Die Blended University

Digitales Lehren, Lernen, Prüfen, Forschen und Verwalten

PD Dr. Malte Persike

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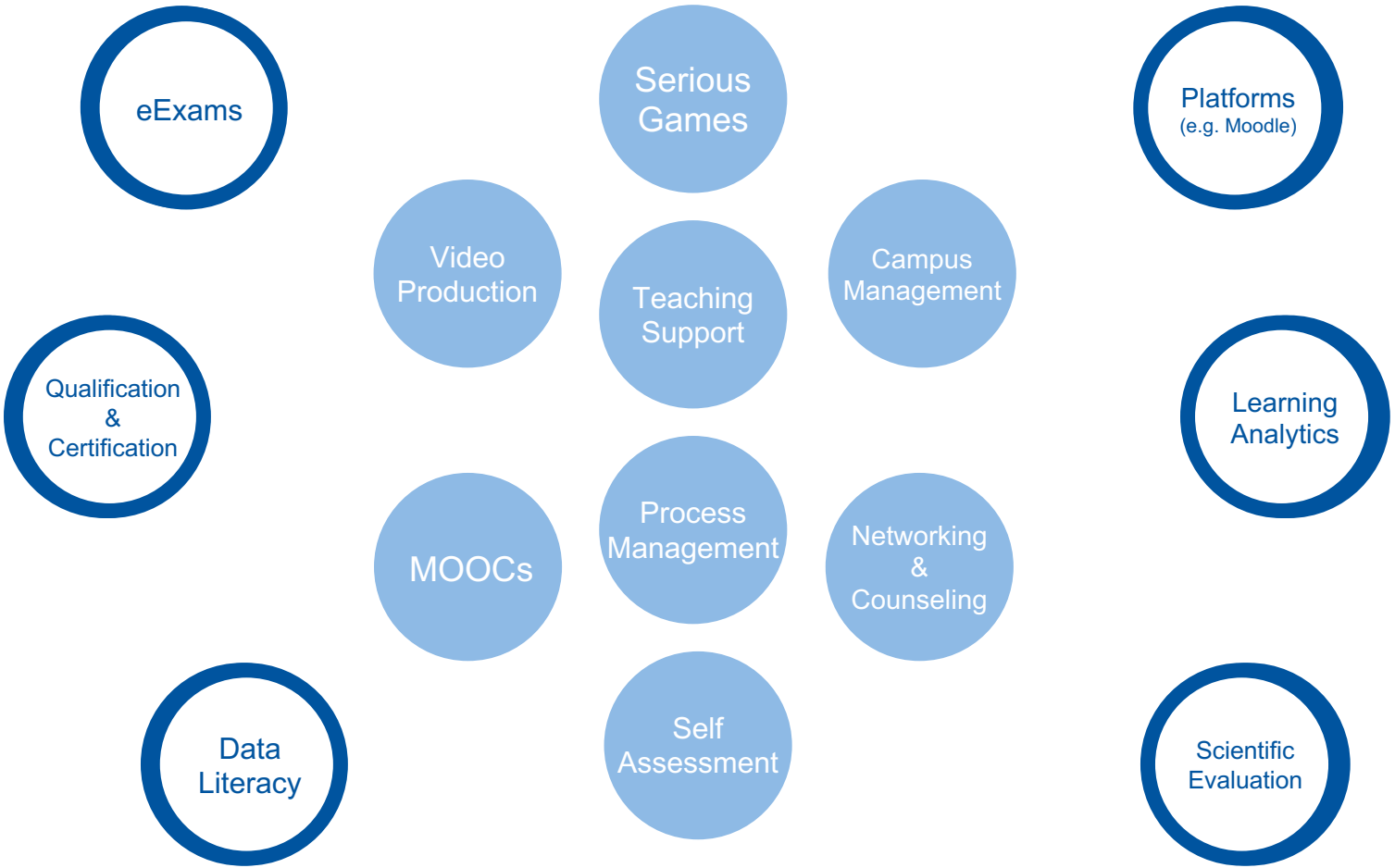
CLS Center für Lehr- und Lernservices | RWTH AACHEN UNIVERSITY

Wissenschaftliche Serviceeinrichtung, ca. 60 Mitarbeitende in 4 Abteilungen.

CLS Center für Lehr- und Lernservices

RWTH AACHEN UNIVERSITY


eExams
Serious Games
Platforms (e.g. Moodle)
Video Production
Teaching Support
Campus Management
Qualification & Certification
Learning Analytics
MOOCs
Process Management
Networking & Counseling
Data Literacy
Self Assessment
Scientific Evaluation

„Im Bereich der Lehre versteht sich die RWTH als Präsenzuniversität, die umfassend digital agiert.“

(Entwurf des Hochschulentwicklungsplans der RWTH, 2022)

„Die klassische Vorlesung, d.h. Frontalunterricht, hat nach unserem Verständnis weitgehend ausgedient“

UNSERE VISION: VOM BLENDED LEARNING ZUR „BLENDED UNIVERSITY“

Wie sieht die Hochschule der Zukunft aus? Wir sind uns sicher, die Zukunft der Lehre an Hochschulen wird weder in der reinen Präsenz liegen, die ohne digitale Medien auskommt, noch in der reinen Online-Lehre. Wir glauben, sie liegt vielmehr in der „Blended University“. Der folgende Text wagt einen visionären Blick in die Zukunft, wie die Hochschule von morgen aus Sicht der Autor:innen aussehen könnte.

VON JANNICA BUDDE, JULIUS-DAVID FRIEDRICH & JOSEPHINE SAMES

Das Hochschulforum Digitalisierung (HFD) beschäftigt sich seit seiner Gründung mit der Frage, wie die Zukunft der Hochschule aussieht. Digitalisierung bzw. digitaler Wandel ist hierbei das zentrale Stichwort. Doch gibt es ganz unterschiedliche Vorstellungen, was das, insbesondere für den Kontext von Studium und Lehre, eigentlich bedeutet. Gerade durch die Erfahrungen während der Pandemie befürchten viele Hochschulangehörige, dass der digitale Wandel (und das HFD gleich mit) die Hochschulen als Orte abschaffen und ausschließliche Online-Lehre als neues Normal etablieren will. Entsprechende Mythen zur Online-Lehre als zukünftiges Sparmodell müssen immer wieder aufs Neue widerlegt werden (siehe HFD Diskussionspapier 13: 9 Mythen des digitalen Wandels in der Hochschulbildung).[1] Vielmehr zeichnet sich unsere Vision von der Hochschule der Zukunft durch einen ausgewogenen Mix aus Präsenzlehre und digitalen Elementen aus. Allerdings nicht im Sinne einer Anreicherung (siehe Abb.1, S. 14), wie sie vor der Pandemie bereits 2016 an 73 % der Hochschulen Standard war – man denke an den Einsatz von Clickersystemen im Hörsaal, die Bereitstellung der Materialien über Lernmanagementsysteme oder Vorlesungsaufzeichnungen.[2] All dies hat aus unserer Sicht Studium und Lehre nicht wirklich verändert. Stattdessen war und ist bei vielen Expert:innen der Leitgedanke der letzten fünf bis zehn Jahre „Blended Learning“. Genau hier setzt unsere Vision einer „Blended University“ an.

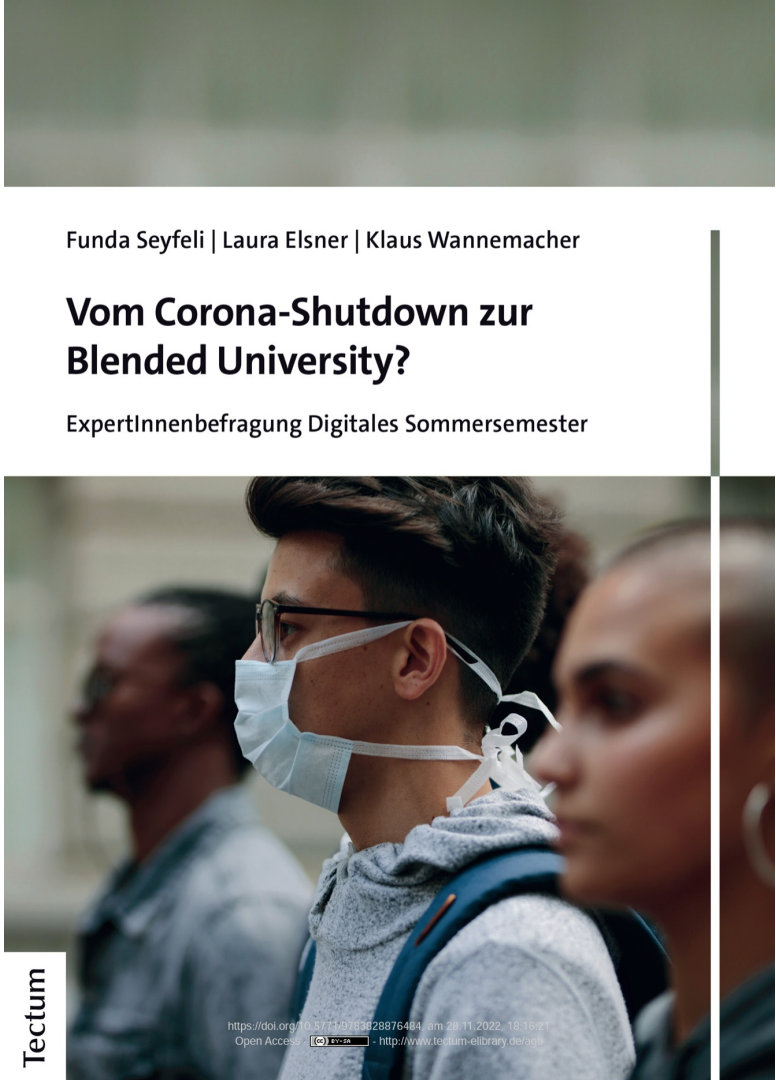
Besonders die digital unterstützte Lehre wird […] noch nicht in jedem Fall angemessen in den Lehrverpflichtungsverordnungen angerechnet

WR WISSENSCHAFTSRAT

Erfurt 29 04 2022

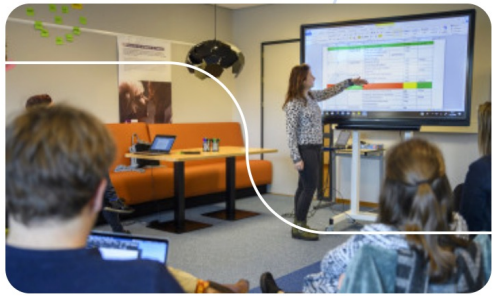
Empfehlungen
für eine zukunftsfähige Ausgestaltung von Studium und Lehre

Die Blended University [...] würde Studierenden eine ausgewogene Mischung aus Lernerfahrungen auf dem Campus und einem punktuellen digitalen Fernstudium bieten und durch leicht zugängliche, interaktive und personalisierte Lernangebote ein ebenso produktives wie inspirierendes Studium ermöglichen.



Organising blended learning

Blended education combines face-to-face with IT-based forms of education. This is more in line with the student's needs and enables activational and time- and location-independent learning. It does have consequences for institutions; it requires vision, redesign of education, and good support from instructors.



Vision

Vision on blended learning

If, as an institution, you want to use online and blended learning (or elements of it), this will affect your business model and the role that lecturers and support staff play. It therefore calls for a focused policy. But how do you go about this?

Hybride Lehre

Digitales Lernen

Blended University

Schlüssel-Kompetenzen

Hybride Lehre

STIFTERVERBAND

HOCHSCHUL-BAROMETER: ZUKUNFT DER LEHRE IST HYBRID

10.12.2021

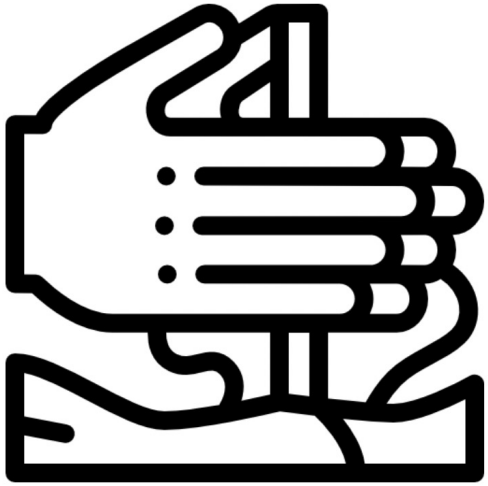
Mehr als ein Drittel der Vorlesungen könnten auch in Zukunft digital stattfinden. Für hybride Lehre müssen Lernorte und IT-Infrastruktur weiter ausgebaut werden. Trotz Pandemie ist die Stimmung unter den Hochschulleitungen so gut wie nie, vor allem unter den privaten Hochschulen. Das sind Ergebnisse des aktuellen Hochschul-Barometers, herausgegeben vom Stifterverband und der Heinz Nixdorf Stiftung.

Studierende wünschen sich auch nach der Pandemie mehr digitales Lernen

Hybrid oder Blended?

Survival Guide für die digital angereicherte Lehre

“Da hybride Lehre im Vergleich zu einer Blended-Learning-Veranstaltung keinen didaktischen Mehrwert bringt, empfehlen wir, diese mit Bedacht einzusetzen.“



Universität Konstanz

Mehrwerte?

Für Lernende

Für Dozierende

Für die Institution

Mehrwerte für Lernende

Räumliche und zeitliche Flexibilität

Überschneidungsfreiheit

Wiederholbarkeit im Falle der Aufzeichnung

Mehrwerte für Dozierende

„Eventuell erreiche ich mehr Teilnehmende.“

Keine didaktischen Vorteile mit Ausnahme sehr spezieller Szenarien

Mehrwerte für die Institution

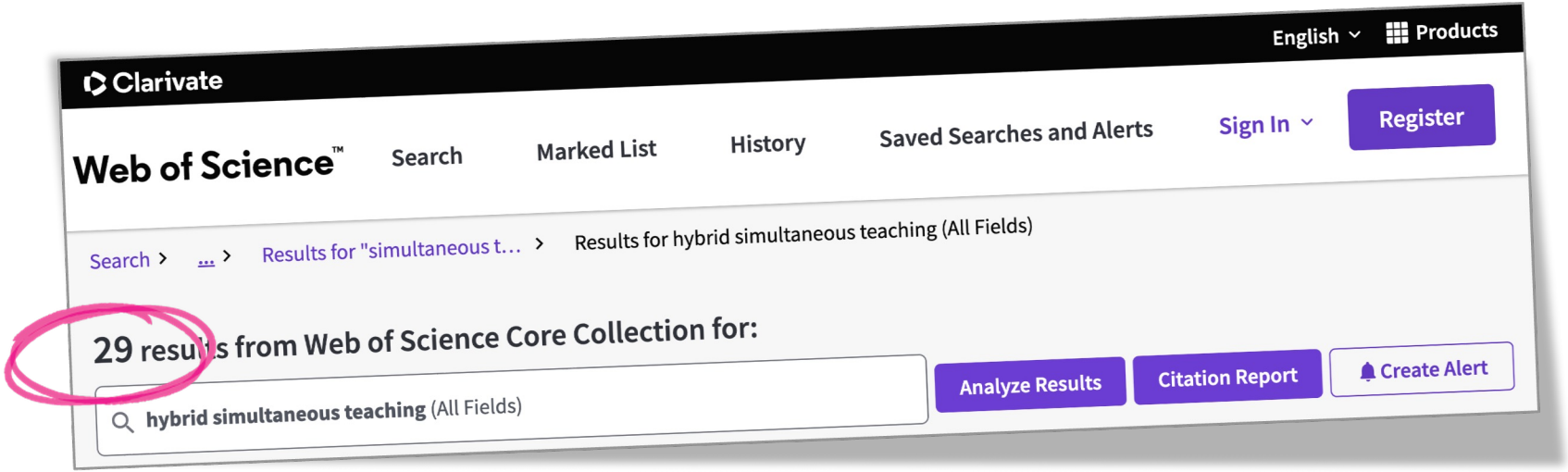
Raumauslastung

Kostenoptimierung

Inklusion

Wettbewerbsvorteil

Empirische Evidenz



Auf dem Weg zur Blended University

Hoher Bedarf an empirischer Evidenz

Hochschulstrategie statt Bottom-Up

Partizipation multipler Statusgruppen

Digitales Lernen

Digitale Lernmedien

Digital im Eigenstudium

Lernen verbessert sich.

Oder auch **nicht**.

Peer Grading

Gegenseitiges Bewerten

Lernen verbessert sich.

Oder auch **nicht**.

Dynamics of Peer Grading: An Empirical Study

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luca@ucsc.edu

Michael Shavlovsky
University of California, Santa Cruz
Department of Computer Science
mshavlov@soe.ucsc.edu

ABSTRACT

Implementation of Peer-Review … Homework Assignments

…hard N. Zare, Charles T. Cox, Jr., Katherine Murphy, and Camille Bayas

Peer Grading in a MOOC: Reliability, Validity, and Perceived Effects

Heng Luo
John A. Dutton E-Education Institute, Pennsylvania State University
…ny C. Robinson
…lvania State University
…ung Park

How effective can simple ordinal peer grading be?*

Ioannis Caragiannis George A. Krimpas Alexandros A. Voudouris
Computer Technology Institute "Diophantus" &
Department of Computer Engineering and Informatics
University of Patras, Greece

Abstract

1 Introduction

J. EDUCATIONAL COMPUTING RESEARCH, Vol. 46(3) 313-333, 2012

UNDERSTANDING THE EFFECTIVENESS OF ONLIN… PEER ASSESSMENT: A PATH MODEL

JINGYAN LU
University of Hong Kong

ABSTRACT

Improving the Peer Assessment Experience on MOOC Platforms

Thomas Staubitz, Dominic Petrick, Matthias Bauer, Jan Renz, Christoph Meinel
Hasso Plattner Institute, Potsdam, Germany
{thomas.staubitz, matthias.bauer, jan.renz, christoph.meinel}@hpi.de
dominic.petrick@student.hpi.de

ABSTRACT

Assessment Matter… Through … Online Peer Critique

Jody Lawrence an… Stephanie Watson, … Hollinger
University of M…

The Internet has enabled us to expand … In an era where the classroom has agg… assessment strategies has never been easier. Online technology has end… shifts in pedagogical practice for design education, generating unique op… connect students with one another to critique and assess the development … This paper presents three ways in which the authors have implemented the … peer assessment to enrich their design courses and discusses how these acti… the learning experience.

Keywords: Assessment, assessment strategies, design education, online peer …

The role of online peer …

Routledge
Taylor & Francis Group

Assessment & Evaluation in Higher Education
Vol. 34, No. 2, April 2009, 221–230

Student perspectives on formative peer assessment: an attempt to deepen learning?

Philip Vickerman*

Liverpool John Moores University, Liverpool, UK

Incentives for Truthful Peer Grading

Luca de Alfaro Michael Shavlovsky Vassilis Polychronopoulos
{luca@ucsc.edu, {mshavlov, vassilis}@soe.ucsc.edu
Computer Science Department
University of California
Santa Cruz, CA, 95064, USA

Technical Report UCSC-SOE-15-19

November 2015

Abstract

Serious Games

Ernsthaft spielen

Programmieren lernen

Mikro-Stadtplanung

Wirtschafts-simulation

Biblische Theologie

Lernen verbessert sich.

Oder auch nicht.

Computers in Human Behavior 80 (2018) 158–167

Contents lists available at ScienceDirect

Computers in Human Behavior

Full length article

A meta-analysis with examination of moderators of studen
affect, and learning outcomes while using serious educati
serious games, and simulations

Richard L. Lamb, Leonard Annetta, Jonah Firestone, Elisabeth Etopi

ARTICLE INFO

ABSTRACT

Information and computer technologies are considered some of the most powerful teaching tools supporting student learning in the classroom (Ertmer & Ottenbreit-Leftwich, 2010). Within the broad category of educational gaming are several technology types including Serious Educational Games (SEG), educational simulations (ES), and Serious Games (SG). In the educational setting, aspects of the relationship between learning and technology are often assumed and the factors that mediate the successes and shortcomings of serious technologies in education are often taken for granted and left unexamined (Pearce, Weitler, Scanlon, & Kinsley,

PROCEEDINGS of the HUMAN FACTORS and ERGONOMICS SOCIETY 57th ANNUAL MEETING - 2013

1455

Investigating the Impact of Self-Efficacy in Learning Disaster Strategies in an On-Line Serious Game

Holly Blasko-Drabik[1], Dawn G. Blasko[2], Heather C. Lum[2], Bilge Erdem[2], & Miri Ohashi[2]

Department of Psychology, University of Central Florida[1]
Department of Psychology, Penn State Erie, The Behrend College[2]

As playing serious games becomes a more viable method of teaching it is important to examine the factors that may impact successful learning. In the current study we examined whether college students could learn disaster prevention strategies from an on-line game. We measured perceptions of learning self-efficacy, enjoyment and game usability. Participants were asked to play an online serious game designed to help them learn what to do to prepare for a natural disaster (tsunami). Knowledge of disaster strategies were measured before and after two brief game periods. The results showed that players significantly improved in their knowledge and performance. The best predictor of post-test scores was the players' perceived self-efficacy at the end of the game. Players who felt that they could master the game, tended to have the highest performance scores. Enjoyment of the game also predicted performance suggesting that those who felt more positively also felt that they could master the game. In this relatively simple game space perceptions of usability were not as strong a predictor of performance.

INTRODUCTION

Perceived self-efficacy, the confidence people have in their ability to overcome challenges, can have a very strong impact on performance (Bandura, 1997; Maddux, 1995; Schwarzer, 1994; 2012). Many studies have examined the effects of self-efficacy in the class room, however there is little research on how self-efficacy might impact learning in on-line serious games.

Serious games are games that are created with a specific learning goal in mind. The use of serious games has become more prevalent as technology becomes easier to use and access to games spreads. There is growing evidence that serious games can be effective learning tools. A recent meta-analysis comparing serious games to other methods of learning showed that those who played the games showed 11% higher declarative knowledge, 14% higher procedural knowledge, 9% better retention of the training (Sitzmann and Ely, 2010).

However there is still a lingering fe

Freitas, S. (2018). Are Games Effective Learning Tools? A Review of Educational Games
ciety, 21 (2), 74–84.

Are Games Effective Learning Tools? A Review of Educational Games

Birkbeck College, University of London

(Submitted Dece

ABSTRACT

The literature around the use, effica
approaches has been building up gradua
This has been problematic in a numb
referencing patterns between different
single-disciplinary perspective has eme
a reliance on single-disciplinary conte
use of multi-methodological approac
neuroscience and information science
has become more quantitative, rigoro
health applications of games, the se
studies that examine and quantify uti

Keywords
Educational games, Serious games,

GAMES FOR HEALTH JOURNAL: Research, Development, and Clinical Applications
Volume 1, Number 1, 2012
© Mary Ann Liebert, Inc.
DOI: 10.1089/g4h.2012.1017

Evaluating Efficacy and Validating Games for Health

Pamela M. Kato, EdM, PhD

Abstract

The field of games for health is growing rapidly, but many games for health are not validated for their use as a tool to improve outcomes. The few research studies that do exist are often poorly designed, and their conclusions cannot be considered valid evidence to support or refute efficacy. Based on lessons learned from the field of digital game-based learning in education and recent efforts to systematically review games for health in meta-analyses, guidelines are suggested for conducting high-quality efficacy studies on games for health.

The Problem

THE FIELD OF GAMES FOR HEALTH is growing dramatically. Major funding agencies are supporting the development of innovative games to train, educate, and motivate people. Businesses for patients, Hospitals and medical schools are developing their own serious simulations and serious games to train healthcare professionals. Conferences that specifically address games for health are being organized and attended by thousands of players. The number of blogs, related LinkedIn groups, and the publications of games and research programs that fit the gamed and serious area based

Chapter XIII
Towards a Development Approach to Serious Games

Sara de Freitas
University of Coventry, UK

Steve Jarvis
SELEX Systems Integration Ltd, UK

Serious Games: A New Paradigm for Education?

Serious Games: A New Paradigm for Educati

Sara de Freitas[1], Fotis Liarokapis[1],

[1]Serious Games Institute (SGI), Coventry University,

Abstract:

This chapter explores the context for the new paradigm of learning emerging to key critical concepts that centre around gamification, immersion, interface The chapter provides an extensive literature review as part of the context including considering serious games and gamification, and social learning considering the changes to educational practices and infrastructure faced b instructors over the coming years. The chapter also provides an historical be highlights some of the conceptual work that has been done already to frame relation to the notion of 'gamification' secondly in a section

Why so serious? On the Relation of Serious G
and Learning

JOHANNES BREUER AND GARY BENTE

Daughter: Daddy, are these conversations serious?

Father: Certainly they are.

Daughter: They're not a sort of game that you play with me?

Father: God forbid… but they are a sort of game that we play together

Daughter: Then they're not serious! (Bateson 1953)

Serious games have become both a growing market in the video game
Alvarez and Michaud 2008; Susi et al., 2007) and a field of academic
Ritterfeld et al. 2009). While the vast majority of these games are tai
arning and education, many studies and texts on serious games lack over
erformed a literature review and looked at existing definitions of games in
d serious games in particular. The inconsistencies and shortcomings of
finitions and typologies are discussed in this paper and more adaptable an
ssifications are presented. We suggest design and implementation strategie
ar the integration of commercial off-the-shelf entertainment games a
cially designed serious/educational games in embedded learning settings.
ssification system for digital and serious games for learning we promote the u
els (tags) instead of fixed genres (categories). The aim of this paper is to ex
focus from what serious games for learning are currently to what they can be
with regard to future developments in gaming technology.

tologies & Oxymorons

cent years serious games have gained the interest of many scholars from
se fields such as psychology, cultural studies, computer science, sociology an
rowing number of companies, conferences and publications devoted to the
ct (see e.g. Ratan and Ritterfeld 2009). Despite the increased attention and
ance which serious games have been receiving lately, the definition of the term
s game' often varies depending on who uses it and in what context. The term
appears to be a contradiction. Are games not fun by definition and hence not
? On the other hand, one could argue that all games are serious. Play and
have an evolutionary background as instruments for survival training and in

Vol. 4, No. 1 (2010)

© by Johannes Breuer and Gary Bente

Original article

Journal of Computer Assisted Learning

Serious games as new educational tools:
how effective are the y? A meta-analysis of
recent studies

C. Girard,* J. Ecalle* & A. Magnant

*Laboratoire Etude des Mécanismes Cognitifs (EA 3082), Ur
†Institut Universitaire de France, Paris, France

Abstract

Computer-assisted learn
adults and children. Re
(SGs)' that are flooding
used to refer to video g
review the results of e
SGs on players' learni
results and the impos
VGs and SGs in learni
of suggestions for future

Keywords
engagement, learning effect, serious game,

Introduction

Background

In recent years, many new ways of teaching academic
and professional skills to children and adults have been
tested using multimedia technologies in the form of
software products, educational computer games or
video games (Kebritchi et al. 2010; Lorant-
Royer et al. 2010). Although the idea that games are
effective learning tools is not new (Annetta et al. 2009),
recently become a subject of

such as face-to-face or pencil-and
addition, the traditional linear
seems to be counter-intuitive to
games could allow them to escap
it imposes (Tanes & Cemalcilar 2
The rapid growth of multim
the last 20 years means that tod
adults were born in a computer
to handling all kinds of softw
They are known as the 'digita
tion' (Prensky 2001; Westera
2009; Bekebrede et al. 2011)

Introduction

Defining efficacy in educational cont
learning contexts. Add
computer science (e.g., analyti
information science (e.g., analyti
which allow us to consider usabi
findings from neuroscience which
(e.g., Bavelier et al., 2012; Kühn
replacement for assessment (e.g.,
understanding of how we can m
more about how we learn.

The review found that "game s
significant term for the game st
new term aims to link game stu
better understand: the learning
through the metaphor of game

A Foreshadowing of Things to Come?

It was fall to conduct rigorous research on games for health, we may be destined to experience the same situation facing the proliferation of serious games in education. This field, known as digital game-based learning (DGBL), was enthusiastically embraced to address the problem of decreases in students' motivation to pursue academic careers, low study habits, and drops in academic performance." A recent article in the New York Times[26] reported that the marketing of dietary supplements and other products were not consistent with research evaluating the efficacy of these products. Senior Research Associate, Dennis Dworski, The Nielsen

British Journal of Educational Technology
doi:10.1111/bjet.12067

The research and evaluation of serious games: Toward a
comprehensive methodology

Igor Mayer, Geertje Bekebrede, Casper Harteveld, Harald Warmelink,
Qiqi Zhou, Theo van Ruijven, Julia Lo, Rens Kortmann and Ivo Wenzler

Igor Mayer is an associate professor in Public Administration and Gaming in the Faculty of Technology, Policy and Management, and Coordinator of the Serious Gaming Research Center, TU Delft, The Netherlands. Geertje Bekebrede is assistant professor in Policy, Organization and Gaming in the Faculty of Technology, Policy and Management, TU Delft, and a senior game designer at Wageningen University, Wageningen, The Netherlands. Casper Harteveld is an assistant professor in Art and Science at Nanyang Technological University, Singapore, and Gaming in the Faculty of Technology, Policy and Management, TU Delft, and a senior game designer at Wageningen University, Wageningen, The Netherlands. Qiqi Zhou is an assistant professor of Art and Science at Nanyang Technological University, Singapore, and Gaming in the Faculty of Technology, Policy and Management, TU Delft. Julia Lo is an assistant professor in Public Administration and Gaming in the Faculty of Technology, Policy and Management, TU Delft. Rens Kortmann is an associate professor in Systems Engineering, Policy Analysis and Management, TU Delft. Ivo Wenzler is an associate professor in Policy, Organization and Gaming in the Faculty of Technology, Policy and Management, TU Delft, and a senior game designer at Wageningen University, Wageningen, The Netherlands. Address for correspondence: Dr Igor Mayer, Faculty of Technology, Policy and Management, TU Delft, PO Box 5015, 2600 GA Delft, The Netherlands. Email: i.s.mayer@tudelft.nl

Vol 45 No 3 2014 502–527

Chapter 7

Designing Effective Feedback Messages in Serious Games and Simulations: A Research Review

Cheryl I. Johnson, Shannon K.T. Bailey, and W

authors present the methodological background to and underlying research
of an ongoing research project on the scientific evaluation of serious games
or computer-based simulation games (SGs) for advanced learning. The main
rch questions are: (1) what are the requirements of SGs?; (2) to what extent
ensive social scientific methodology for the evaluation of SGs contribute to or determine
SGs contribute to advanced learning?; (3) what factors contribute to or determine
learning?; and (4) to what extent and under what conditions can SG-based learn
be transferred to the real world? In the Netherlands between 2005 and 2012,
veral hundred SG sessions with 12 SGs were evaluated systematically, uniformly
nd quantitatively to create a dataset, which comprises data on 2488 respondents in
higher education or work organizations. The authors present the research model, the
quasi-experimental design and the evaluation instruments. This focus in this paper is
on the methodology and dataset, which form a sound foundation for forthcoming pub-

Wikis in der Lehre

Kollaborative Wissenskonstruktion

Lernen verbessert sich.

Oder auch nicht.

Learner Generated Content

From Learning to Teaching

Lernen verbessert sich.

Oder auch **nicht**.

Virtual & Augmented Reality

Lernen fast wie in echt

Lernen verbessert sich.

Rapid Communication

Transfer of training from virtual reality

J. J. Kozak, P. A. Hancock, E. J. Arthur and S. T. Chrysler
Human Factors Research Laboratory, University of Minnesota, 60 Norris Hall, 172 Pillsbury Drive, S.E., Minneapolis, MN 55455, USA

Keywords: Virtual reality; Training; Human factors; Human–computer interaction.

This experiment compared the value of real-world training, virtual reality training, and no training in the transfer of learning to the same task performed in real-world conditions. Results provide no evidence of transfer from a virtual reality training environment to a real-world task. There was no significant difference between the virtual reality training group and the group that received no training on the task. The group that received real-world training performed significantly better than both of the other two groups. The results question the utility of virtual training and suggest that in the present configuration, individuals learn performance characteristics specific only to the virtual reality context. Needed improvements to virtual reality for the purpose of enabling the transfer of training are indicated.

EFFECTIVENESS OF COMPUTER-BASED INSTRUCTIONAL SIMULATION: A META ANALYSIS

JUNE LEE
Utah State University

Does training in a virtual reality simulator improve surgical performance?

G. Ahlberg,[1] T. Heikkinen,[1] L. Iselius,[1] C.-E Leijonmarck,[2] J. Rutqvist,[3] D.

Toward Measuring Empathy in Virtual Reality

Computers & Education

Educational virtual environments: A ten-year review of empirical research (1999–2009)

Tassos A. Mikropoulos, Antonis Natsis

Facilitating empathy through virtual reality

Nicola S. Schutte · Emma J. Stilinović

Comparative effectiveness of design features in simulation-based learning

Learning Science in Immersive Virtual Reality

Jocelyn Parong and Richard E. Mayer
University of California, Santa Barbara

The impact of perception and presence on emotional reactions: a review of research in virtual reality

Julia Diemer, Georg W. Alpers, Henrik M. Peperkorn, Youssef Shiban and Andreas Mühlberger

Affective Interactions Using Virtual Reality: The Link between Presence and Emotions

GIUSEPPE RIVA, Ph.D.,[1,2] FABRIZIA MANTOVANI, Ph.D.,[1-4] ALESSANDRA PRESCHA, M.S.,[1] FRANCESCA MORGANTI, Ph.D.,[1] CLAREE SAMANTHA CAPIDEVILLE, Ph.D.,[2,3] DANIELA VILLANI, M.S.,[1,2] ANDREA GAGGIOLI, Ph.D.,[1,2] CRISTINA BOTELLA, Ph.D.,[5] and MARIANO ALCANIZ, Ph.D.[6]

Effectiveness of a Virtual Laboratory as a preparatory resource for Distance Education chemistry students

Barney Dalgarno, Andrea G. Bishop, William Adlong, Danny R. Bedgood Jr.

Developing a web-based multimedia assessment system for facilitating science laboratory instruction

Tzu-Hua Wang | Chien-Hui Kao | Yu-Ling Dai

Breaking Bad Behaviors: A New Tool for Learning Classroom Management Using Virtual Reality

Augmented reality in education: a meta-review and cross-media analysis

Julian Radu

Gruppenarbeitsformen

Kommunizieren & zusammenarbeiten

Lernen verbessert sich.

Available online at www.sciencedirect.com
ScienceDirect
Computers in Human Behavior 23 (2007) 2256–2268
www.elsevier.com/locate/com

The effects of group composition of self-effica
and collective efficacy on
computer-supported collaborative learning

Shu-Ling Wang [a,*], Sunny S.J. Lin [b]

[a] Center of Teacher Education, National Taiwan University of Science and Technology, #43 Sec.
Keelung Road, Taipei, Taiwan
[b] Institute of Education, National Ch

The Efficacy of Collaborative Learning Recitation S
Student Outcomes

By Kim P. Huynh, David T. Jacho-Chávez, and James K. S

For most students, freshman level introductory economic courses represent their first exposure to the science of economics and its powerful tools of reasoning. For most universities and colleges, students in several majors will be required to take at least one course in economics and will generally take that course in their freshman year. The tools taught in these courses offer students a basic understanding of economics. Despite the benefits afforded in understanding the principles of economics, anecdotally, there is little enthusiasm for learning economics, and many express fear that the course will be excessively difficult. One way to help overcome these obstacles is to incorporate opportunities for Collaborative Learning (CL) into the pedagogy. This addresses a criticism that undergraduate economic courses are too reliant on passive learning (lecture-only classroom activity), which was raised by William E. Becker and Michael Watts (1996). However, the efficacy of CL is an open question that we will address in this study.

Carol G. Johnston, Jenny
McDonald, and Richard H. Jar
ated a pair of intermediate leve
sections designed with a recita
One section had a CL recitati
learning component, and the c
ditional recitation. Recitation pa
required at the cost of one hour
per week for a 13-week course.
tion students were broken into g
students and required to work w
through various problems: while
trol recitation sections, they simp
the same problems with tutor le
Their main question was whether
ing activities designed in their
tion sections were superior to thei
recitation sections. Their finding s
deep learning process. In particula
be structured to incorporate the dee
approach suggested by F. Marton an
(1976). However, their findings were
an increase in student appreciation for
who led the section.

In general, Johnston et al. (200
mixed gains in student learning prac
little improvement in examination perf
or student reported interest in the subject
nomics. Considering that course examin
standard measures of performance
regardless if it is a CL or traditional secti
more productive towards student learning
than just using class time for lecture only
no recitation time each week.

Steven Yamarik (2007) addresses these c
cisms by incorporating a deep learning des
into one of his intermediate microeconom
courses by forming CL groups within his cla
He then required those groups to be maintain

287

Computers in Human Behavior
Volume 27, Issue 1, January 2011, Pages 53-57

Superiority of collaborative learning with
tasks: A research note on an alternative a
explanation

Femke Kirschner [a, b], Fre

Show more

https://doi.org/10.1016/j.chb.2

Abstract

Kirschner, Paas, and K
load to explain why th
than that of i
limitations
capacity and by allowi
members. Inspired by
affective explanation
learners expected to i
out the task, this stud
complexity problem e
solve the problem alo
amount of mental effo

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ScienceDirect
Computers & Education 51 (2008) 109–128
www.elsevier.com/locate/compedu

COMPUTERS &
EDUCATION

The influence of students and teachers characteristics
on the efficacy of face-to-face and computer supported
collaborative learning

Solimeno [a,*], Minou Ella Mebane [b], Manuela Tomai [a],
Donata Francescato [a]

[a] Università di Roma La Sapienza, Facoltà di Psicologia 1, Via dei Marsi 78, 00185 Roma, Italy
[b] Università di Roma La Sapienza, Facoltà di Psicologia 2, Via dei Marsi 78, 00185 Roma, Italy

21 December 2006; received in revised form 21 March 2007; accepted 22 April 2007

Triggers of Students'
Efficacious Interaction
in Collaborative
Learning Situations

Elina Määttä[1], Hanna Järvenoja[1],
and Sanna Järvelä[1]

Abstract

This article presents a case study that investigated primary sc
social interaction while working in small groups in science. Th

Soc Psychol Educ (2012) 15:517–532
DOI 10.1007/s11218-012-9202-6

Collaborative learning: the effects of trust and open
and closed dynamics on consensus and efficacy

Owen Harney · Michael J. Hogan ·
Benjamin J. Broome

Received: 13 January 2012 / Accepted: 28 July 2012 / Published online: 23 August 2012
© Springer Science+Business Media B.V. 2012

Collaborative Training With a More Experienced Partner:
Remediating Low Pretraining Self-Efficacy in Complex Skill
Acquisition

Eric Anthony Day, Paul R. Boatman, Vanessa Kowollik, Jazmine Espejo, Lauren E
McEntire, and Rachel E. Sherwin, University of Oklahoma, Norman, Oklahoma

Objective: This study examined the effectiveness of collaborative training for individuals with low pretraining self-efficacy versus individuals with high pretraining self-efficacy regarding the acquisition of a complex skill that involved strong cognitive and psychomotor demands. Background: Despite support for collaborative learning from the educational literature and the similarities between collaborative learning and interventions designed to remediate low self-efficacy, no research has addressed how self-efficacy interact in contexts concerning complex skills and collaborative learning. Method: One hundred fifty-five young male adults trained with a more experienced partner on a complex

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Computers in Human Behavior 22 (2006) 163–176
www.elsevier.com/locate/comphumbeh

Evaluation of the efficacy of
collaborative learning in face-to-face
and computer-supported university contexts

Donata Francescato [a,*], Rita Porcelli [a], Minou Mebane [a],
Marcella Cuddetta [a], Jane Klobas [b], Paolo Renzi [a]

[a] University of Roma La Sapienza, Facoltà di Psicologia 1, Via dei Marsi 78, 00185 Roma, Italy
[b] The Graduate School of Management, The University of Western Australia and Bocconi University,
35 Stirling Hwy, Nedlands 6009, Western Australia

Available online 28 March 2005

Abstract

This study aimed to compare the efficacy of collaborative learning in face-to-face and online groups. Fifty psychology majors learnt the same professional skill

Intern. J. Comput.-Support. Collab. Learn (2015) 10:367–394
DOI 10.1007/s11412-015-9223-1

Investigating the effects of prompts on argumentation style,
consensus and perceived efficacy in collaborative learning

Owen M. Harney[1] · Michael J. Hogan[1] · Benjamin Broome[2] · Tony Hall[1] ·
Cormac Ryan[1]

Received: 10 February 2015 / Accepted: 28 October 2015 / Published online: 25 November 2015
© International Society of the Learning Sciences, Inc. 2015

Journal of Engineering
July 2011, Vol. 100, No. 3, pp
© 2011 ASEE. http://w

Collaborative Learning in Engineeri
Students: Gender and Achievemen

Glenda S. Stump, Jonathan C. Hilpert[a], Jenefer Hu
Wen-Ting Chung, Wonsik Kim
Arizona State University, Indiana University–Purdue University

Missing Something? Authority in Collaborative Learning

Iris Howley, Elijah Mayfield, & Carolyn P. Rosé
Carnegie Mellon University, 5000 Forbes Ave. Pittsburgh, PA
{ihowley, emayfiel, cprose}@cs.cmu.edu

Abstract: Past research in individual learning settings has shown that student dispositions such as self-efficacy are predictive of learning and other beneficial outcomes, but the relationship is less clear in a collaborative learning environment. This paper explores authoritativeness of stance within a conversation as a social factor influencing learning and related to self-efficacy in a computer-supported collaborative learning setting. Our results indicate that this authoritativeness measure predicts learning, where an individual's self-efficacy does not, and that student and partner authoritativeness predicts group self-efficacy. Further research is required to better determine the relationship between conversational authoritativeness, individual dispositions, and learning.

Keywords Collaboration · Technology · Dialogue · T
Computer supported collaborative learning

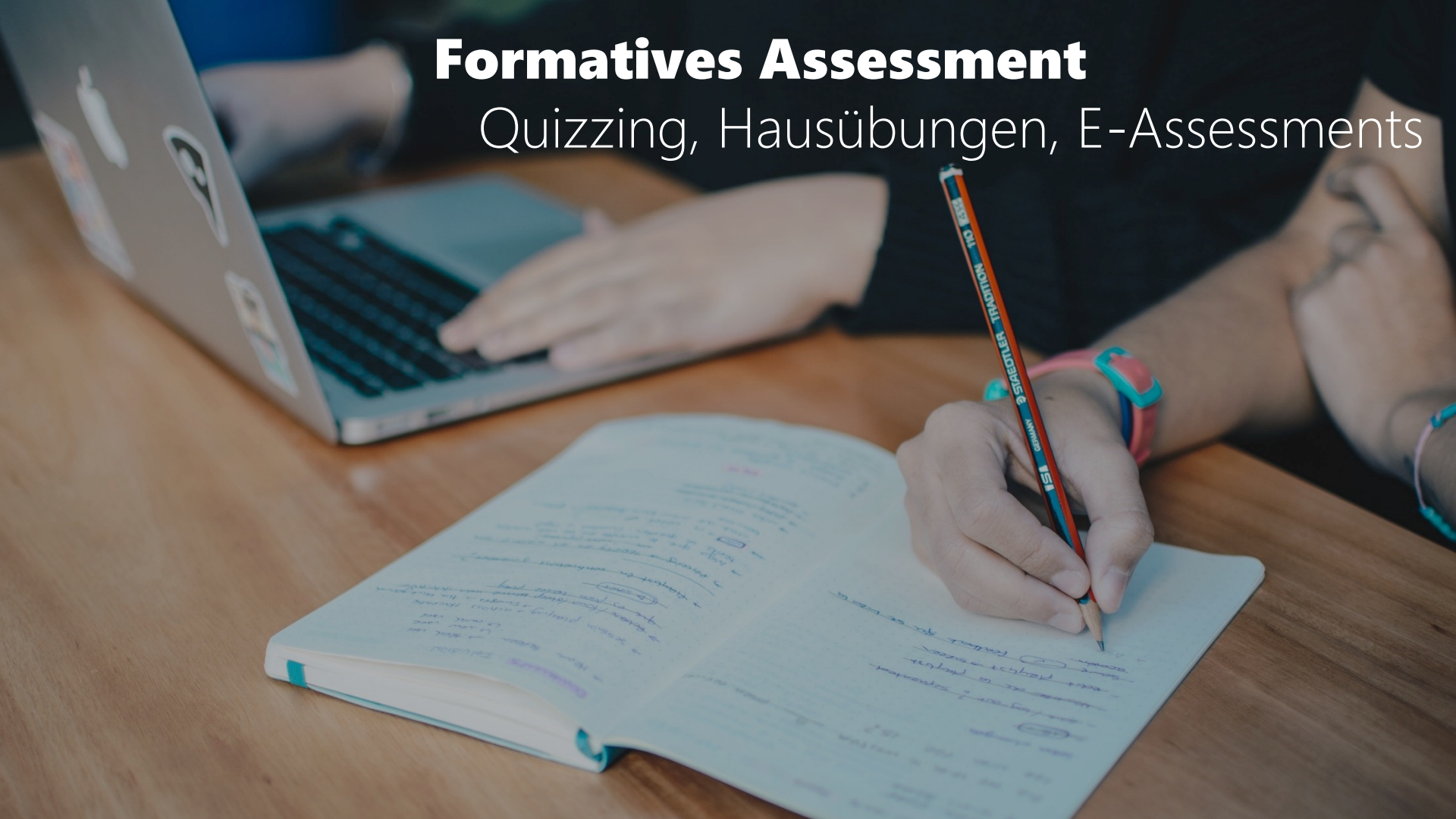
Introduction

Research in individual learning settings connected with popular dispositional constructshas demonstrat
intrinsic motivation, mastery-learning oriented goals, and high self-efficacy are predictive of learning as
positive traits such as persistence (Sheldon & Kasser, 1995; Harackiewicz et al. 2002; Coutinho & Ne
2008). However, this leaves open the question of what happens when an additional student is added
learning activity, and we then have a collaborative learning task. Will self-efficacy still predict learnin
behavior in this collaborative setting? Or does the absence of considered social factors in these disposi
constructs dilute their predictive value in the face of social comparison, social identity, positioning, and
factors introduced by a collaborative setting?

At the same time that the introduction of a learning partner introduces complications that may inte
with the predictive value of motivational assessments largely optimized for use within individual lear
settings, the advantage is that the social interaction makes self-concepts visible through linguistic strat
speakers employ to position themselves within their groups. Thus, an important part of our
investigating the applicability of constructs such as self-efficacy within a group learning setting, we develo
behavioral measure in the form of a categorical coding scheme through which we can quantify the relative
of authoritativeness of stance between the collaborative partners. In this paper
conversational data by hand, although in the

Formatives Assessment

Quizzing, Hausübungen, E-Assessments



Lernen verbessert sich.

Computers & Education

journal homepage: www.elsevier.com/locate/compedu

Examining the benefits and challenges of using audience response
A review of the literature

Robin H. Kay *, Ann LeSage [1]

Wireless Audience Response System: Does It Make a D

Abstract
Because Extension seminars are costly in preparation and delivery, questions about t
effectiveness of various methods are important to consider. Interactive devices are b
available to Extension professionals. One such device, OptionFinder®, utilizes individ
keypads and a control station, manned by the lecturer or an assistant. It is believed
participation and information retention. The lecturer can assess the audiences' unde
by asking multiple choice or true/false questions. The study described h
terms of knowledge retention, of such a system compared

Benefits of Electronic Audience Response Systems on Student Participation, Learning, and Emotion

Jeffrey R. Stowell and Jason M. Nelson
Eastern Illinois University

We compared an electronic audience response system (clickers) to standard lecture, hand

Effectiveness, efficiency, eng of pre-lecture quizzes on educ

Tanya Evans, Barbara Kensington-Miller, Julia
University of Auckland

Our study addresses a systemic issue facin research alongside new techno

Educational Research Review

journal homepage: www.elsevier.com/locate/edurev

Review
The promised land of blended learning: Quizzes as a moderator

Ingrid A.E. Spanjers [a,1], Karen D. Könings [a,*], Jimmie Leppink [a], Danielle M.L. Verstegen [a], Nynke de Jong [a], Katarzyna Czabanowska [b], Jeroen J.G. van Merriënboer [a]

2012; 34: e386–e405

Taylor & Francis Group, LLC
ISSN: 0098-6283 print / 1532-8023 online
DOI: 10.1080/00986280802529152

METHODS AND TECHNIQUES

Mastery Quizzing as a Signaling Device to Cue Attention to Lecture Material

effrey S. Nevid and Katie Mahon
t. John's University

WEB PAPER
BEME GUIDE

The effects of audience response systems on learning outcomes in health professions education. A BEME systematic review: BEME Guide No. 21

CODY NELSON, LISA HAR... SANDRA CAMPBELL & ANNA E. OSWALD
University of Alberta, Canada

Test-Enhanced Learning in the Classroom: Long-Term Improvements From Quizzing

Henry L. Roediger III, Pooja K. Agarwal, Mark A. McDaniel, and Kathleen B. McDermott
Washington University in St. Louis

The Impact of Pre-Lecture Quizzes on Students' Performance in Blended Learning

Cristina-Claudia OSMAN
Business Informatics Research Center, Babeş-Bolyai University, Romania
cristina.osman@econ.ubbcluj.ro

Abstract–Testing is a powerful mechanism to enhance the learning process. This study analyses the impact of pre-lecture quizzes on students' performance. Based on quizzes results, 2 groups are created. A series of indices are used in order to decide the number of clusters for each group. The analysis of each cluster reveals details related to the association between the results obtained by students on quizzes and their performance on course. Post-hoc tests like Tukey's test, Levene test, and Games-Howell test are used to investigate the variances between students' performance based on quizzes' results.

Keywords: students' performance, pre-lecture quizzes, blended learning, case study, Moodle

I. Introduction

Digital Natives are the generation having the tendency of using digital technology [1]. They used digital technology for most of their lives, preponderantly for social interaction. As a result of Digital Era changes generations' behaviour, it also asks for new teaching and evaluation methods. The literature shows 3 types of Digital Era learners: the enthusiasts, the reactionaries, respectively the critics [2]. Technology plays an important role in improving the teaching-learning process. Traditional teaching methods like "chalk and talk" are now combined with new methods and tools like Learning Management Systems (LMSs), digital assessments, or flipped classroom.

Journal of Computing in Higher Education
Spring 2003, Vol. 14(2), 121-134.

A Comparison of In-Class and Online Quizzes on Student Exam Performance [1]

Eros DeSouza
Matthew Fleming
Department of Psych...

ABSTRACT

THIS STUDY evaluated the use of We the instruction of students enrolled in a ity class. During 1999, we compared 29 took online quizzes with 291 undergraduates paper-and-pencil quizzes. All online quizzes maintained by the class instructor using Mallard Web-based assessment program), which allowed when, where, and how long to work on their qui dents performed significantly better on achievemen class exams) than non-Mallard students. Survey da most students reported being "very satisfied" with findings followed similar trends in other forms of co instruction. Future research and potential pedagogic Web-based assessment

Comparison of the Impact of Pre- and Post-Lecture Student Learning in an Engineering Economics

Rick T. Olson
University of San Diego

Empowering or compelling reluctant participators using audience response systems

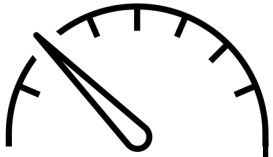
Psychological Bulletin

© 2014 American Psychological Association
0033-2909/14/$12.00 http://dx.doi.org/10.1037/a0037339

The Effect of Testing Versus Restudy on Retention: A Meta-Analytic Review of the Testing Effect

Christopher A. Rowland
Colorado State University

Keywords: testing effect, retrieval practice, meta-analysis, memory, retrieval



Hochschuldidaktik-Dilemma

- **Oft ambivalente empirische Evidenz**
- **Hohe Aufwände bei der Einführung**
- **Große Schmerzen beim Zurückrollen**

Auf dem Weg zur Blended University

Hoher Bedarf an empirischer Evidenz

Hochschulstrategie statt Bottom-Up

Partizipation multipler Statusgruppen

Hohe Support-Bedarfe

Experimentieren (und Scheitern) können

Blended University

1. Ein Großteil der Hochschulen wird aussterben
2. Die Präsenzlehre soll abgeschafft werden
3. Digitalisierung macht Lehrende überflüssig
4. Digitale Lehre ist nicht auf das Lehrdeputat anrechenbar
5. Digitalisierung schränkt die Freiheit der Lehre ein
6. Digital Natives haben Digitalkompetenzen mit der Muttermilch aufgesogen
7. Diskursive Formate sind digital nicht möglich
8. Digitalkenntnisse sind wichtiger als didaktische Fähigkeiten
9. Digitalisierung ist ein Sparmodell

DISKUSSIONSPAPIER NR. 13 / JULI 2021

9 Mythen des digitalen Wandels in der Hochschulbildung

Mit dem Begriff der Digitalisierung verbinden sich in weiten Teilen der Hochschulwelt Ängste, Hoffnungen, (leere) Versprechungen und die diffuse Vorstellung, dass sich alles verändert. Dieses Diskussionspapier beleuchtet neun Mythen, die im Kontext der digitalen Hochschulbildung immer noch für Verunsicherung sorgen und ordnet sie vor dem Hintergrund der Corona-Pandemie ein.

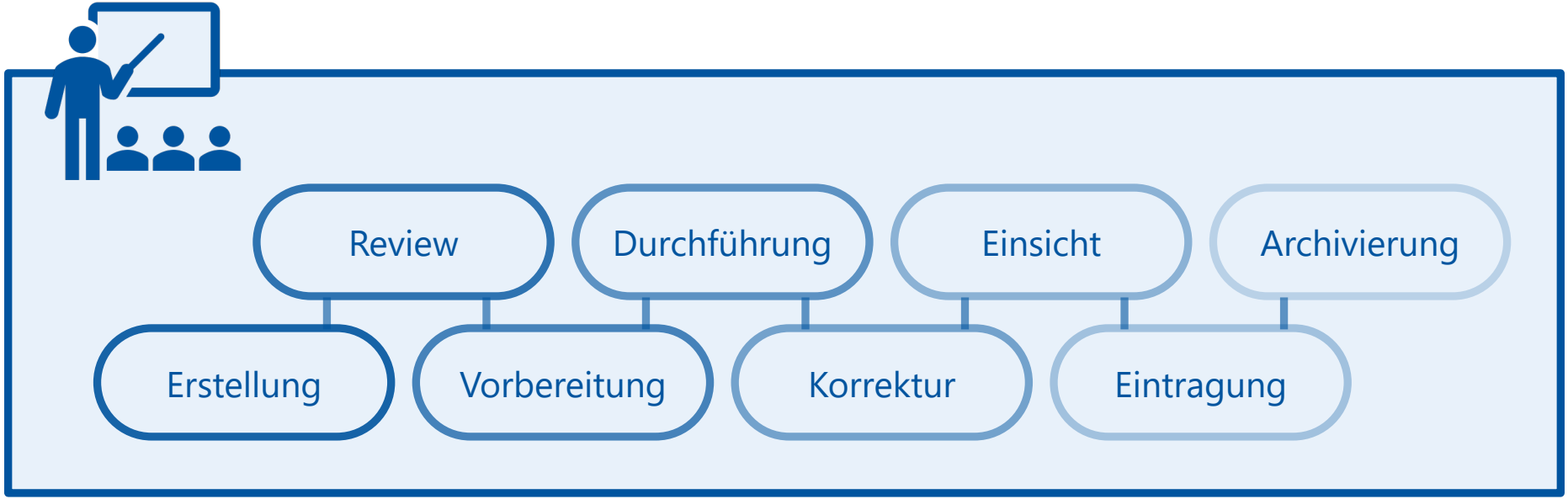
AUTORINNEN & AUTOREN

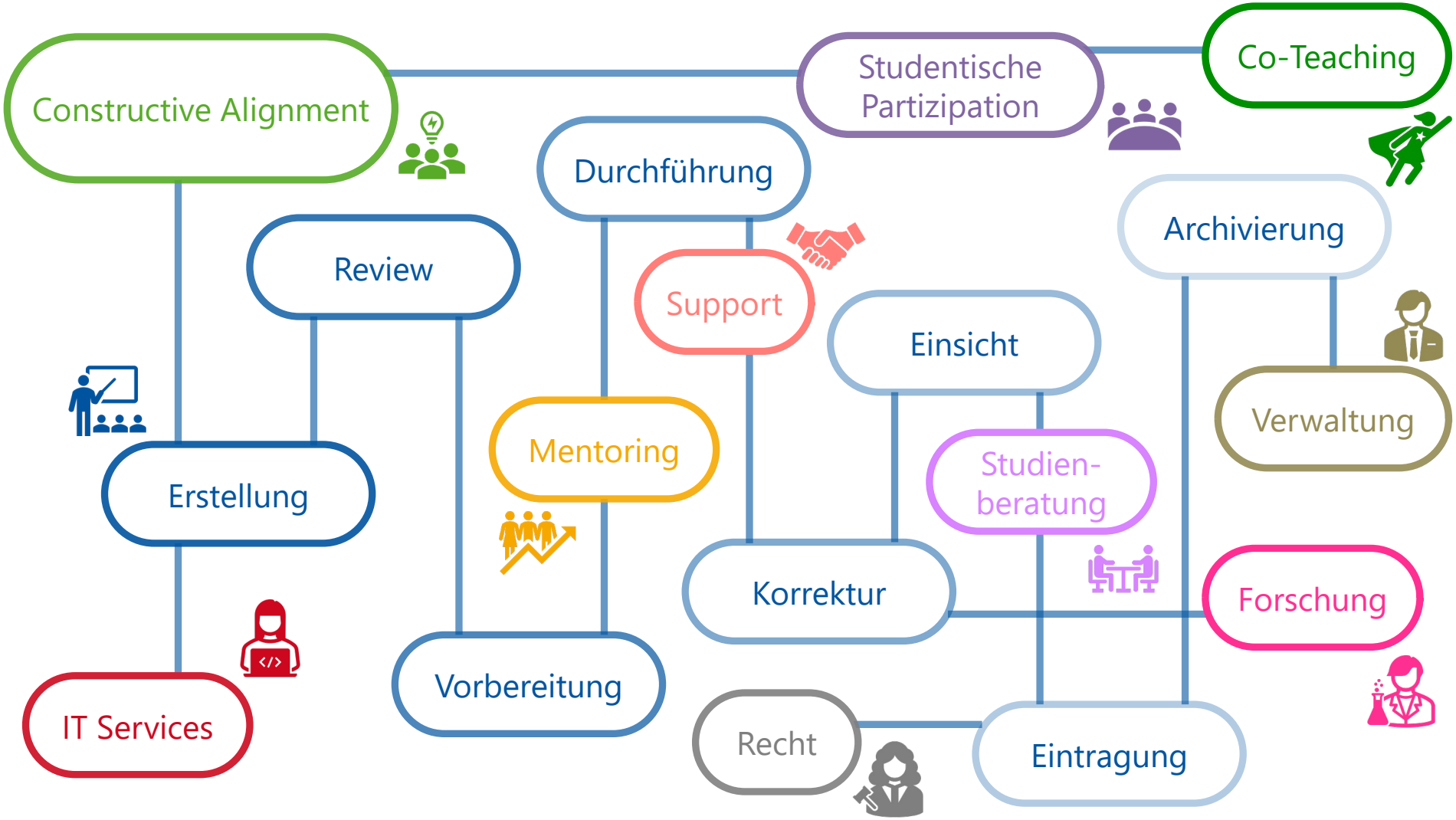
Julius-David Friedrich, Hochschulforum Digitalisierung (CHE Centrum für Hochschulentwicklung) / Philipp Neubert, Hochschulforum Digitalisierung (CHE Centrum für Hochschulentwicklung) / Josephine Sames, Hochschulforum Digitalisierung (CHE Centrum für Hochschulentwicklung)

Arbeitsdefinition

Die Blended University meint die Kombination von digitalen und Präsenzelementen in allen Teilbereichen einer Hochschule. Dies umfasst das Lehren, Lernen und Prüfen, die Verwaltung und Governance-Strukturen, die Forschung sowie die Third Mission.

Der klassische Prüfungsprozess

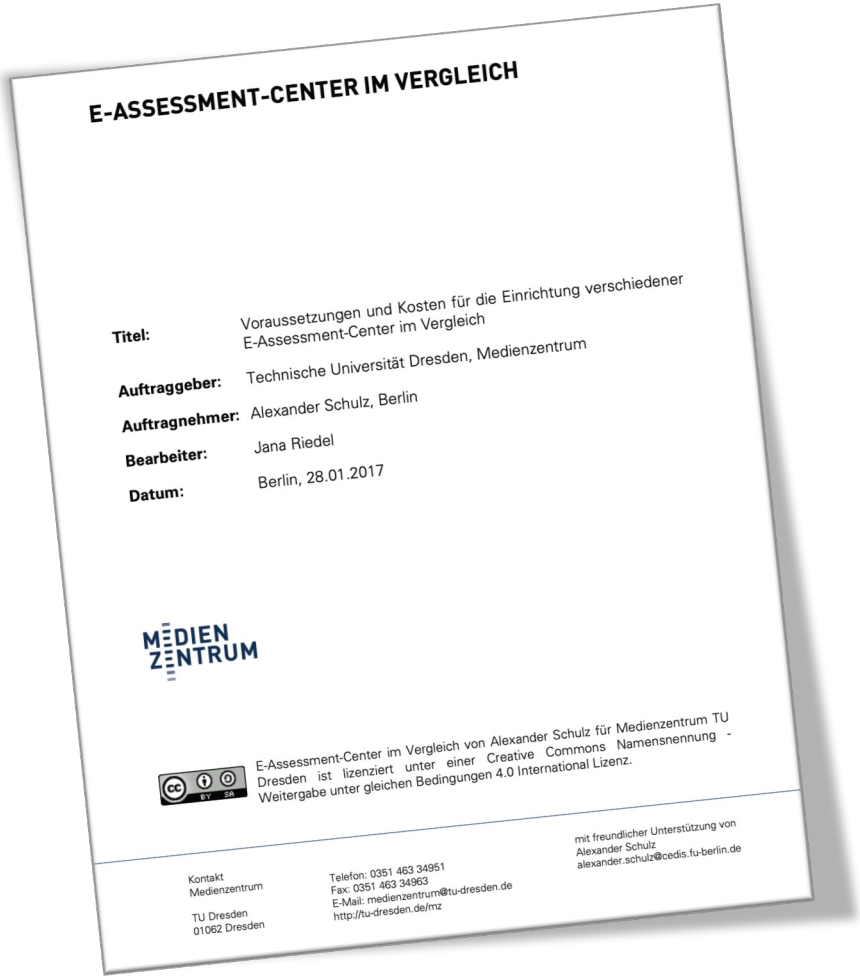



Constructive Alignment
Studentische Partizipation
Co-Teaching
Durchführung
Review
Support
Archivierung
Einsicht
Verwaltung
Mentoring
Studien-beratung
Erstellung
Korrektur
Forschung
IT Services
Vorbereitung
Recht
Eintragung

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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http://tu-dresden.de/mz

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

Quelle: https://blog.schoolspecialty.com/six-key-learning-environment/

Quelle: https://www.contemporist.com/future-learning-environments-by-tengbom/

Quelle: https://contemporist.com/future-learning-environments-by-tengbom/

Quelle: Joe Harrison, JH Potography Inc.

Zwischen 50.000€ bis 200.000€ für einen Seminarraum

>12h/Tag personelle Betreuung

Flexible Raumkonzepte und Arbeitsschutz

Die Blended University

kombiniert digital und Präsenz,

ist Begegnungsort,

umfasst strategisch und operativ die gesamte Hochschule,

ist partizipativ und kollaborativ für alle Statusgruppen,

benötigt Kulturwandel.

Einreichung von AMANDA PÜSCHEL, Studierende an der Burg Giebichenstein Kunsthochschule Halle

Schlüsselkompetenzen

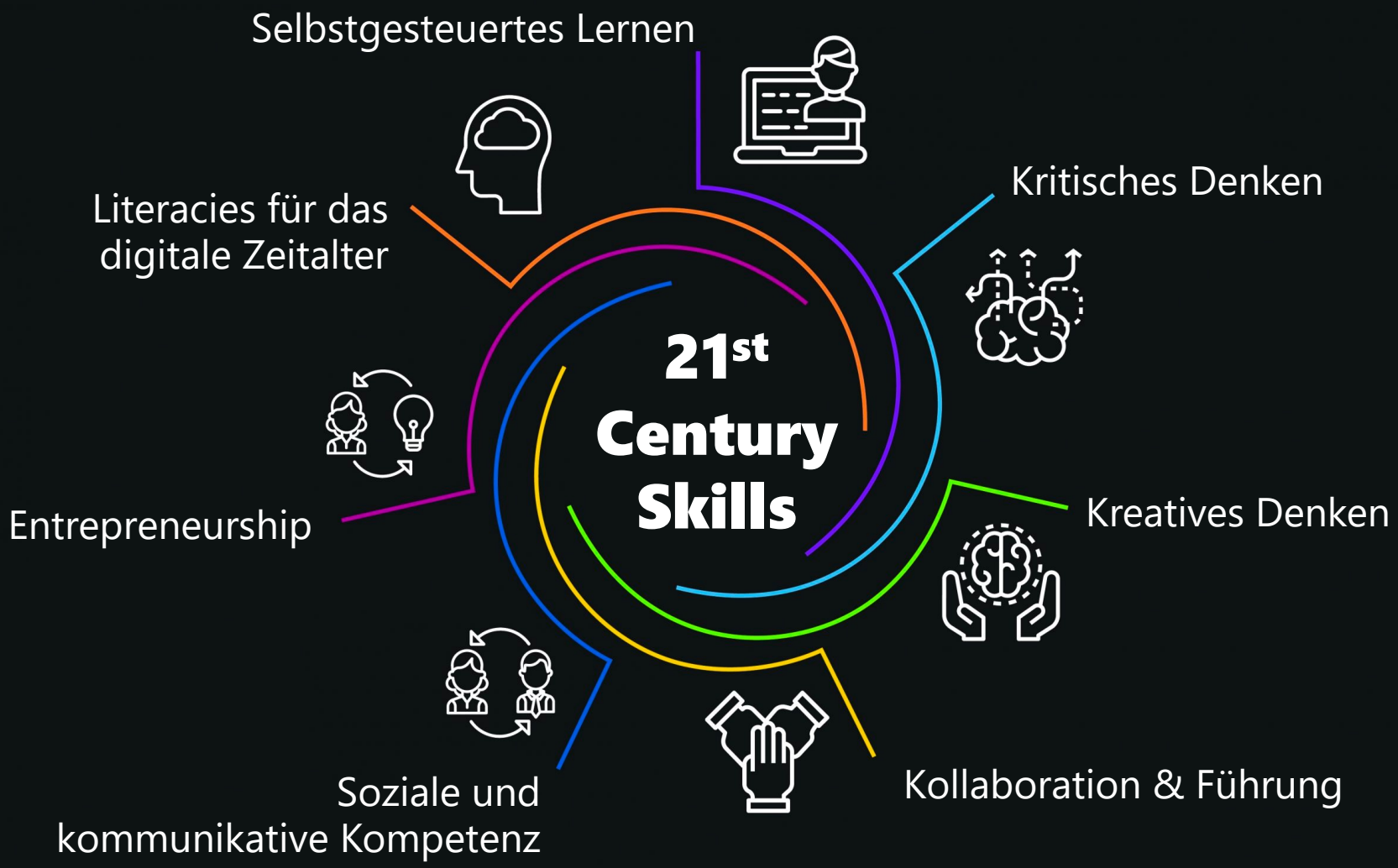
ORCA.nrw

Für Studierende und Lehrende

Digitale Kompetenzen

Bildung ist der entscheidende Schlüssel, um an den Chancen des digitalen Wandels teilzuhaben.

Die Aneignung von digitalen Kompetenzen sind Schlüsselqualifikationen und bilden die Grundlage für eine gesellschaftliche Partizipation sowie für ein selbstbestimmtes Leben.


Selbstgesteuertes Lernen
Kritisches Denken
Literacies für das digitale Zeitalter
21st Century Skills
Entrepreneurship
Kreatives Denken
Soziale und kommunikative Kompetenz
Kollaboration & Führung

Take-Home

- Die digitale Transformation der Hochschulen gelingt nicht bottom-up
- Die Blended University fordert immer auch Kulturwandel.
- Sie benötigt den Aufbau von Schlüsselkompetenzen bei allen Stakeholdern

Bildquelle: https://unsplash,com