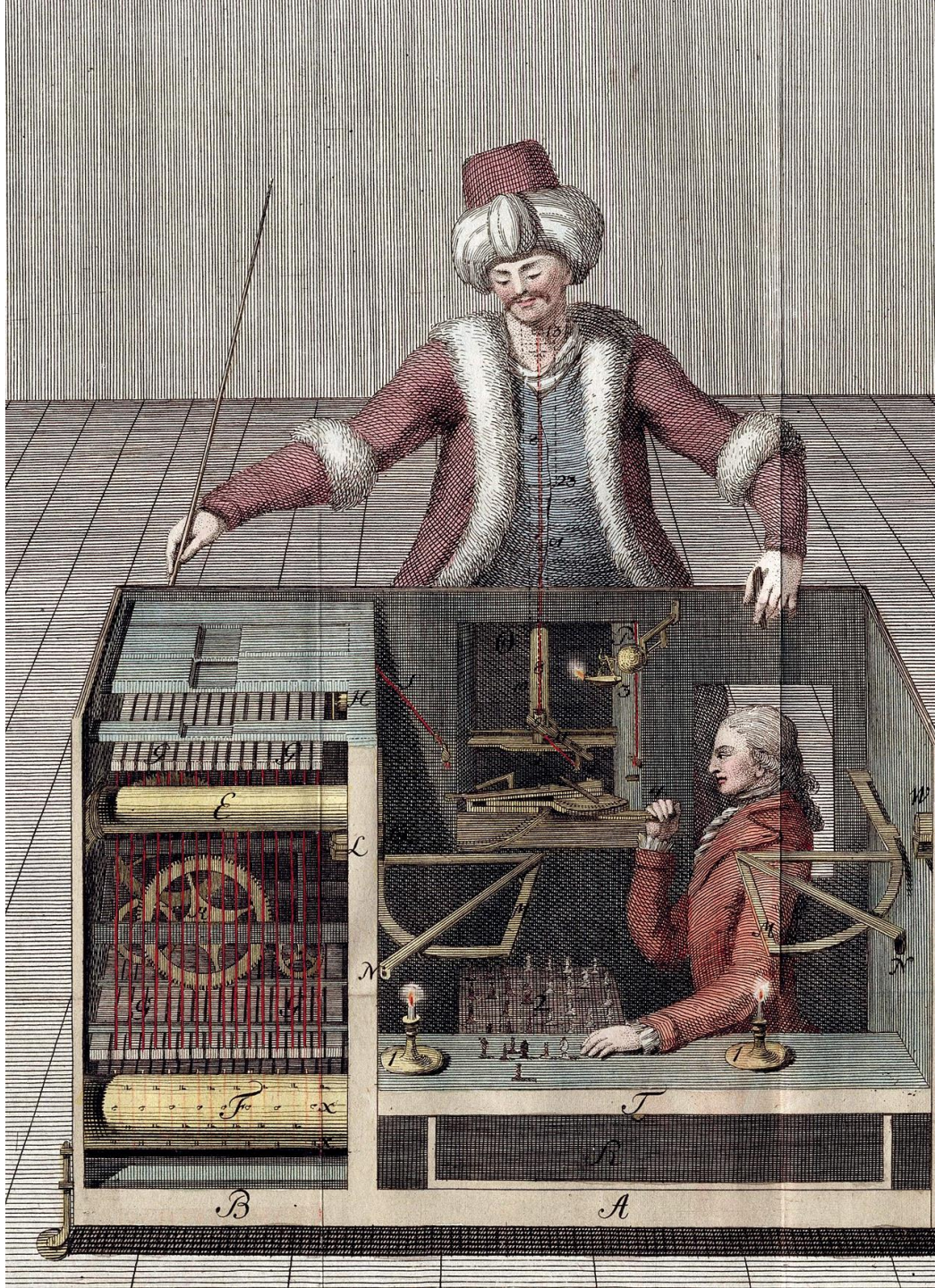
Täuschungsversuche mit Beteiligung Dritter

Kopieren der Lösungen (Messenger)

Dritte im Raum oder akustisch zugeschaltet

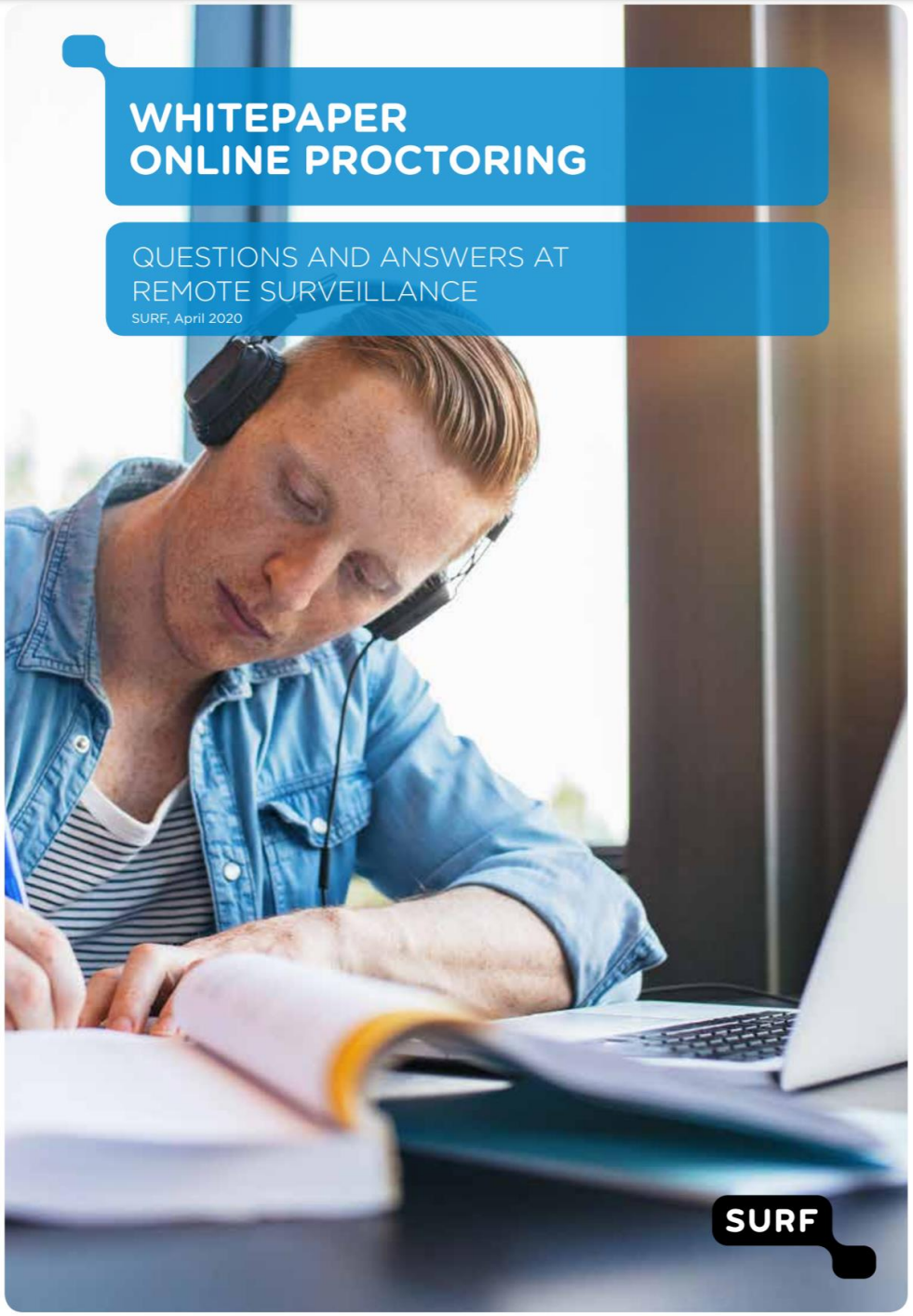
Übertragung und/oder Fernsteuerung des PC („Schachtürke“)

Ersetzen der digitalen Prüfungsdatei



Täuschungsmöglichkeiten

Online Proctoring ist ortsunabhängiges digitales Assessment. Die Teilnahme an Prüfungen findet online mithilfe spezieller Software statt, die Täuschungen verhindern soll. Die Software ermöglicht dazu Aufzeichnungen in verschiedenster Form (z.B. Bildschirmfotos, Video, Audio, Clickstream).

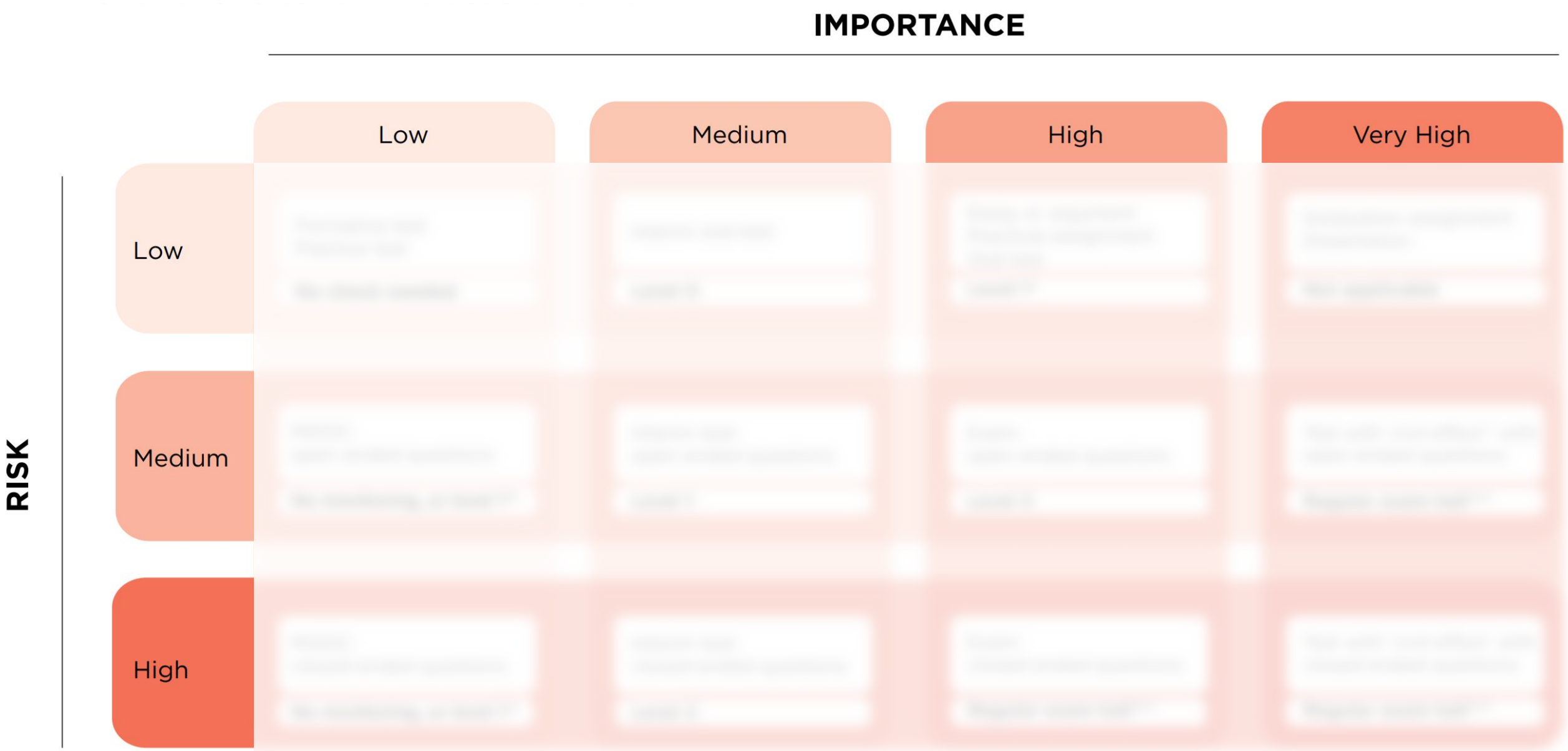


Level 0: Videokonferenzen mit bis zu 50 Studierenden, keine Aufzeichnung.

Level 1: Proctoring mit dezidierter Software, 1 Kamera, Website-Logging, ggf. Aufzeichnung.

Level 2: Proctoring mit 1 Kamera, Website- und Application-Logging plus Computer Lock-Down, ggf. Aufzeichnung.

Level 3: Proctoring mit 2 Kameras, vollständigem Aktivitäts-Logging plus Computer Lock-Down, ggf. Aufzeichnung.


IMPORTANCE
Low
Medium
High
Very High
RISK
Low
Medium
High

Digitale Prüfungsformate

in E-Prüfungssystemen

- Multiple-/Single-Choice-Aufgaben
- Kprim-Aufgaben
- An-/Zuordnungsaufgaben
- Klassifikationsaufgaben
- Lückentext-Aufgaben ("CLOZE")
- Bildannotation/Hotspot/ImageMap
- Ergebniseingabe
- Freitextaufgabe

- Fachspezifische Aufgaben (z.B. Coding, Formeln, CAS, Buchungen)
- Prüfungen mit Drittapplikationen

Übersicht Assessmentsysteme
https://t1p.de/lcb0

Closed Book Exams (CBE)

Cheat Sheet Exams (CSE)

Open Book Exams (OBE)

Open Web Exams (OWE)

EDUCATIONAL AND PSYCHOLOGICAL MEASUREMENT
Vol. XXI, No. 3, 1961

AN EVALUATION OF COLLEGE STUDENTS' REACTIONS TO OPEN BOOK EXAMINATIONS

JOHN F. FELDHUSEN
Wisconsin State College

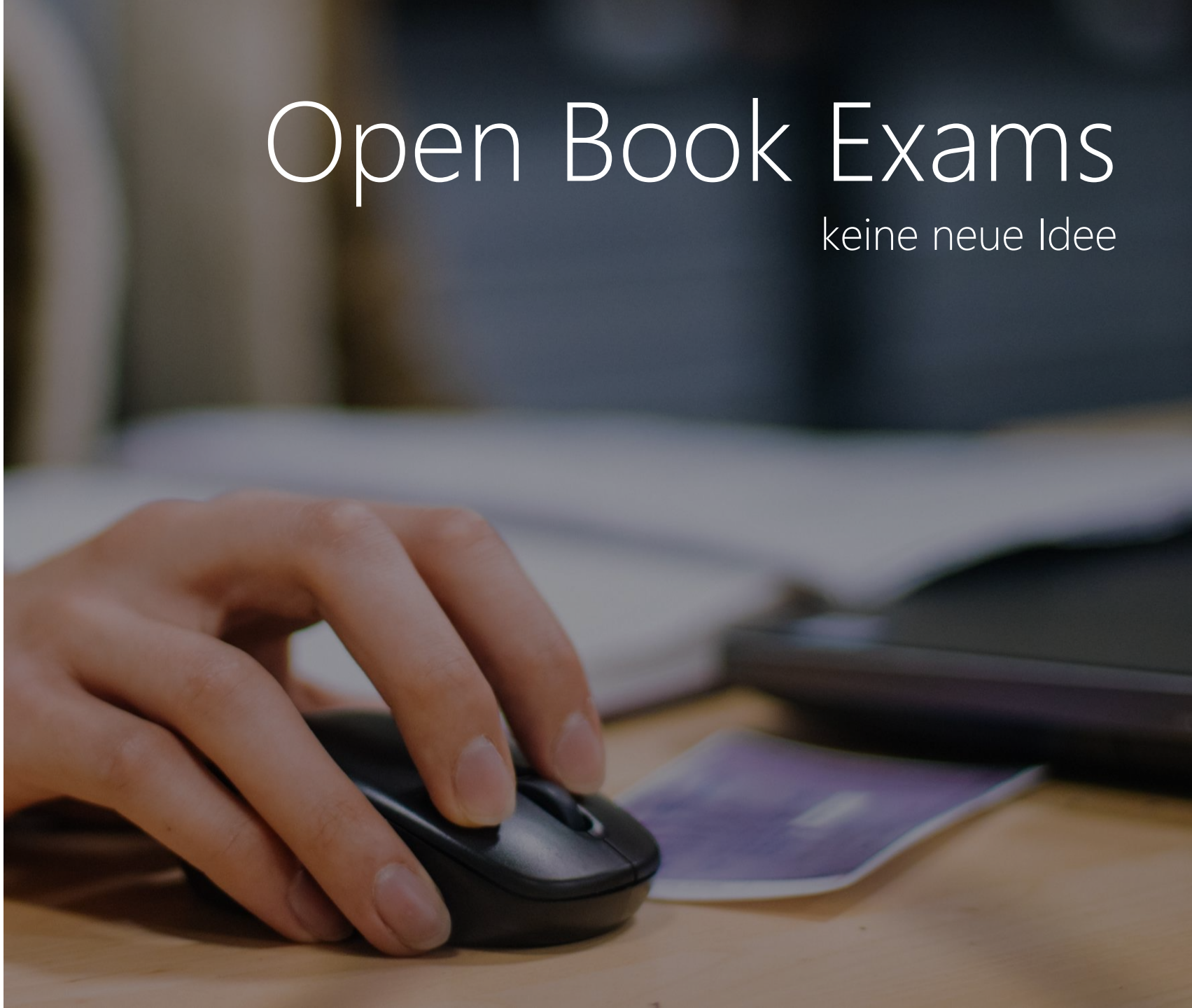
TEACHERS at all levels continue to show some interest in the open-book examination as a measurement technique which may offer solutions to problems associated with closed-book testing. Tussing's (1951) general discussion of the open-book test presents highly optimistic conclusions concerning the advantages of an open-book examination. He suggests that fear and emotional blocks are removed, cheating is eliminated, and the test can be constructed in any of the traditional test forms. Kalish's (1958) more recent experimental report on the open-book examination concluded that the opportunity to use the text and lecture notes afforded no advantage in test error reduction. However, he also concluded that the open-book examination measures different abilities from the closed-book examination. He concluded, finally, that student ratings of the value of the open-book examination will not be related to their examination scores.

Problem

The present study is concerned with college students' reactions to the open-book and the closed-book examination on both objective and essay tests. The subjects in the study were all candidates for teaching certificates, and thus the present study was further concerned with the subjects' perception of the two testing procedures in relation to their own future teaching practices.

Method

Subjects. The subjects, 76 per cent women, 24 per cent men, were 90 students at the University of Wisconsin enrolled in three sec-



Oft verwendetes Mittel im Digitalen Semester

Oft keinerlei Erfahrung bei Studierenden mit OBE: Bucharbeit muss geübt werden

Eignung vor allem auf höheren Kompetenzeben

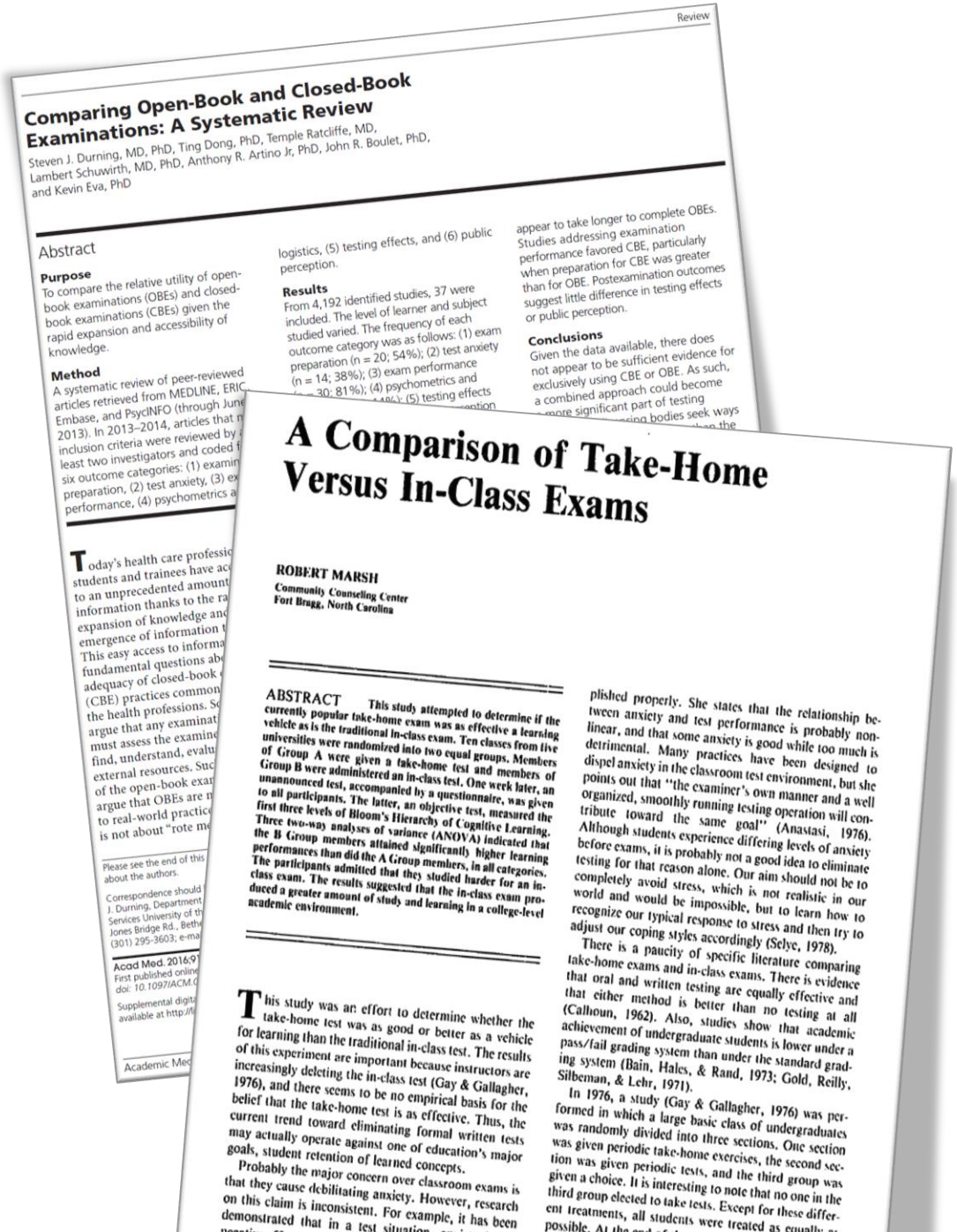
Didaktische Qualität der Klausuren steigt

Tendenziell höhere Vorbereitungszeit/-qualität und Anwesenheit bei CBE

Unveränderte Lernstrategien

Eher bessere Prüfungs-leistungen bei CBE

Vergleichbare psychometrische Qualität



Review

Comparing Open-Book and Closed-Book Examinations: A Systematic Review

Steven J. Durning, MD, PhD, Ting Dong, PhD, Temple Ratcliffe, MD, Lambert Schuwirth, MD, PhD, Anthony R. Artino Jr, PhD, John R. Boulet, PhD, and Kevin Eva, PhD

Abstract

Purpose

To compare the relative utility of open-book examinations (OBEs) and closed-book examinations (CBEs) given the rapid expansion and accessibility of knowledge.

Method

A systematic review of peer-reviewed articles retrieved from MEDLINE, ERIC, Embase, and PsycINFO (through June 2013). In 2013–2014, articles that met inclusion criteria were reviewed by at least two investigators and coded for six outcome categories: (1) examination preparation, (2) test anxiety, (3) exam performance, (4) psychometrics and logistics, (5) testing effects, and (6) public perception.

Results

From 4,192 identified studies, 37 were included. The level of learner and subject studied varied. The frequency of each outcome category was as follows: (1) exam preparation (n = 20; 54%); (2) test anxiety (n = 14; 38%); (3) exam performance (n = 30; 81%); (4) psychometrics and

appear to take longer to complete OBEs. Studies addressing examination performance favored CBE, particularly when preparation for CBE was greater than for OBE. Postexamination outcomes suggest little difference in testing effects or public perception.

Conclusions

Given the data available, there does not appear to be sufficient evidence for exclusively using CBE or OBE. As such, a combined approach could become a more significant part of testing

Today's health care professio students and trainees have ac to an unprecedented amount information thanks to the ra expansion of knowledge and emergence of information t This easy access to informa fundamental questions ab adequacy of closed-book (CBE) practices common the health professions. Sc argue that any examinat must assess the examine find, understand, evalu external resources. Suc of the open-book exa argue that OBEs are n to real-world practice is not about "rote me

Please see the end of this about the authors.

Correspondence should J. Durning, Department Services University of th Jones Bridge Rd., Bethe (301) 295-3603; e-ma

Acad Med. 2016;91 First published online doi: 10.1097/ACM.0

Supplemental digita available at http://

Academic Med

A Comparison of Take-Home Versus In-Class Exams

ROBERT MARSH
Community Counseling Center
Fort Bragg, North Carolina

ABSTRACT This study attempted to determine if the currently popular take-home exam was as effective a learning vehicle as is the traditional in-class exam. Ten classes from five universities were randomized into two equal groups. Members of Group A were given a take-home test and members of Group B were administered an in-class test. One week later, an unannounced test, accompanied by a questionnaire, was given to all participants. The latter, an objective test, measured the first three levels of Bloom's Hierarchy of Cognitive Learning. Three two-way analyses of variance (ANOVA) indicated that the B Group members attained significantly higher learning performances than did the A Group members, in all categories. The participants admitted that they studied harder for an in-class exam. The results suggested that the in-class exam produced a greater amount of study and learning in a college-level academic environment.

This study was an effort to determine whether the take-home test was as good or better as a vehicle for learning than the traditional in-class test. The results of this experiment are important because instructors are increasingly deleting the in-class test (Gay & Gallagher, 1976), and there seems to be no empirical basis for the belief that the take-home test is as effective. Thus, the current trend toward eliminating formal written tests may actually operate against one of education's major goals, student retention of learned concepts.

Probably the major concern over classroom exams is that they cause debilitating anxiety. However, research on this claim is inconsistent. For example, it has been demonstrated that in a test situation

plished properly. She states that the relationship between anxiety and test performance is probably nonlinear, and that some anxiety is good while too much is detrimental. Many practices have been designed to dispel anxiety in the classroom test environment, but she points out that "the examiner's own manner and a well organized, smoothly running testing operation will contribute toward the same goal" (Anastasi, 1976). Although students experience differing levels of anxiety before exams, it is probably not a good idea to eliminate testing for that reason alone. Our aim should not be to completely avoid stress, which is not realistic in our world and would be impossible, but to learn how to recognize our typical response to stress and then try to adjust our coping styles accordingly (Selye, 1978).

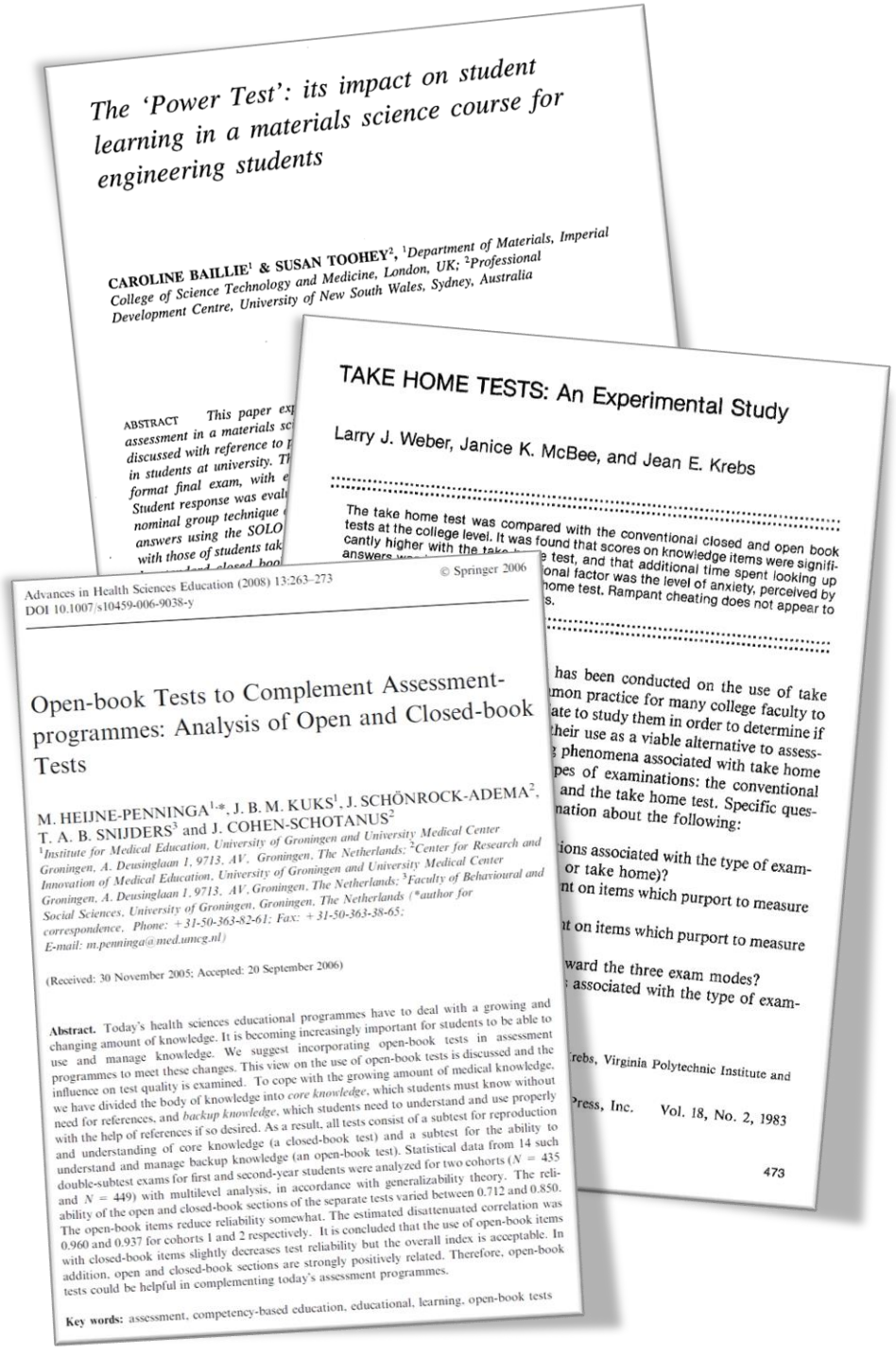
There is a paucity of specific literature comparing take-home exams and in-class exams. There is evidence that oral and written testing are equally effective and that either method is better than no testing at all (Calhoun, 1962). Also, studies show that academic achievement of undergraduate students is lower under a pass/fail grading system than under the standard grading system (Bain, Hales, & Rand, 1973; Gold, Reilly, Silbeman, & Lehr, 1971).

In 1976, a study (Gay & Gallagher, 1976) was performed in which a large basic class of undergraduates was randomly divided into three sections. One section was given periodic take-home exercises, the second section was given periodic tests, and the third group was given a choice. It is interesting to note that no one in the third group elected to take tests. Except for these different treatments, all students were treated as equally

Kaum Unterschiede bei Stress und Prüfungsangst

Längere Bearbeitungsdauer in OBE/OWE (bei maximal gleichbleibenden Leistungen)

OWEs und OBEs trotzdem von Studierenden bevorzugt



The 'Power Test': its impact on student learning in a materials science course for engineering students

CAROLINE BAILLIE[1] & SUSAN TOOHEY[2], [1]Department of Materials, Imperial College of Science Technology and Medicine, London, UK; [2]Professional Development Centre, University of New South Wales, Sydney, Australia

TAKE HOME TESTS: An Experimental Study

Larry J. Weber, Janice K. McBee, and Jean E. Krebs

Advances in Health Sciences Education (2008) 13:263–273
DOI 10.1007/s10459-006-9038-y

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Open-book Tests to Complement Assessment-programmes: Analysis of Open and Closed-book Tests

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(Received: 30 November 2005; Accepted: 20 September 2006)

Abstract. Today's health sciences educational programmes have to deal with a growing and changing amount of knowledge. It is becoming increasingly important for students to be able to use and manage knowledge. We suggest incorporating open-book tests in assessment programmes to meet these changes. This view on the use of open-book tests is discussed and the influence on test quality is examined. To cope with the growing amount of medical knowledge, we have divided the body of knowledge into *core knowledge*, which students must know without need for references, and *backup knowledge*, which students need to understand and use properly with the help of references if so desired. As a result, all tests consist of a subtest for reproduction and understanding of core knowledge (a closed-book test) and a subtest for the ability to understand and manage backup knowledge (an open-book test). Statistical data from 14 such double-subtest exams for first and second-year students were analyzed for two cohorts ($N = 435$ and $N = 449$) with multilevel analysis, in accordance with generalizability theory. The reliability of the open and closed-book sections of the separate tests varied between 0.712 and 0.850. The open-book items reduce reliability somewhat. The estimated disattenuated correlation was 0.960 and 0.937 for cohorts 1 and 2 respectively. It is concluded that the use of open-book items with closed-book items slightly decreases test reliability but the overall index is acceptable. In addition, open and closed-book sections are strongly positively related. Therefore, open-book tests could be helpful in complementing today's assessment programmes.

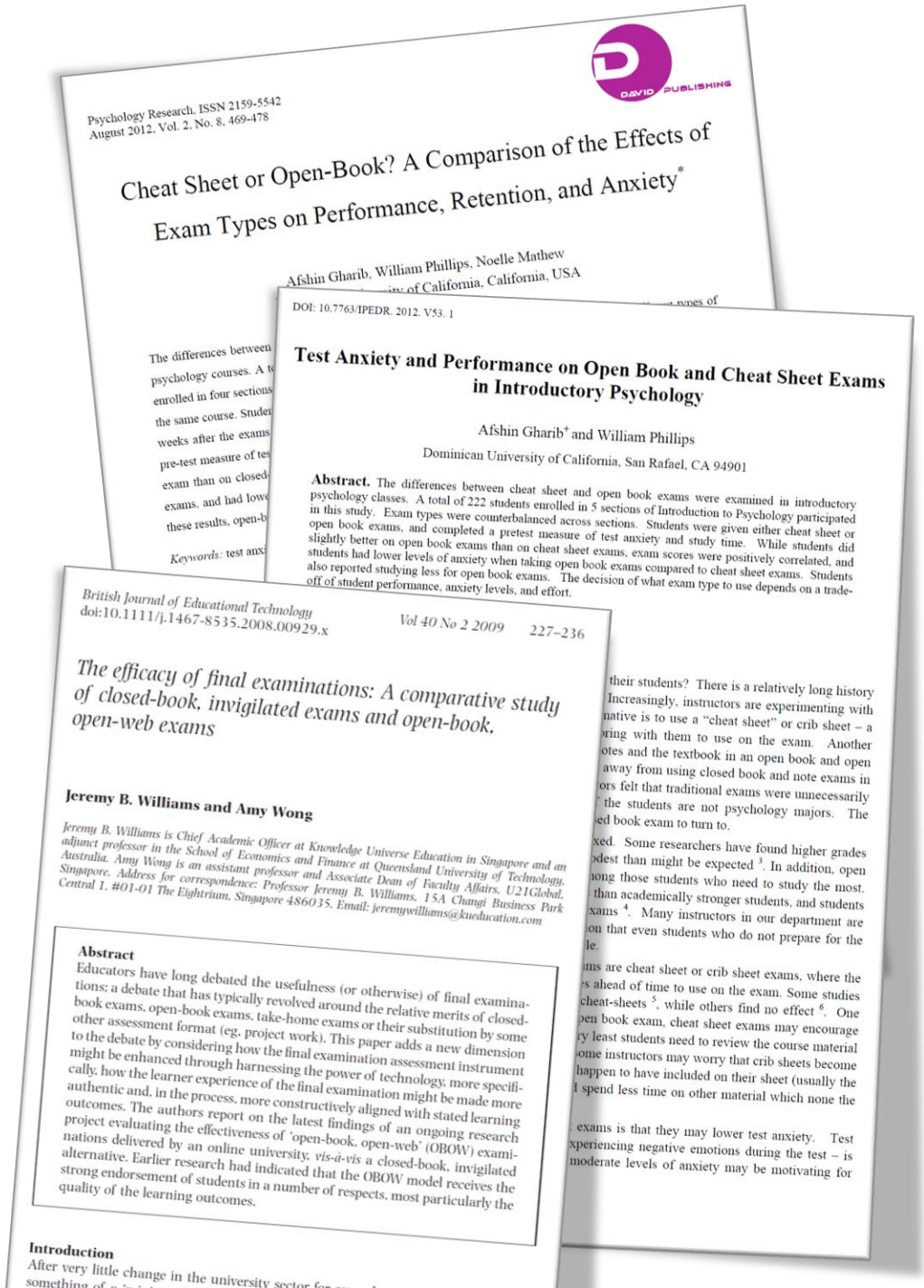
Key words: assessment, competency-based education, educational, learning, open-book tests

Keinerlei Vorteile bei CSE hinsichtlich Prüfungsleistung

Vorbereitungszeit bei CSE tendenziell länger

Stress und Prüfungsangst bei CSE höher als bei OBE/OWE

Keine vermehrten Täuschungsfälle in allen Varianten



Psychology Research, ISSN 2159-5542
August 2012, Vol. 2, No. 8, 469-478

DAVID PUBLISHING

Cheat Sheet or Open-Book? A Comparison of the Effects of Exam Types on Performance, Retention, and Anxiety*

Afshin Gharib, William Phillips, Noelle Mathew

DOI: 10.7763/IPEDR. 2012. V53. 1

Test Anxiety and Performance on Open Book and Cheat Sheet Exams in Introductory Psychology

Afshin Gharib+ and William Phillips

Dominican University of California, San Rafael, CA 94901

Abstract. The differences between cheat sheet and open book exams were examined in introductory psychology classes. A total of 222 students enrolled in 5 sections of Introduction to Psychology participated in this study. Exam types were counterbalanced across sections. Students were given either cheat sheet or open book exams, and completed a pretest measure of test anxiety and study time. While students did slightly better on open book exams than on cheat sheet exams, exam scores were positively correlated, and students had lower levels of anxiety when taking open book exams compared to cheat sheet exams. Students also reported studying less for open book exams. The decision of what exam type to use depends on a trade-off of student performance, anxiety levels, and effort.

British Journal of Educational Technology
doi:10.1111/j.1467-8535.2008.00929.x Vol 40 No 2 2009 227–236

The efficacy of final examinations: A comparative study of closed-book, invigilated exams and open-book, open-web exams

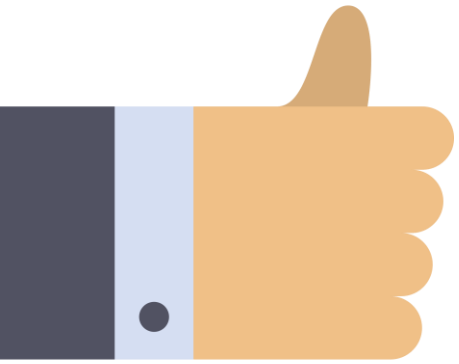
Jeremy B. Williams and Amy Wong

Jeremy B. Williams is Chief Academic Officer at Knowledge Universe Education in Singapore and an adjunct professor in the School of Economics and Finance at Queensland University of Technology, Australia. Amy Wong is an assistant professor and Associate Dean of Faculty Affairs, U21Global, Singapore. Address for correspondence: Professor Jeremy B. Williams, 15A Changi Business Park Central 1, #01-01 The Eightrium, Singapore 486035. Email: jeremywilliams@kueducation.com

Abstract

Educators have long debated the usefulness (or otherwise) of final examinations: a debate that has typically revolved around the relative merits of closed-book exams, open-book exams, take-home exams or their substitution by some other assessment format (eg, project work). This paper adds a new dimension to the debate by considering how the final examination assessment instrument might be enhanced through harnessing the power of technology, more specifically, how the learner experience of the final examination might be made more authentic and, in the process, more constructively aligned with stated learning outcomes. The authors report on the latest findings of an ongoing research project evaluating the effectiveness of 'open-book, open-web' (OBOW) examinations delivered by an online university, *vis-à-vis* a closed-book, invigilated alternative. Earlier research had indicated that the OBOW model receives the strong endorsement of students in a number of respects, most particularly the quality of the learning outcomes.

Introduction

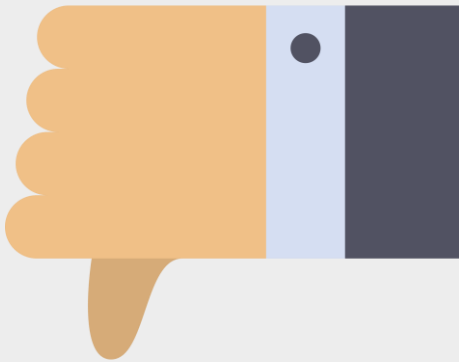


Videoüberwachung

Kompetenzorientierte digitale Prüfungen

Prüfungen mit Drittapplikationen
(z.B. R, CAS, CAD, Python Java)

Digitale Prüfungsworkflows



Nicht-überwachte Take-Home Prüfungen

Generalverdächtigung der Studierenden

Klassische papiergebundene Klausuren

Scanprüfungen

Corona-Hotfix oder Zukunftsmodell

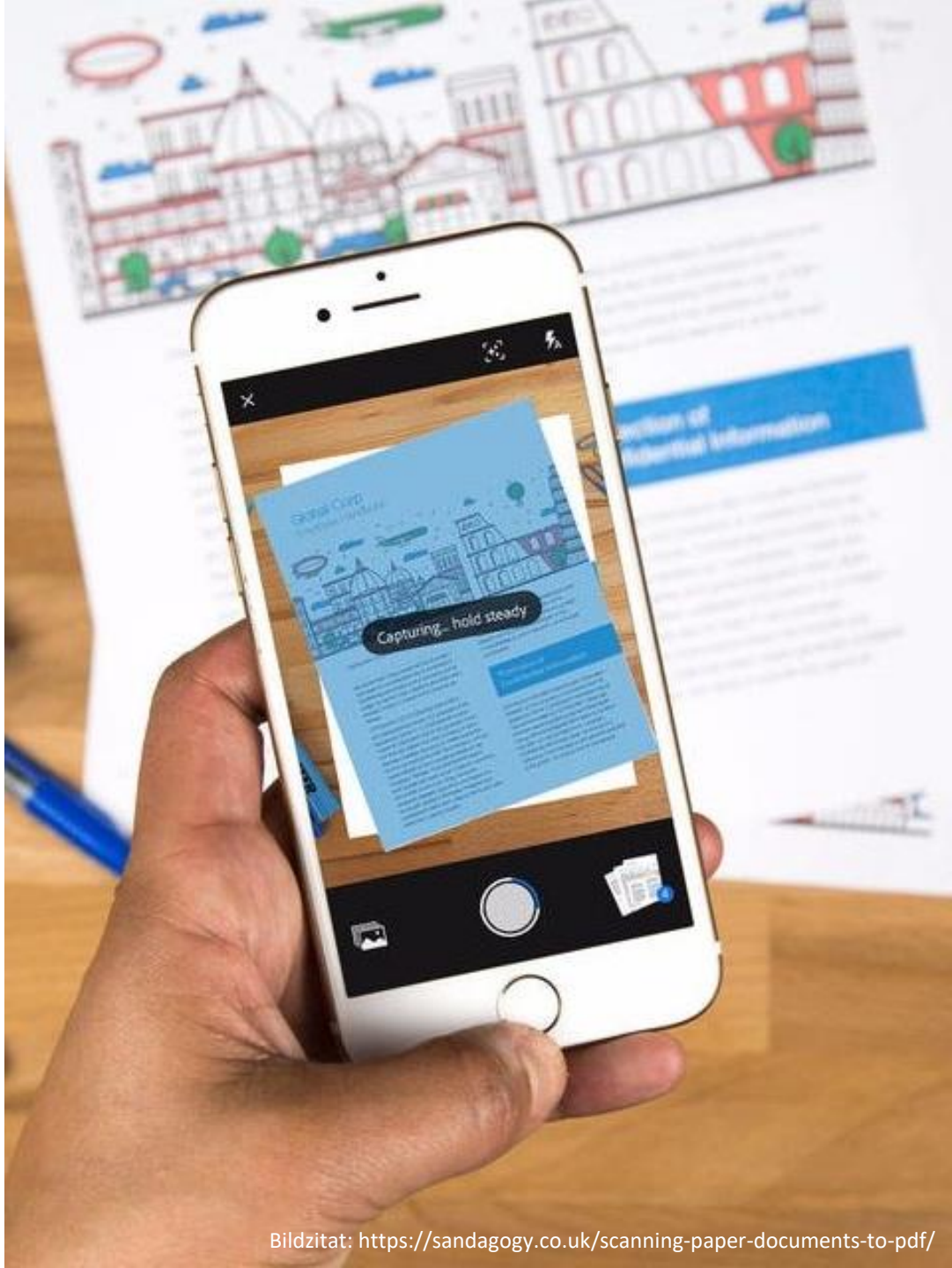
Das Bedienverhalten bei Tablets unterscheidet sich deutlich von der papier-basierten Niederschrift und muss eingeübt werden, bevor die Performanzen vergleichbar sind wie bei der Verwendung von Papier.

Scanprüfungen: der Corona Prüfungs-Hotfix

Mit iOS und Android Bordmitteln möglich

Nicht ohne Schulung der Studierenden

Unkalkulierbare Upload-Formate (Größen, Dateitypen)



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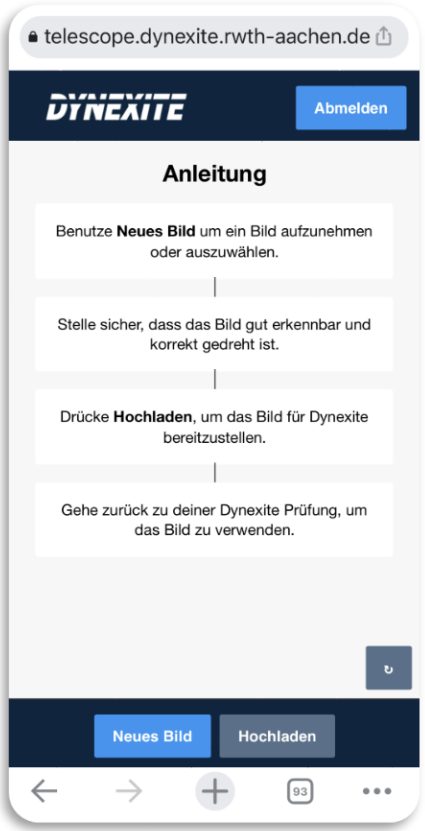
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Stelle sicher, dass das Bild gut erkennbar und korrekt gedreht ist.
Drücke **Hochladen**, um das Bild für Dynexite bereitzustellen.
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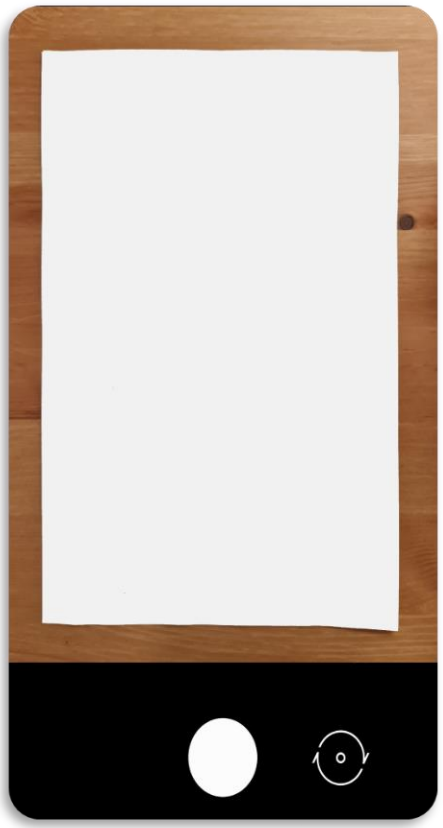

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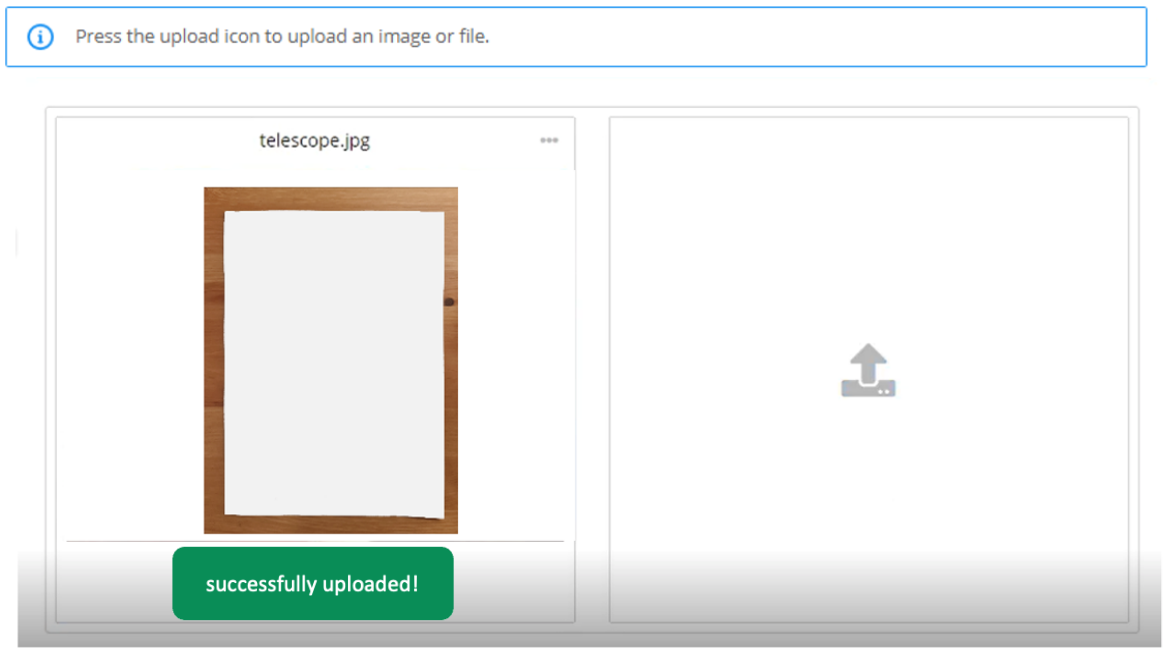
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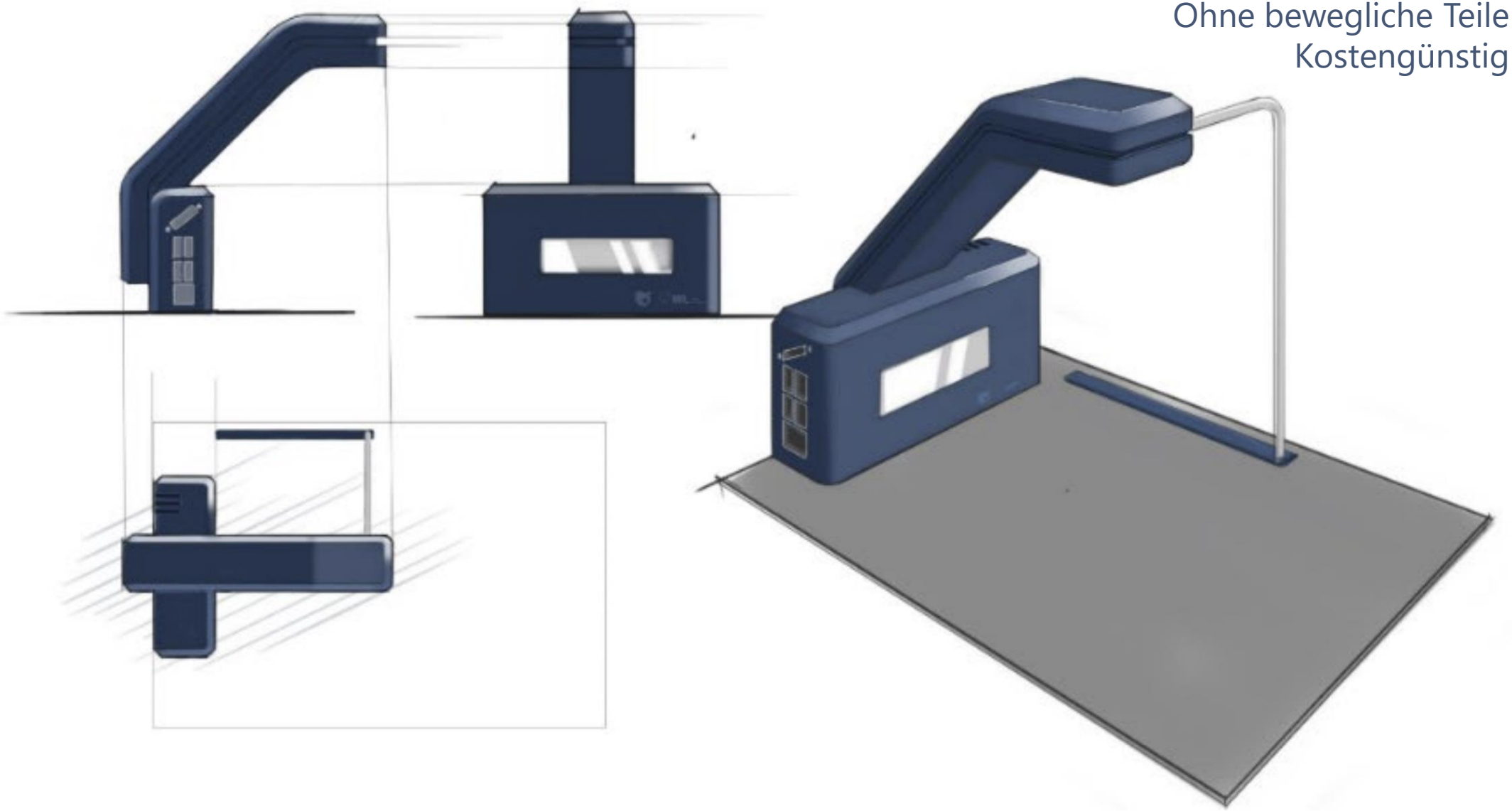
C4, C5
HYDROLOGY

Quick-E-Scan

A4 Scanfläche
Performanter PC (E-Prüfungssystem-fähig)
Hochauflösende Kamera
Sehr robust
Ohne bewegliche Teile
Kostengünstig



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