

Eva OSTERESCH¹ (Oldenburg)

Designing a case study approach for competence-oriented examination in large courses

Abstract

The advantages and potentials of case study work are well known. However, the use in German large university courses and the use as a competence-oriented examination are still not common. This article aims to address this unrealized potential of case studies by presenting a scientifically sound and effective teaching concept that has been designed, implemented, and evaluated over three semesters in a bachelor module with about 400 participants. Students indicate that the teaching concept leads to high satisfaction, high motivation, high learning success, and fun. This evaluation emphasizes the use of case studies as a competence-oriented examination, even in large courses.

Keywords

case study work, large courses, competency-oriented assessment, constructive alignment

1 Introduction

The advantages of case study work are well known. Case studies, when applied appropriately, are suitable to activate and motivate learners, to promote personal, social, and methodological skills, to present complex issues, and to generate long-term learning success (GERDSMAIER, 1979; GRAGG, 2013; MÜLLER 2007; PILZ, 2001). Therefore, it is surprising that they are hardly used in German university

¹ email: eva.osteresch@uni-oldenburg.de



contexts (HOIDN, 2010; MELCHER, 2021). Especially the framework conditions of large bachelor modules (i. e., many participants, limited resources, broad teaching content, little prior knowledge) are considered unsuitable for the use of case studies. The scope of case study work is thus limited and possible benefits are not addressed (HILGERS-SEKOWSKY & HUXOLD, 2021; MELCHER, 2021).

Another unrealized potential of case study work is the use as a competence-oriented assessment. Gaining competencies primarily entails “cognitive abilities and skills to solve specific problems, as well as the associated motivational, volitional, and social readiness and skills to use the problem solutions successfully and responsibly in variable situations.” (WEINERT, 2014, p. 27). Unlike standardized teaching approaches with the structure “lecture, exercise, exam” and a focus on replicating existing knowledge without linking the teaching and testing situation (DÖBLER, 2019; SCHINDLER, 2015), case studies can promote multiple competencies and focus on the application of knowledge. One way to use case studies as an examination is the portfolio, which is already implemented in many examination regulations and offers a possibility to implement practice- and process-oriented teaching and examination. There is anecdotal evidence that the use of case studies as an examination can be useful, but implementation fails due to a lack of workable approaches. With the demands of competence-oriented assessments and constructive alignment, it is time to leverage this potential (BIGGS, 1996; DEN OUDEN et al., 2019; KANDL-BINDER, 2014).

This paper addresses both challenges at once: how can the advantages of case study work be applied in large university courses and how can case study work serve as a competence-oriented examination? A design science approach is chosen for this purpose, as it represents a valuable means for generating theoretical insights and emergent solutions to the real-world problem of case study implementation (GREGOR & HEVNER, 2013; HEVNER et al., 2004). The approach will be depicted in depth in the methodology section.

The artificial solution designed and proposed by this research is a teaching concept that facilitates case study work as a portfolio-examination in German large courses. Therefore, the teaching concept of a bachelor course in supply chain management (approx. 350–400 participants) was redesigned and evaluated over three years. The paper contributes to the theory of case study work by identifying possible applications, success factors, and positive learning effects. It contributes to competen-

cy-based examination theory by highlighting case studies as a possible examination instrument (including large courses). In terms of practice, the framework provides a practical tool for teachers to develop their own successful teaching concept with case studies.

The following section lays out the conceptual background of case study work. The subsequent section justifies and expounds on the design science approach. Chapter four presents the proposed design solution. It also highlights key findings from the evaluation, to underline the effectiveness of the approach. The concluding discussion identifies theoretical and practical implications, acknowledges limitations, and suggests future research avenues.

2 Academic case studies

Case study work has its origins in the 1870s at Harvard Law School and has subsequently moved to school and university contexts (ARNDT, 2013; KOSIOL, 1957; MAY, 2010). In particular, the Bologna reform and accompanying efforts to improve the quality of teaching at universities have strengthened the use of case studies (BANSCHERUS et al., 2009). The aim of case study work for learners is to identify and analyze problems, to develop and evaluate solutions independently, and then to make reasoned decisions (ARDNT, 2013). In doing so, learners expand their problem-solving and decision-making skills by discussing different solutions to the case study in groups and agreeing on a result (HERREID, 2011; KAISER, 1976). They learn to think in a differentiated manner, to weigh up alternatives, and to find and evaluate information (ARNDT, 2013; BONZ, 2009). In addition, social competence, the ability to abstract, and moral-ethical competence are promoted through case study work (REBMANN et al., 2011). Overall, case studies, when used properly, are capable of activating and motivating learners, presenting complex issues, and achieving long-term learning success (GERDSMEIER, 1979; GRAGG 2013; MÜLLER, 2007).

On a theoretical level, case studies are suitable for competence-oriented teaching and testing (WEINERT, 2014). For example, in the expert report on competence orientation in study and teaching (SCHAPER et al., 2012), case studies are emphasized for the ability to assess complex issues, the promotion of application and practical

relevance of scientific learning content processes, the promotion of interdisciplinary and professional competences, and process-oriented examinations. Especially the motivational effect of case study work is noteworthy, as it is a central factor for learning success and immanent to competency attainment (DECI & RYAN, 1993; PRENZEL et al., 1996; WEINERT, 2014). In particular, perception of autonomy, perception of competence, social inclusion, relevance of content, and instructional quality are conditions for self-determined motivation that can be fulfilled by case study work (DECI & RYAN, 1993; PRENZEL et al., 1996).

Despite the presented benefits and positive effects, case studies are hardly used in the German university context (HOIDN, 2010). Two established application scenarios of case study work are the Harvard Business School and the German vocational schools (HBS, 2021; ARDNT, 2013). The case study approach prevalent in the English-speaking university environment is the Harvard Case Method (HCM) (HBS, 2021; MELCHER, 2021). It is developed for university teaching (approx. 90 participants). Thereby 12 to 28 cases are processed per semester. The processing is obligatory and consists of an individual preparation, a small group discussion, a plenary discussion with the teacher, and a self-reflection. The HCM cases refer to a real situation in an organization at a specific time with a need for action (MELCHER, 2021). Its use at German universities is hindered by the lack of German-language cases and the inability to assess “active participation” in German examination regulations (MELCHER, 2021).

Another example is the use in the German (vocational) school context. In the classes (approx. 20 participants), the cases are usually worked on in groups under the guidance of the teachers and then discussed in plenary. According to BRETTSCHEIDER (2000), case study work should be a social process (e. g., through group work), a guided process (support from instructors), a constructive process (active action by learners, e. g., research), and an independent process (own scope of action).

Both approaches fit the basic situation to a limited extent as they were developed for smaller numbers of participants and not as an examination. At the same time, components such as using real-world settings, working through multiple cases to apply the learning content, and Brettschneider’s rules are important directions for further development.

The lack of German language cases and the intended use as an exam necessitate the design of new case studies. Therefore, established case study design criteria are considered.

A case study comprises an authentic and realistic case or basic information, (guiding) questions or tasks as well as rich information material or guiding texts (EULER & HAHN 2014; WILBERS, 2014; WOLFF, 1992). The case designer should first define the learning objectives and align the case studies accordingly. The cases should be problem-oriented, conflict-containing, and complex so that several possible solutions arise (PILZ & KRÜGER, 2013). While the HCM only deals with real companies and situations, fictional companies are used in the school context. The aim is to reduce the real-world complexity to a reasonable level (WOLFF, 1992).

One possibility to use case studies within an examination is the portfolio. In addition to the usage as a self-reflection tool or learning diary, a portfolio can also be used as an assessment tool (HÄCKER, 2007). This form of portfolio refers to a combination of several partial performances that form the examination. Nowadays, many German examination regulations include the portfolio as a possible examination method. The portfolio literature particularly emphasizes the relevance of support and feedback processes that must be included in the design of the teaching approach (STRATMANN et al., 2009). Sometimes case studies are already included in portfolios, but little research has been done on the possible combination of the two approaches (RIEBE & SCHEFFLER, 2017). The use of case studies in portfolios offers the possibility to transfer the positive effects of case study work (see above, e. g. active learners, competence orientation) into an examination situation. How this can be realized is shown below.

3 Design science approach

The design science method was chosen for the development of a new case study approach because of its suitability for developing effective solutions to real-world problems (GREGOR & HEVNER, 2013; HEVNER et al., 2004). Originating in computer science, the design science approach is now established internationally and across disciplines (BUSSE et al., 2017; HOLMSTRÖM et al., 2009). The basis is always a scientific foundation (GREGOR & HEVNER, 2013). Design science

is more concerned with the question of whether something “works” than whether something is “true” (ROMME, 2003). At the same time the result “it works” always offers scientific contributions about why and under which circumstances something works. Starting point of the research is the environment and the knowledge base. Under these framework conditions, an artifact (teaching concept) is designed, implemented, and evaluated. The research design is shown in Figure 1.

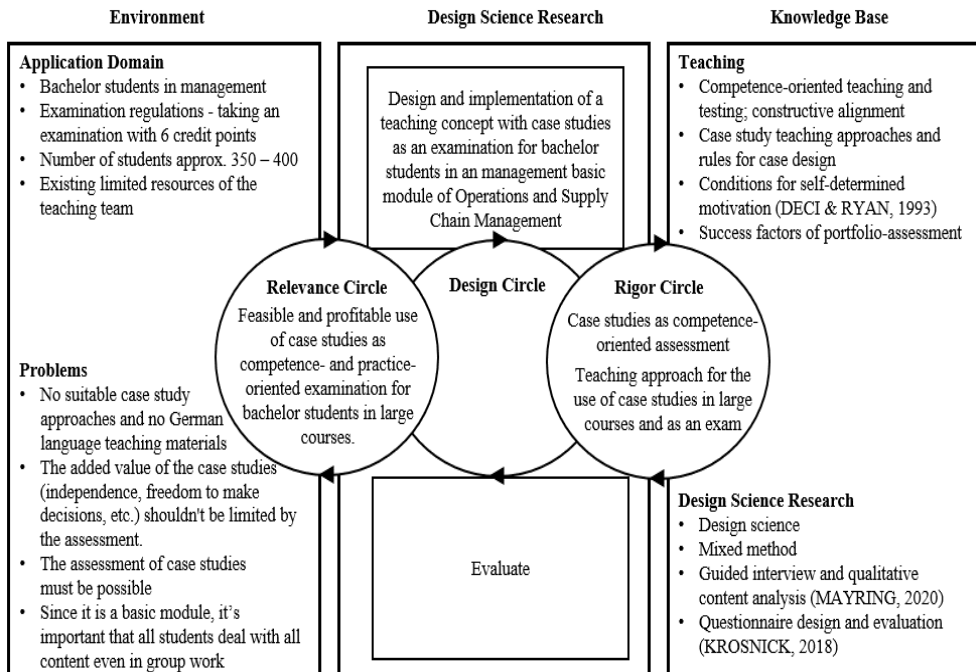


Fig. 1: Research design (own illustration, based on HEVNER et al. (2004))

The teaching concept was designed, implemented, evaluated, and refined by the author in collaboration with the teaching team in three consecutive years. In each year,

several types of evaluations were used. Table 1 details the data collections that were conducted and the basic population.

Table 1: Basic population and data base

| | 2019 | 2020 | 2021 | Σ |
|-------------------------|----------------------|----------------------|-------------|----------|
| Participants | 333 | 410 | 359 | 1102 |
| Official evaluation (N) | 57 | <i>not performed</i> | 46 | 103 |
| Interviews (N) | 14 | <i>not performed</i> | 7 | 21 |
| Additional survey (N) | <i>not performed</i> | 103 | 105 | 208 |

The evaluation was conducted on an annual basis to improve the artifact in line with the design science approach. Like the teaching concept, the evaluation concept has evolved continuously. In 2021, the most comprehensive evaluation was conducted to examine the effectiveness of the final developed artifact. All individuals in the basic population had the opportunity to participate in all survey forms of the evaluation.

Part of the evaluation was the official online teaching evaluation. This could not be influenced by the researcher. The evaluation contained questions about the study situation, the course, the teachers, the students' own learning as well as an overall assessment and free text comments about positive and negative course aspects. The repetitive use of the same items over the years showed the longitudinal trend that results from the further development of the module. In 2020, there was an exception to the questionnaire due to the Corona pandemic. The official teaching evaluation was adapted to the situation and no longer contained all items. These were therefore included in a self-administered additional survey of 2020.

The additional online survey was conducted in 2020 and 2021. The questionnaire included items about the teaching concept, the teaching team, and open-ended questions about positive and negative aspects of case study work as well as suggestions for improvement. A 5point Likert scale was chosen to enable a neutral response (KROSNICK, 2018).

In 2021, the questionnaire was expanded to include the motivational conditions for self-determined motivation as it is a central factor for learning success and immanent to competency attainment (DECI & RYAN, 1993). Social integration and content interest on the part of the teacher were not surveyed, as the standardized items were developed for face-to-face teaching and were therefore only transferable to the online scenario to a limited extent. Literature-based and proven items were used (at least 4 per scale), which were presented in a mixed form (PRENZEL et al., 1996).

In 2019 and 2021, semi-structured interviews were conducted as part of final projects. Central were the questions about the positive and negative effects of the case study work, group work, motivational effects as well as possible suggestions for improvement.

The data analysis combined quantitative and qualitative methods in a mixed-method approach. The quantitative questionnaire results were analyzed using descriptive statistics via SPSS. A reliability analysis was performed for the motivation scales. The open questions and suggestions of the surveys and the interviews were evaluated using a qualitative content analysis according to MAYRING (2020). The data were examined for statements about components of the teaching concept, forming a deductive category in each case. In addition, an inductive category was formed for student sensations.

4 Findings

4.1 Case study teaching approach

The goal of the design science approach was to develop a teaching concept that meets the practical and theoretical requirements shown in Figure 1. This resulted in certain key factors of the teaching concept. First, a written elaboration with a defined appropriate scope (no presentation or oral exam) to ensure fair and uniform assessment as well as feasibility in a large course. In addition, group work was chosen to promote discussion, exchange, and social skills, and to minimize the correction effort. Transparency of learning objectives and requirements, fair assessment and strong feedback structures as prerequisites for good portfolio work and competency-based teaching were also important. The translation of these factors into a teaching concept is illustrated in Figure 2.

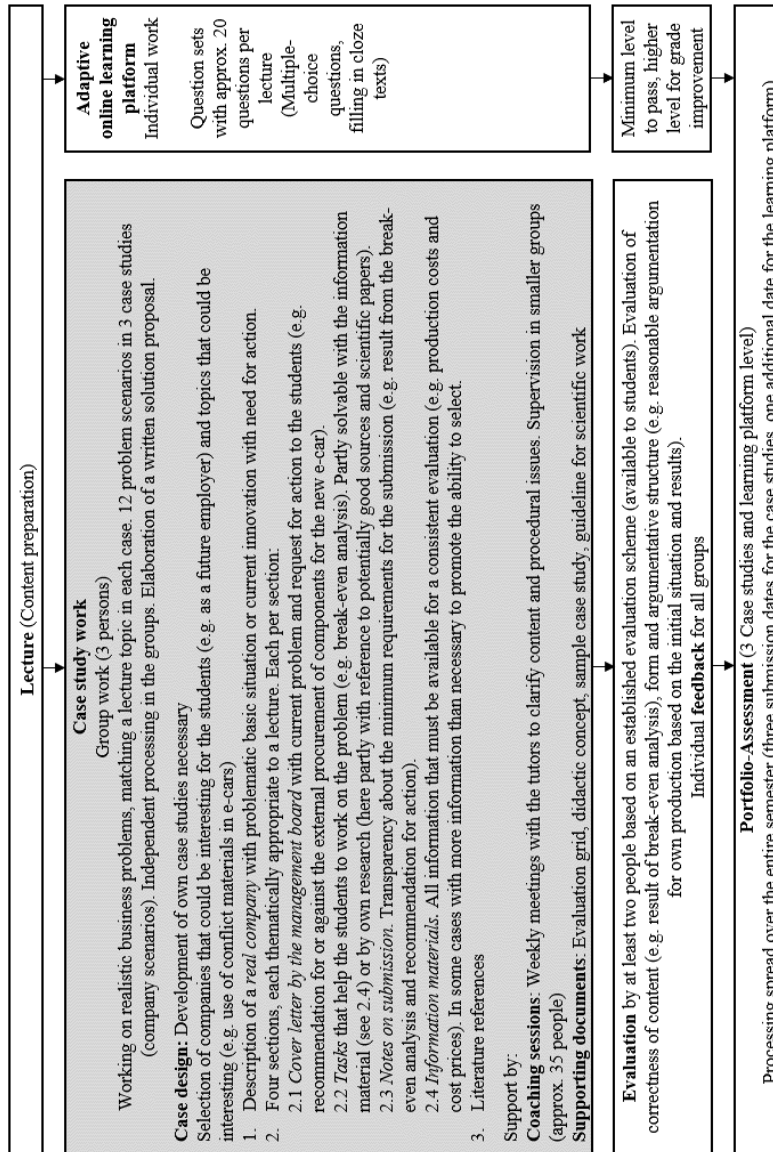


Fig. 2: Case study teaching approach

Figure 2 contains relevant components of the teaching concept and describes the didactic and methodical sequence. Central to the success was the development of own case studies tailored to the course content and auditability. The described case design can serve as a template for other teachers to convert their own teaching content into a case study.

One component teachers and students considered useful is the additional and individual learning assessment. This counteracted two disadvantages of group work formulated by students, the formation of “experts” (not all deal with all content) and group assessment.

The teaching concept followed the rules of constructive alignment and combined the teaching and testing situation. The learning objectives were made transparent. Students were put into professional situations where they had to apply their knowledge to recommend a decision for “their” board. Through group work and the construction of the tasks (e. g. research tasks, analyzing employee interviews), method and social skills were addressed in addition to professional competence.

Compared to other case study approaches, the combination of case studies and examination eliminated common steps such as a class discussion with the teacher. Moreover, the case study structure was more small-step. Students were placed in multiple decision-making situations. In each scenario, they were given a task by the management board which they had to solve (similar to a real professional situation) with the help of internal and external company materials and their own knowledge (gained through the lecture).

Whether and how the positive effects of case study work could also be achieved in this teaching setting is presented in the following.

4.2 Effectiveness of the case study approach

Table 2: Results of the official teaching evaluation

| | 2018 ¹ | 2019 ¹ | 2020 ² | 2021 ¹ |
|--|-------------------|-------------------|-------------------|-------------------|
| | MV | MV | MV (Tra.) | MV |
| The course... | | | | |
| ...is structured in a comprehensible way | 1.31 | 1.32 | 1.29 (1.22) | 1.33 |
| ... is well organized | 1.44 | 1.40 | 1.60 (1.45) | 1.17 |
| ...stimulates critical debate | 2.26 | 1.80 | 1.79 (1.59) | 1.47 |
| Related to the entire module... | | | | |
| ... the course has meaningfully expanded my competencies according to the module description | 1.55 | 1.47 | 1.57 (1.43) | 1.18 |
| ...the form of examination is appropriate | 1.68 | 1.33 | 1.71 (1.53) | 1.35 |
| ...the ratio of workload and credit points is appropriate | Yes (69%) | Yes (95%) | 2.38 (2.04) | Yes (81%) |
| I am overall satisfied with the module | 1.61 | 1.47 | 1.80 (1.60) | 1.35 |

Note: For the years 2018 (N=87), 2019 (N=57) and 2021 (N=46), this is the official teaching evaluation of the university. In 2020 (N=103), due to online teaching, the university modified the official teaching evaluation so that the relevant items were collected through a separate survey.

¹ Measured with a 4-point Likert scale

² Measured with a 5-point Likert scale, mathematically transposed to a 4-Likert scale for better comparability (values in parentheses).

In 2019, the case studies were initially only used as a substitute for traditional exercises in the tutorials and not as a form of examination. However, the teaching team

perceived that students did not engage with the case studies extensively, as they did not see any added value for this for the exam. Therefore, the teaching concept and examination method were extensively revised again in order to actually achieve a constructive alignment of teaching and examination (see Figure 2). The data showed continuous improvement in almost all areas (see Table 2). Notable are the increases in the areas of critical debate, overall satisfaction, and appropriateness of the form of examination.

Table 3: Students' sensations based on the qualitative content analysis

| Codes | Excerpts from the data |
|---|---|
| Case studies better than written exams/learning by heart (30) | <i>"That you don't have this bulimic learning, that's why I find such a portfolio performance much better than an exam, because it's just not this dull learning by heart. Rather, you apply the knowledge and I think that's good."</i> |
| Very good module (8) | <i>"Overall, this module seems to be the best module I have taken so far (content, structure, explanation and support)."</i> |
| High learning success (15) | <i>"In my opinion, the long-term learning success is ensured and it has more impact than an exam!"</i> <i>"Through the intensive discussion I can better retain what I have learned"</i> |
| High motivation (21) | <i>"More motivated than in a written exam, was much more fun than "bulimic learning" for an exam."</i> |
| Fun/Interest (15) | <i>"The case studies were well developed and therefore fun to work on!"</i> |
| Autonomy/self-reliance (25) | <i>"[I liked:] The independent work and discussion in the group."</i> |
| Deeper discussion/application (22) | <i>"I think the advantage of the case study is that you do it again and again and don't just learn it by heart, but you also have to really understand it in order to explain it to someone else, i.e. our imaginary board of directors."</i> <i>"That you could deal with the contents of the lectures in tasks and thus acquire more understanding."</i> |

Note: The coding frequency is shown in parentheses after the code. Data originate from the open questions and suggestions of the official teaching evaluation (N=46), the additional questionnaire (N=105) as well as the transcripts of the seven conducted guided interviews on the topic "case study work in university teaching".

In the following, the evaluation results of the year 2021 are presented, since the development of the artifact was completed at that time. The results, therefore, provide information on the effectiveness of the artifact shown in Figure 2.

The students mentioned many positive aspects of the case study work (see Table 3). The general tenor was that case study work should be retained as an examination, as it led to high learning success, high motivation and was more fun than classic teaching approaches. The results indicate that the requirements for a competence-oriented examination could be met. Students also nominated the module as the university’s “best module” three times in a row, for the internal teaching award.

As shown in Table 4, the questionnaire results support the perceived positive effects of the teaching concept.

Table 4: Results of the additional questionnaire 2021 regarding the didactic concept

| Item | MV | SD |
|--|------|------|
| The case study work allowed me to get a deeper understanding of the issues. | 4.51 | 0.63 |
| The discussions in my case study group allowed me to gain a deeper understanding of the issues. | 3.94 | 1.12 |
| I have internalized essential concepts through constant exposure to the topics via the learning platform. | 3.90 | 1.66 |
| I think the combination of online lecture, learning platform and case study work is useful. | 4.08 | 1.72 |
| The coaching sessions were very useful for me. | 4.11 | 1.11 |
| Working with individual original scientific essays was enriching. | 3.16 | 1.86 |
| All in all, the case study work overwhelmed me. ¹ | 1.95 | 0.95 |
| I believe I gained a better understanding of the content by working through the case studies than I would have with an exam. | 4.56 | 0.86 |
| I estimate that the long-term learning success of a case study is higher than the learning success of an exam. | 4.61 | 0.69 |

Note: N=105, measured with a 5-point Likert scale (1 = I totally disagree, 5 = I fully agree).

¹ The item is reverse coded.

In order to further investigate the motivational impact of the case studies, the motivation conditions content relevance, perception of competence, perception of autonomy, and instructional quality were surveyed in the 2021 questionnaire (see Table 5).

Table 5: Motivation conditions

| Scale | Item | MV |
|---|--|------|
| Content relevance Scale mean 4.20 $\alpha^1 = 0.72$ | ...was shown by examples or problems how important the material is | 4.16 |
| | ...I have learned that I can also use what I have learned in my later professional life | 4.09 |
| | ...it was made clear which role the learning subject plays in operational processes/coherences | 4.40 |
| | ...I was put in situations where I could see for myself how important the material was | 4.10 |
| Perception of competence Scale mean 4.35 $\alpha^1 = 0.62$ | ...I had ample opportunity to practice what I had learned | 4.40 |
| | ...I was also trusted with difficult tasks | 4.52 |
| | ...I was able to use my strengths | 4.20 |
| | ...I was able to see what I can do already | 4.25 |
| Perception of autonomy Scale mean 4.39 $\alpha^1 = 0.69$ | ...I was allowed to do tasks my way | 4.27 |
| | ...I was encouraged to proceed independently | 4.52 |
| | ...I was able to complete demanding tasks on my own responsibility | 4.36 |
| | ...I had the opportunity to deal with interesting tasks or contents in more detail | 4.40 |
| Instructional quality Scale mean 4.44 $\alpha^1 = 0.61$ | ...I had the opportunity to handle new areas independently | 4.43 |
| | ...the material was illustrated with examples | 4.40 |
| | ...tools (e.g. instructions, guidelines...) were available | 4.44 |
| | ...my questions were answered | 4.46 |
| | ...I was informed about the learning objectives (what I should be able to do) | 4.30 |
| ...I have received an overview of the proposed course of action | 4.39 | |

Note: N=105, measured with a 5-point Likert scale (1 = I totally disagree, 5 = I fully agree).

¹ Reliability analysis, Cronbach's alpha, Performed with SPSS (GEORGE & MALLERY, 2003)

Reliability was satisfactory for two scales and questionable for two scales (GEORGE & MALLERY, 2003). The reliability could not be increased by omitting individual items, and no further items were added due to the already existing length of the

questionnaire. Overall, high scores were found for all motivation conditions, reinforcing the positive benefits of case studies.

The results show that competence-oriented teaching and testing is possible even in large bachelor courses. The case studies are suitable for exposing students to professional problem situations that they have to solve independently. It was necessary to develop good evaluable case studies as well as a different way of processing the case studies (without, e. g., a class discussion). The results show that the positive effects of the case study work were not decreased by the alternative use. On the contrary, students described positive effects such as high motivation, fun and enjoyment during the work, and high learning successes. These were estimated to be higher and more long-term than they would have been in the case of a classic teaching structure.

The designed teaching concept can presumably be transferred to other subjects and modules. It can serve as a blueprint for a variety of teaching contents, provided that the teachers are willing to design their own case studies or have access to suitable or adaptable case studies. If the key components, a strong support structure, feedback processes, group work, content preparation (e. g. through a lecture), individual performance review, and clear and fair assessment structures are maintained, it can be assumed that the presented positive effects can also be achieved in other modules.

5 Discussion

The design science approach has enabled the development of a theoretically sound, practical, and student-appreciated teaching concept for the use of case studies as competency-based examination in large courses (see Figure 2).

The teaching concept works and is effective. The case studies are used to put students in professional situations where they have to apply their knowledge, analyze informational material, and agree on a solution as a group to recommend a decision for “their” board. The repetitive evaluation results show an improvement in the categories satisfaction with the module, competence enhancement, structure, and organization as well as the promotion of critical thinking through the implementation and optimization of the teaching concept. The qualitative content analysis shows that in the perception of the students there is a high learning success, high motivation,

fun/interest in the processing, and high perceived autonomy/self-determination. The results indicate that a competence-oriented form of examination could be achieved through the case study work. Students describe that they prefer the presented teaching concept to a classical teaching structure with a written exam.

The presented approach has many advantages compared to a classical teaching approach (lecture, exercise, exam). The successful implementation also shows the feasibility with an appropriate teaching team (in this case professor, scientific employee, six tutors). This paper thus demonstrates that competence-oriented teaching and testing with case studies can be successful even in large courses.

5.1 Scientific implications

The results provide contributions to the topic area of case study work. In particular, due to the wide range of applications, there are only a few scientifically based contributions on the impact and design of special teaching concepts. The design science approach shows that the use of case studies as a competence-oriented examination in large German courses is possible and successful. The research therefore contributes to expand the previous scope of application of case studies. The findings indicate that the use of case studies as an examination (instead of a substitute for exercises) seems to be particularly meaningful since the students have a high level of activity (especially since “active collaboration” cannot be assessed in the current German examination law). The profitable combination of case study work and portfolio work, especially with regard to a process-oriented, competence-oriented teaching and examination structure, is emphasized and a possible implementation is shown.

5.2 Practical implications

The results support the efforts of competence-oriented examinations at universities and offer teachers central starting points for a successful implementation. The developed teaching concept and the design structure of the case studies (see Figure 2) can therefore serve as a blueprint for other teachers. In addition to all forms of business management modules, the teaching concept could be of interest to all teachers who are confronted with a high number of students and still want their teaching and ex-

amination structures to have a high level of practical application. Even though more effort is required from teachers and learners, the results show that it is feasible and advantageous. The positive evaluation results provide incentives for realizing the potential of case studies in practice.

5.3 Limitations and future research

There are at least four potential limitations concerning the findings of this study. The first limitation concerns the scenario of the study. The teaching event is not necessarily representative of other large events. In addition, the switch to online teaching during the Corona pandemic greatly changed the setting of the study. The transfer to other courses would be interesting to explore whether the presented effects can be generalized. A second potential limitation is that the author's scientific and personal background may have influenced the coding. It should also be emphasized that in this case, the evaluations are carried out by one of the teachers. A third limitation concerns the different ways of collecting data that have evolved over the years. As a result, not all developments can be tracked over the years (e. g., self-determined motivation). Moreover, the number of students surveyed and the intensity of the survey changed over the years. Finally, the orientation of the evaluation was primarily developmental in the sense of the applied design science approach. Therefore, the observed effects are based on the students' self-assessment. After the feasibility and initial effectiveness of the teaching concept have been established, it would be useful for future research to validate it through standardized procedures in additional research settings.

Despite these limitations, this research identifies an effective teaching approach for the case study work that can be useful for other similar modules and makes contributions to case study theory, by targeting its use as a competence-oriented examination in large courses.

6 References

- Arndt, H.** (2013). *Methodik des Wirtschaftsunterrichts*. Opladen: Barbara Budrich.
- Banscherus, U., Himpele, K., & Staack, S.** (2009). Zehn Jahre Bologna: Studienreform zwischen Anspruch und Wirklichkeit. *Forum Wissenschaft*, 26(4), 12–15.
- Bargel, T., Multrus, F., Ramm, M., & Bargel, H.** (2009). *Bachelor-Studierende-Erfahrungen in Studium und Lehre: eine Zwischenbilanz*. Berlin: Bundesministerium für Bildung und Forschung.
- Biggs, J.** (1996). Enhancing Teaching Through Constructive Alignment. *Higher Education*, 32(3), 347–364.
- Bonz, B.** (2009). *Methoden der Berufsbildung: ein Lehrbuch* (2nd ed.). Stuttgart: Hirzel.
- Brettschneider, V.** (2000). *Entscheidungsprozesse in Gruppen: theoretische und empirische Grundlagen der Fallstudienarbeit*. Bad Heilbrunn: Klinkhardt.
- Busse, C., Schleper, M. C., Weilenmann, J., & Wagner, S. M.** (2017). Extending the Supply Chain Visibility Boundary: Utilizing Stakeholders for Identifying Supply Chain Sustainability Risks. *International Journal of Physical Distribution & Logistics Management*, 47(1), 18–40.
- Deci, E. L., & Ryan, R. M.** (1993). Die Selbstbestimmungstheorie der Motivation und ihre Bedeutung für die Pädagogik. *Zeitschrift für Pädagogik*, 39(2), 223–238.
- den Ouden, H., Frölich-Steffen, S., & Gießmann, U.** (2019). *Kompetenzorientiert prüfen und bewerten an Universitäten: Didaktische Grundannahmen, rechtliche Rahmenbedingungen und praktische Handlungsempfehlungen*. Opladen: Barbara Budrich.
- Döbler, J.** (2019). *Prüfungsregime und Prüfungskulturen. Soziologische Beobachtungen zur internen Organisation von Hochschule*. Wiesbaden: Springer Verlag.
- Euler, D., & Hahn, A.** (2014). *Wirtschaftsdidaktik* (3rd ed.). Bern: UTB GmbH.
- George, D., & Mallery, P.** (2003). *SPSS for Windows Step by Step: A Simple Guide and Reference* (4th ed.). Boston: Allyn & Bacon.
- Gerdsmeier, G.** (1979). Induktiver Wirtschaftslehre-Unterricht: Begründung, Merkmale und Verlaufsmodelle. *Bildung und Erziehung*, 32, 25–42.

-
- Gragg, C. I.** (2013). *Because Wisdom Can't Be Told*. Cambridge, MA: Harvard University Press.
- Gregor, S., & Hevner, A. R.** (2013). Positioning and Presenting Design Science Research for Maximum Impact. *MIS Quarterly*, 337–355.
- HBS** (2021). *Harvard Business School Online. Academic Experience – The HBS Case Method*. Harvard Business School. <https://www.hbs.edu/mba/academic-experience/>
- Häcker, T.** (2007). *Portfolio: ein Entwicklungsinstrument für selbstbestimmtes Lernen. Eine explorative Studie zur Arbeit mit Portfolios in der Sekundarstufe 1* (2nd ed.). Baltmannsweiler: Schneider Hohengehren.
- Herreid, C. F.** (2011). Case Study Teaching. *New Directions for Teaching and Learning* (128), 31–40.
- Hevner, A. R., March, S. T., Park, J., & Ram, S.** (2004). Design Science in Information Systems Research. *MIS Quarterly*, 75–105.
- Hilgers-Sekowsky, J., & Huxold, S.** (2021). Kompetenzorientierte Lehre am Beispiel eines Real-Life-Business-Case. In C. Hattula, J. Hilgers-Sekowsky & G. Schuster (Eds.), *Praxisorientierte Hochschullehre* (pp. 15–25). Wiesbaden: Springer.
- Hoidn, S.** (2010). *Lernkompetenzen an Hochschulen fördern*. Wiesbaden: Springer.
- Holmström, J., Ketokivi, M., & Hameri, A. P.** (2009). Bridging Practice and Theory: A Design Science Approach. *Decision Sciences*, 40(1), 65–87.
- Kaiser, F.-J.** (1976). *Entscheidungsstraining: die Methoden der Entscheidungsfindung. Fallstudie, Simulation, Planspiel* (2nd ed.). Bad Heilbrunn: Klinkhardt.
- Kandlbinder, P.** (2014). Constructive Alignment in University Teaching. *HERDSA News*, 36(3), 5–6.
- Kosiol, E.** (1957). *Die Behandlung praktischer Fälle im betriebswirtschaftlichen Hochschulunterricht (case method): ein Berliner Versuch*. Berlin: Duncker & Humblot.
- Krosnick, J. A.** (2018). Questionnaire Design. In *The Palgrave Handbook of Survey Research* (pp. 439–455). Basingstoke: Palgrave Macmillan.

- May, H.** (2010). *Didaktik der Ökonomischen Bildung* (8th ed.). München: Oldenbourg.
- Mayring, P.** (2020). Qualitative Inhaltsanalyse. In G. Mey & K. Mruck (Eds.), *Handbuch qualitative Forschung in der Psychologie* (pp. 495–511). Wiesbaden: Springer.
- Melcher, H.** (2021). Einsatz der Harvard Case Method in der deutschen BWL für ein verstärkt interaktives, dialog-orientiertes Lernen. In J. Noller, C. Beitz-Radio, D. Kugelmann, S. Sontheimer & S. Westerholz (Eds.), *Studierendenzentrierte Hochschullehre* (pp. 131–148). Wiesbaden: Springer.
- Metzger, C., Schulmeister, R., & Martens, T.** (2012). Motivation und Lehrorganisation als Elemente von Lernkultur. *Zeitschrift für Hochschulentwicklung*, 7(3), 36–50.
- Müller, S.** (2007). Nah dran an der Praxis: Fallstudien bieten effektives Training von Managementkompetenzen. *Das Hochschulwesen*, 55(5), 154–160.
- Pilz, M.** (2001). Der Einsatz von Fallstudien zur Förderung des vernetzten Denkens im Wirtschaftslehreunterricht – Darstellung und Evaluation eines Projektes in der Berufsfachschule. *Wirtschaft und Erziehung*, 53(6), 193–200.
- Pilz, M., & Krüger, J.** (2013). *Vernetztes Denken und Entscheidungsfindung im Ökonomieunterricht. Eine Fallstudiensammlung*. Europa-Lehrmittel.
- Prenzel, M., Kristen, A., Dengler, P., Ettle, R., & Beer, T.** (1996). Selbstbestimmt motiviertes und interessiertes Lernen in der kaufmännischen Erstausbildung. *Zeitschrift für Berufs und Wirtschaftspädagogik*, 108–127.
- Rebmann, K., Tenfelde, W., & Schlömer, T.** (2011). *Berufs- und Wirtschaftspädagogik: eine Einführung in Strukturbegriffe* (4th ed.). Wiesbaden: Gabler.
- Riebe, K., & Scheffler, R.** (2017). Lernprozesse und Prüfung: das E-Portfolio zur flexiblen Gestaltung der Lehre. In A. Mörth & U. Elsholz (Eds.), *Portfolios in der wissenschaftlichen Weiterbildung. Handreichung der wissenschaftlichen Begleitung des Bund-Länder-Wettbewerbs. Aufstieg durch Bildung: offene Hochschulen*. https://www.pedocs.de/volltexte/2017/14892/pdf/Moerth_et_al_2017_Portfolios_in_der_wissenschaftlichen_Weiterbildung.pdf
- Romme, A. G. L.** (2003). Making a Difference: Organization as Design. *Organization Science*, 14(5), 558–573.

Schaper, N., Reis, O., Wildt, J., Horvath, E., & Bender, E. (2012). *Fachgutachten zur Kompetenzorientierung in Studium und Lehre*. HRK Projekt nexus.

Schindler, C. (2015). *Herausforderung Prüfen: Eine fallbasierte Untersuchung der Prüfungspraxis von Hochschullehrenden im Rahmen eines Qualitätsentwicklungsprogramms*. https://www.researchgate.net/publication/305800358_Herausforderung_Prufen_Eine_fallbasierte_Untersuchung_der_Pruferungspraxis_von_Hochschullehrenden_im_Rahmen_eines_Qualitaetsentwicklungsprogramms/references

Stratmann, J., Preussler, A., & Kerres, M. (2009). Lernerfolg und Kompetenz bewerten. Didaktische Potenziale von Portfolios in Lehr-/Lernkontext. *MedienPädagogik: Zeitschrift für Theorie und Praxis der Medienbildung*, 18, 119.

Weinert, F. (2014). Vergleichende Leistungsmessung in Schulen – eine umstrittene Selbstverständlichkeit. In F. Weinert (Ed.), *Leistungsmessungen in Schulen* (3rd ed., pp. 17–31). Weinheim – Basel: Beltz Verlag.

Wilbers, K. (2014). *Wirtschaftsunterricht gestalten: eine traditionelle und handlungsorientierte Didaktik für kaufmännische Bildungsgänge* (2nd ed.). Berlin: epubli.

Wolff, K. (1992). Die Fallstudie als Unterrichtsmethode. *Wirtschaft und Erziehung*, 44(10), 324–332.

Acknowledgement

I would like to thank Prof. Dr. Christian Busse for the great cooperation in the development and implementation of the teaching concept and the guidance throughout my research. I would also like to thank Ms. Maren Sandmann and Ms. Iris Ruhnau for collecting and sharing their interview data.

Author



Eva OSTERESCH || Carl von Ossietzky Universität Oldenburg,
Chair of Sustainability and Supply Chain Management || Ammerländer Heerstr. 114–118, D-26129 Oldenburg

<https://uol.de/en/bwl-bwp/sscm>

eva.osteresch@uni-oldenburg.de

