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Do Cases Always Deliver What They Promise? A Quality Analysis of Business Cases in Higher Education

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Abstract: Although the usage of case studies is very common in teaching worldwide, there has been inadequate discussion concerning the quality with respect to teaching and learning. The focus of this article is to assess the pedagogic aspect of business case studies in academic teaching. On the basis of a specific tool to detect the pedagogical quality of business cases and related teaching notes, a total of nine award-winning case studies delivered by a well-known publishing house were analysed. The findings indicate that the pedagogical quality varies from case to case. There are deficits concerning the focus on problem orientation and the complexity of the cases. Further weaknesses have been identified in some case studies regarding the learner's autonomy and prior knowledge, while with respect to real-life orientation, most case studies have a high level of accordance with a pedagogic optimum.

Keywords: business cases; teaching cases; case study design; quality criteria; pedagogics in higher education

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1. Introduction

Case studies have been used widely and are a long-standing method in teaching and learning in higher education (HE), both generally and specifically in management education [1–5]. Many different types of case studies are available from publishing companies including The Case Centre, Ivey Publishing and Harvard Business School Publishing. They are applied in HE mainly because of their problem orientation and learner-centred focus [6] (p. 6). The use of case studies is also intended to impart an applied understanding of academic theories and models and to supplement conventional lectures [7]. However, there is little empirical evidence of the pedagogic aspect of their usage [8,9] (p. 34), and only quite old and rudimentary evidence of how using case studies influences the learning process, or the conditions under which their advantages can be exploited [10] (p. 407). The literature, meanwhile, consistently emphasises the authentic real-life orientation of case studies as a mark of their quality, similarly downplaying pedagogic aspects and findings from research into teaching and learning [1,10–12]. From an HE perspective, this is problematic, as the pedagogic content of case studies is considered crucial both for establishing links to subject-specific academic content and for designing structured learning for students.

Although the application of case studies has already proved its value in management teaching at universities worldwide, there has been inadequate discussion of the pedagogic criteria they should fulfil if they are to achieve the associated teaching and learning goals.

By pedagogy, we mean here, in a very general sense, teaching and learning to develop knowledge and competencies [13]. The special focus here, however, is on the teaching materials and their potential to support the students' learning. In particular, we draw on the findings of teaching–learning research, which have informed the quality criteria for case study evaluation within this study, as will become clear below in the presentation of the quality criteria.

The aim of this article is to assess the pedagogic quality of business case studies in academic teaching in line with the central research question, ‘To what extent are business case studies used in HE designed in line with pedagogical principles?’

To answer this question, a set of instruments for evaluating the pedagogic content of case studies and accompanying teaching notes for lecturers is presented and applied. The findings will then be presented and discussed. The article begins, however, with an overview of the existing academic literature.

2. Case Studies as Part of Academic Discourse

Below, the writing of case studies and their pedagogical standards are outlined, followed by the existing academic research findings.

2.1. Case-Study Writing and Pedagogical Standards

The literature presents various approaches to the development of case studies [12]. Leenders, Mauffette-Leenders, and Erskine [6] is one of the best-known studies of case-study writing, and the authors give insight into the three-stage process they use. The first stage is the fundamental decision to write a case study for a specific course, the search for a company to function as an appropriate starting point for the case study and the initial contact with that company, including a meeting to explore the potential for cooperation. Once the thematic focus and main aims of the case study have been defined as well as a *case-study plan* devised to serve as a basis for discussion of the main points and subsequent stages, the first stage concludes (ideally) with preliminary approval by the contact within the company. This process is crucial to the further development of the case study. According to Leenders, Mauffette-Leenders, and Erskine [6], the second stage consists of data collection and preparation of a first draft of the case study alongside the drafting of teaching notes and exercises checked by the writer for completeness and comprehensiveness. Phase two also includes initial revisions with regard to linguistic and formal aspects and concludes with approval by the company; provided the pre-agreed case-study plan has been complied with, the authors see no further difficulties at this point. Stage three involves the completion of the teaching notes and timetabling by lecturers of the case study in their teaching. Any revisions will follow the first use of the case study as part of teaching, though any changes needed may require further approval by the company [6] (p. 29).

Designing a high-quality case study, however, requires more than just the processes outlined above; basic pedagogic requirements also need to be considered [14].

To our knowledge, the only recent study that explicitly describes quality criteria not on the basis of singular practical experiences but on the basis of findings from teaching-learning research is the study by Rosier [15] (p. 3). The following pedagogical criteria, in particular, are cited here: ‘presenting problems for students to solve, confronting and eradicating students’ misconceptions, assessing for structure rather than for independent fact, teaching and assessing in a way that encourages a positive learning atmosphere, so students can make mistakes and learn from them, emphasising the depth of learning, rather than breadth of coverage, and using teaching materials, and practices that promote student interest in the subject matter’.

Pilz, Pierenkemper, and Meinhard [16] present a combination of design criteria for case studies based on experiences at St. Gallen Business School (see also [17]), including prior definitions of learning objectives. This means that the documents and briefing materials provided must be closely aligned with these objectives. Case study content must include no contradictions and must consider learners’ experience, conceptual framework and prior knowledge. This requires an authentic and realistic description of the case study. From a pedagogic point of view, the structure of the case study must also be problem oriented, involve conflicts and present complex material. Furthermore, case studies are to be designed to allow a range of solutions and motivate learners to solve the problem.

Leenders, Mauffette-Leenders and Erskine [6] (p. 121) also present a set of criteria for case study design: congruence, completeness, consistency, correctness, clarity, control, coherence and convention. These criteria function as a checklist for those writing case studies but, in contrast with Pilz', Pierenkempers and Meinhard's criteria [16], largely ignore the pedagogic perspective. Nevertheless, the findings of Leenders, Mauffette-Leenders, and Erskine [6] are of considerable significance for the design of a case study. The first three criteria—*congruence*, *completeness* and *consistency*—refer to the content of the case study. *Congruence* is the suitability of the descriptions of products, services, processes, etc., used in the subject organisation. This criterion might not be met if the company withholds information for data protection reasons, which would indicate a trade-off between the company's data protection interests and the authenticity of the case study. However, the question arises whether a case study needs extremely precise data from the company to meet the learning objectives. *Completeness* refers particularly to the comprehensiveness of the narrative and possible gaps in it. *Consistency* results when the information given in the case study forms a coherent ensemble and there are no logical errors resulting from the distillation of the real-life problem in a case study. The remaining criteria—*correctness*, *clarity*, *control*, *coherence* and *convention*—allude to linguistic design features or formal matters to be taken into consideration in the case study design.

2.2. Empirical Findings on the Use of Case Studies

Literature reviews on the use of business case studies in academic teaching are not very common [18]. Meinhard and Pilz [19] for example, emphasise the lack of empirical findings regarding the benefits of the case study approach for the teaching and learning process. For this reason, older publications must also be taken into account when evaluating the literature, as Rosier [15] also noted with regard to his literature review.

The existing literature takes a rather broad focus or one that deviates from our research question. A number of research studies that investigate the use of case studies and their empirically based impact on learning emphasise this gap: Few studies provide empirical evidence for the advantages of using case studies in the teaching and learning process and *learning outcomes*. However, while these advantages are often discussed in theory, they are usually based on surveys and assessments by students themselves [20] (p. 142). For example, in a comparison based on written surveys, Adler and Milne [21] (p. 210) established that students in action-oriented accounting courses perceive their learning success more positively than those in traditionally taught (lecture-based) courses. Weil, Oyelere, and Rainsbury [20] list individual studies of the influence of case study-based courses on a range of professional and personal competencies. They find students identifying positive effects on various competencies [20] (p. 142) but also emphasise the need for caution in applying the findings of such studies: 'The results, however, should be interpreted with caution, given that each programme of this nature is unique and needs to be treated as such' [20] (p. 162).

Another study, by Ballantine and Larres [22] (p. 171), shows that students who have work experience or are already in the world of work do not rate the use of case studies (and the company and work situation presented in them) significantly more highly than students without work experience: 'The findings suggest that accounting educators should not tailor the use of case studies to take account of students' relevant work experience' [22] (p. 187). The commercially available case studies from the field of accounting used in the study were modified by rewriting them or adding further sentences to enhance interdisciplinary competencies (for example, analysing unstructured problems, determining and evaluating data from different sources and communicating arguments correctly). Despite changes to the text of the case study, most students (including those with work experience) reported a positive attitude towards the use of the case study method [22] (p. 171); see also quite similar findings from [23].

Dorta-Afonso [24] investigates the learning preferences of students on a Bachelor course in tourism in Spain and their satisfaction with the use of the case study method. The results validate previous findings by emphasising the suitability of the case study method as a learner-centred and motivational teaching method. Case studies also provide scope for problem-oriented learning [24] (p. 3); [25,26]. 'The case study method is a suitable teaching strategy to improve learning outcomes because it is suitable to develop communicative and interpersonal skills, group decision-making and problem-solving skills, strategic thinking and analytical capabilities' [24] (p. 2); see also [23]. The empirical results show students' largely positive attitude to the case study method: '[case studies] were useful to understand the different concepts related to organisational behaviour [...]' or '[...] it is much better to learn in this practical way than only theory because you don't know how to apply it afterwards [...]' [24] (p. 5).

Another study, by Farashahi and Tajeddin [27], compares the three most common teaching methods in the field of business education: simulations, case studies and traditional lectures. This study focuses on the influence of teaching methods on students' ability to solve problems, personal competencies and self-confidence as *learning outcomes*. Students' assessments confirm, among other things, a positive effect of the case study approach on problem-solving ability [27] (p. 140).

In contrast to the analyses cited so far, the study by Penn et al. [28] focuses on the real or anticipated experiences of lecturers using or planning to use case studies in their business studies teaching. Like students, they observe the case study method having a positive effect on various skills and competencies. The results of the online survey reflect other reasons for the use of case studies cited in the literature. These include bridging the gap between theoretical concepts and practical experience (see also [29–32]), the assumption of different roles by lecturers with a clear shift from a traditional lecturer's role to a moderator and learning facilitator [33], and the use of appropriate theoretical concepts to enhance the development of analytical skills and critical thinking (see also [9,30,34]).

A study by Heuer and Pilz [35] of more than 300 students from business schools in Germany finds that only about half of the students have experience with case studies but also shows that the application of case studies was perceived positively by the students surveyed. The students were particularly positive about the use of case studies to promote independence to plan their own learning process. In addition, the data prove that a high situational interest on the part of students and perceived motivation when working with case studies correlate positively with each other.

As discussed by Weil, Oyelere, and Rainsbury [20], previous empirical findings on the use of case studies must be evaluated carefully, since only very limited findings are available. As the sources cited here show, the literature often presents either little empirically supported "advice" based on one's own experiences in teaching or the empirical findings refer to the implementation of cases in teaching. In addition, there are some studies on the measurement of learning success or the motivation of teachers and students. However, a direct and intensive analysis of the teaching material, here in the form of the cases, is not yet available. Therefore, the approach we have chosen, which is in the tradition of the evaluation of teaching materials [36], is to be seen as innovative.

To the best of our knowledge, there are no academically robust sound studies specifically of the quality of business case studies. Although there have been individual attempts to foreground the positive effects of the case study approach for learning, difficulties have been identified concerning the selection and operationalisation of suitable variables that can be justified in terms of learning theory [15,19].

3. Methodological Approach

The selection of the case studies and the analytical tools is presented below.

3.1. Selecting Case Studies

The Case Centre is an institution that holds one of the world's largest and most diverse collections of case studies in the field of business studies. It forms part of one of the most renowned publishing houses, which has set out to further develop the case study method internationally and establish a comprehensive exchange of knowledge and experience in this regard. The Case Centre has also been awarding prizes for the best business case studies around the world since 1991. For the purposes of this study, the most recent overall winners of the Case Centre Award were taken into account. It should be noted that the awards reflect not only the quality of case study content but also the frequency of use in international teaching [37]. For example, Swiercz and Ross [32] selected for their study the most used one, too.

All the published case studies have undergone review by the publisher on the basis of defined quality guidelines, which include pedagogic reference points such as role identification by the learner, the case study's problem orientation, and diverse approaches to the solution. However, there is no further explanation of the significance of these aspects for the preparation of the case study and the associated learning process.

The suggestion that the winning case studies have a high quality is implicit. The frequency of the use of case studies in academic teaching suggests that they are of good quality, ultimately improving the comparison of case studies at the end of the study. However, multipliers in HE have contributed to the wide dissemination of the winning case studies. Another relevant aspect of this study is that the winning case studies are not thematically 'exotic' and thus appear suitable for broader use in business studies teaching and analysis.

This study selects and analyses a total of nine winning case studies (The Case Centre Award: overall winners). These case studies were written between 2010 and 2019 and represent a broad spectrum of award-winning business case studies.

3.2. The Analytical Tool

With regard to the measurement of pedagogical quality, the present study is based on the findings of research into teaching and learning with a psychological orientation [38].

Educational and learning psychology researchers agree that the case study method is especially suitable for enhancing learning in complex situations [15,39,40]. To date, there has been no specific model for analysing and justifying the pedagogic dimensions of case studies in teaching business studies. Therefore, for the study presented here, the relevant literature on the evaluation of teaching materials that are as complex as possible (case studies, simulations, student companies, etc.) in the field of business education was reviewed and relevant quality criteria aggregated (see references below). In the process, some criteria were highlighted as particularly important in the literature and were also mentioned repeatedly in different sources. These were then identified as particularly relevant for this study. In addition, the most complete possible consideration of relevant criteria was achieved by the fact that two publications explicitly provided an overview of important criteria to design business cases in line with pedagogical principles (see in detail below).

Findings from teaching and learning research indicate that a problem-oriented approach forms the basis of the design of complex teaching and learning arrangements [38,41]. The case study as a teaching and learning tool is, therefore, a learning setting that puts learners at the heart of constructivist learning processes by providing them with a problem-based company situation based on the reality that they have to analyse and solve independently or with others [42,43]. The model used here can be linked to the characteristics of constructivist teaching and the principles of complex teaching and learning arrangements [12,43,44] in the same way as the steps of holistic problem-solving methodology and networked thinking [25,45] can be linked to the context of a complex teaching and learning situation (see, for example [7]). With reference to the findings on the case study method from the perspective of teaching and learning research and the associated academic discourse, a guiding model from the University of St. Gallen is used as the conceptual basis for creating training units and for deriving and elaborating pedagogic dimensions (see above and [16,17]). This model includes also the design criteria described above by Rosier [15].

These dimensions/criteria are closely linked to the specific design of business cases, which enables certain learning occasions through the presentation of a largely real situation and distribution of roles. The design of the description of the situation, in which the learners should recognise themselves as well as *discover problems* independently, is of great significance. Active learning and the independent *discovery* of problems has been recognised as an important component of case study learning (see, for example, [7]). The assumption of a certain role by the students working on a case study can also enhance independent discovery. The necessary identification with the role of a decision-maker in a company therefore requires students to think in terms of roles and perspectives, so interest in the case study is also highly significant (making the case study situation suitable for the target group). This, in turn, depends on the extent to which the students can identify with the situation [46] (p. 6). From a pedagogic point of view, a simple change of perspective leads to elaborate learning and transfer processes by allowing a learning situation to be viewed from different sides.

The comparison of the principles of complex teaching and learning arrangements with existing pedagogic design rules for case studies (see, for example, [15,47] demonstrates convergence that largely coincides with the approaches within the guiding model [16,17]. The approach used here consists of a total of ten different dimensions/components (see Figure 1), which are explained in more detail in the following example. In the review of the relevant research literature from different disciplines, these aspects have also been the subject of multiple observations and can be seen as complex teaching and learning arrangements with regard both to constructivist teaching and learning processes and to the specific case study context. At the same time, academic teaching aims at a stronger competence orientation, so HE pedagogic discourse reflects a *shift from teaching to learning* (student-centred pedagogics) [40,48].

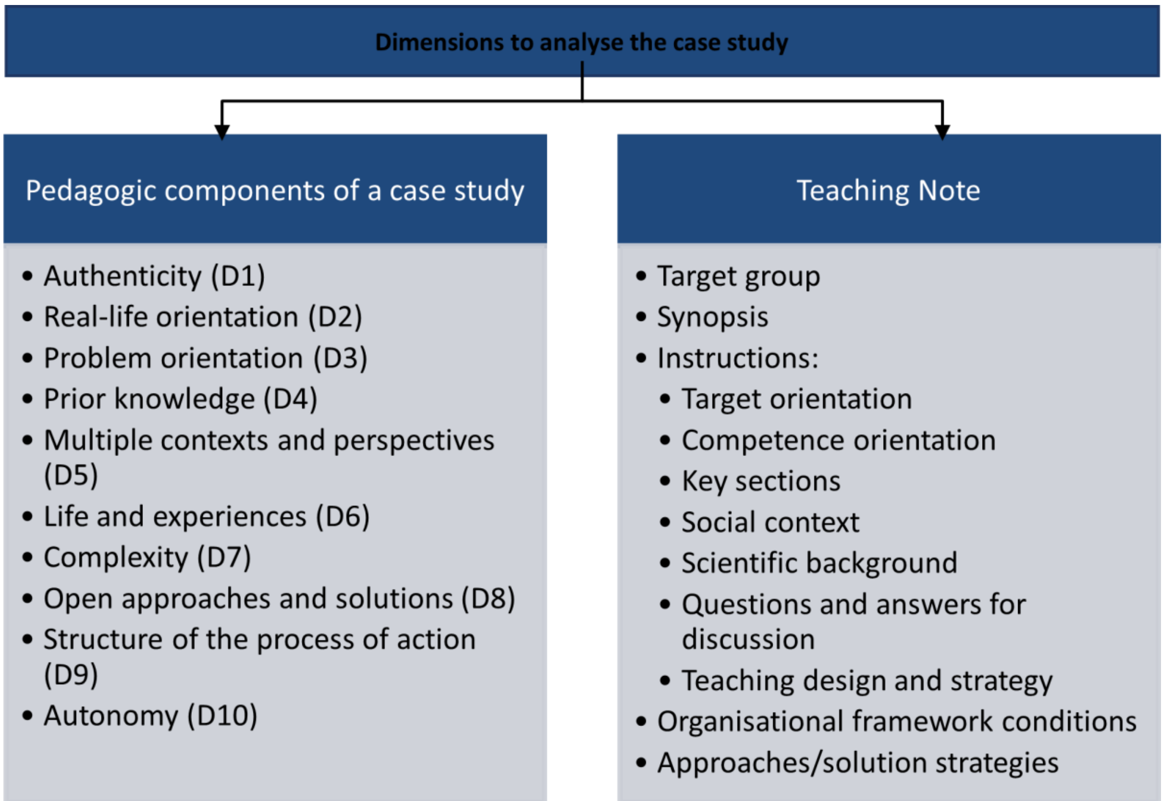

Figure 1. Analytical framework.

It should be emphasised that the dimensions listed in Figure 1 (for further explanation of the 10 dimensions, see the example below) do not indicate an analytical ranking, which would not be meaningful because of the strong interdependency of the dimensions, including the analysis of the case study situation.

All dimensions were further operationalised on the basis of the existing research literature through the development of appropriate criteria (in total a no. of 56). For example, the dimension problem orientation was differentiated by the six criteria: problem identification, problematic state, problem situation, problem structuring, problem type and subjective adequacy/comprehensibility. The operationalisation of all dimensions was again based on corresponding scientific findings from teaching–learning research and pedagogy, in the example of problem orientation on the corresponding approaches to problem solving [41,49,50].

In order to be able to record the quality of the cases in a structured way and to be able to compare different cases transparently, we use the construct of the pedagogical optimum [51]. This construct only reflects trends in quality and does not represent absolute scores. However, it is possible to make a relative assessment by comparing different cases. During the analysis of material, the criteria are based on common examples or features that can be identified within each case study. In a further step, the deviation from the pedagogic optimum can therefore be described interpretatively with regard to the theoretical and empirical understanding of the pedagogic dimensions of a case study that this work is based on. It should be noted here that the analysis does not establish differentials between values but identifies trends. The dimensions are, therefore, not to be understood in isolation but as strongly interconnected. Accordingly, the *authenticity* dimension, for example, also reflects the influence of other dimensions, such as, for example, *real-life orientation*, *problem orientation*, consideration of *multiple contexts and perspectives* and the existing complexity and openness to approaches and solutions in an independently organised learning process. In connection with the presentation of the findings in the following chapter, the individual dimensions are presented and explained in more detail.

Teaching notes, which supplement the case study materials and specify exactly how and in regard to which objectives the case study should be used and processed, are also analysed [40]; see also [52] (p. 2).

Basically, a teaching note should start with a summary of the situation presented in the case study and its key elements (see, for example [53] (p. 1); [54,55]) and give lecturers an initial overview and assessment of the usability of the case study. Furthermore, a *good* teaching note provides information on the intended learning objectives—including categorisation in an educational taxonomy—and on the target group, the field of study and the prior knowledge required, as well as the syllabus of the case study. It should also include a classification of the difficulty of the case study, information and strategies for design and implementation (for example, with regard to the analysis process), references to the literature and information on the use of certain media and guiding questions for discussion with students (see, for example [53–58]). The author's experience of using the case study in his or her own courses may also be of interest, as it could provide lecturers with teaching notes on the case study and highlight the aspects that students have focused on in the past [54]. It is also important that the teaching note is written in a comprehensible form that guides the lecturers step by step so that they can use the case study regardless of their level of prior knowledge: 'You have to guide them step by step through the case; show them all the important details; explain, analyse and synthesise the information; and demonstrate how to use the information in class discussion, to maximise the learning values of the case. Some details you think might be obvious in their analytical values still need to be highlighted and spelled out' ([59] (p. 1); see also [52] (p. 2)).

If the above considerations of the components and design guidelines of teaching notes are considered alongside the explanations on the role of the lecturer and the findings from teaching and learning research derived from the literature by the method explained above (for example, components of structural planning; see, for example [60]), the most important components of teaching notes for pedagogically justifiable use of the case study in HE teaching (rather than the actual setting of the case study) can be compared as follows (Figure 1):

Figure 1 visualises the comprehension of the case study and illustrates that a case study consists of two components: the case study itself and the teaching note.

4. Findings and Discussion

We now present a complete analytical evaluation as an example. Subsequently, the findings for all nine case studies analysed are outlined and discussed in aggregated form.

4.1. Results of the Pedagogical Analysis of One Case Study

The case study consists of a case study situation and related supporting information for the lecturer. It was published in 2005 and was The Case Centre Award overall winner in 2010 [61]. It is embedded in the situational context of marketing in a large company known for non-traditional marketing techniques that have enabled it to secure market share in the beverage and sports industries. Competing product brands on the market are strong, so the focus of the case study is whether the anti-establishment marketing strategy looks like an expedient approach for the company or whether it should switch to a more traditional marketing approach. The target group addressed in the teaching note are Bachelor's and Master's students in the field of marketing with a focus on the topics of advertising, marketing communications, brand management and marketing strategy. Further, according to the information in the teaching note, the case study is suitable both for students with little prior knowledge and for those with advanced knowledge.

First, the findings regarding the *authenticity (D1)* and the *real-life orientation (D2)* of the case are presented. The situational context of the case study and thus the implied specialist content refer to the business-related syllabus the target group is studying and can be seen as typical for the students' future job profile. The case study challenges learners to tackle the situation by analysing it in the context of the company presented in the case. *Access to the case study situation* enables the learners to transfer the knowledge and skills acquired in the case study to everyday personal and work life (see also [62]). However, for a case study to meet the pedagogic requirements of *authenticity*, it is also important that the learner is able to identify with the roles that arise in the situation described (role identification). In terms of situational representation, it is important that actions and dialogues used lead the learner into the situation. Here, in particular, the educational challenge in the design is to ensure that the written cases are made as real as possible by the students through realistic language in the dialogues and a pictorial description of the problem situations. In this way, the case becomes as real as possible in the learner's imagination. Moreover, the analysis often shows that the case study does not include the assignment of roles but is instead a presentation of the historical as well as current brand positioning of the company. The underlying interdependence means that this has a negative influence on the pedagogic dimensions of *complexity (D7)* and the adoption of *multiple contexts and perspectives (D5)*. As a result of the predominantly linear storyline of the case study, it contains very few actions and dialogues that would allow the learners to immerse themselves as actors in individual situational aspects within a corporate process and to analyse the case study from the resulting perspective. However, *role identification* as part of case study work encourages role-based thinking by students that allows for the analysis and solving of problems or complex situations from the perspective of an employee or company (see, for example [46] (p. 6)). Nevertheless, the role of the CEO of the company is often mentioned within the case study and is integrated via direct quotations, as well as personal attitudes and opinions on a range of branding topics, such as, for example: 'Mateschitz believed in the importance of context for consumption of Red Bull. Therefore, the marketing focused on sampling and event sponsorship that embodies the spirit of Red Bull. Mateschitz invested 35% of turnover in marketing and sponsorship in events. In his words, "we don't bring the product to the people, we bring people to the product. We make it available and those who love our style come to us'. He added, 'Red Bull isn't a drink, it's a way of life." [...]' [61] (p. 5). Despite the narrative form of the case study, this offers students the opportunity to view the decision making and problem analysis from the perspective of or in the role of the managing director without, however, being able to immerse themselves further in the company process as a stakeholder. In the context of an authentic learning environment, however, a holistic approach with reference to complex actions and processes is essential to providing the most realistic image of corporate reality (see, for example [32,48]). Furthermore, in the sense of situational representation, it can be deduced that the case study is exemplary for an entire section of reality, but a sequence of actions by persons acting in the case study situation cannot be established in terms of a realistic representation of the business process. Consequently, with regard to authenticity, there is a high deviation from the pedagogic optimum. In addition to *authenticity of the case study (D1)*, the *real-life orientation (D2)* rates highly in terms of the nature of the material, the transferability of the situation and the problem. The materials (text, graphics, tables, etc.) reflect the corporate reality of the company, and data are backed up with sources. Moreover, the case study situation refers to content and problems that apply not only to the company described in the case study but also to other companies/industries, as is clear from the analysis regarding the decontextualization of the case study on the *multiple contexts and perspectives (D5)* dimension, showing a high degree of comparability between the problems mentioned in the situation and those in professional practice. Consequently, the case study accords substantially with the pedagogic optimum.

As discussed above, one of the central features of a case study is the *problem orientation (D3*), which enhances learners' ability to analyse, evaluate and act within a learning situation. The initial nature of the case study is problem oriented, as the situation presents dangers that have an impact on the marketing concept or the brand positioning of the company and that it wishes to analyse. Thus, the case study allows problems to be identified independently: it neither mentions work assignments nor provides assistance with problem identification. Further, the teaching note does not indicate whether the problems should be listed in advance. However, the case study then appears less problem oriented since the situation itself is not genuinely characterised by a problematic or undesirable initial state: the existing marketing concept is primarily reproduced in narrative form (see also *authenticity (D1)*). In addition, problems that arise in the case study are revisited (for example, through statistics or by identifying ways of solving decision-making processes that have already been carried out), which is why they are no longer the focus of the problem analysis. In line with the primacy of pedagogic goals in which different types of problems create intrinsic motivation in students and encourage their problem-solving ability through discovery learning, the case study does not contain different types of problems. This can be explained by the fact that there are few, if any, gaps regarding intentions to act or contradictions, since the situation makes it very clear why the company has implemented the marketing measures set out. There is, therefore, no substantial contradiction with traditional marketing measures. Subjective comprehensibility should also be addressed at this point, even though the case is not very problem oriented: the problem situation has few (cognitive) conflicts that would encourage discovery-based problem-oriented learning. Nevertheless, the case study situation demands problem solving during the analysis of decision making since the students must rethink an existing marketing concept, taking into account the company's history, the competition and the future market positioning. At the same time, their imagination can be stimulated by the case study, which concerns a product they are familiar with and that can be linked to business-related content from their studies. The results of the analysis regarding the problem orientation indicate a high degree of deviation from the pedagogic optimum, despite some positive aspects.

Since the subject tackled by the case study is aimed at business studies students and should therefore include their previous study experience and appeal to their imagination, the case study also meets the dimension of *prior knowledge (D4).* By establishing the link to business knowledge structures and content, the case study can activate students' individual prior knowledge of academic topics of marketing as well as general content from the field of business studies (domain-specific knowledge): 'Instead of traditional advertising, Red Bull relied on a strategy of word-of-mouth or "buzz" marketing. Red Bull focused on getting the word out through various stealth marketing techniques, playing on associations with energy, danger and youth culture, carefully cultivating its mystique' [61] (p. 4). There is therefore a high degree of accordance with the pedagogic optimum.

The case study therefore enhances processing according to different business studies-specific models and theoretical approaches to marketing both through contextualisation and through the dimension of *multiple contexts and perspectives (D5*). A change of perspective is only indirectly provided by the case study situation since the focus is predominantly on management decisions and therefore represents a single economic point of view. Students are not, therefore, encouraged by the situation description to consider different stakeholders and interest groups in the analysis *(multiple perspectives)*, which means that the case study does not generally facilitate an action orientation. However, since the ability to take multiple perspectives is of considerable importance to students' ability to tackle present and future professional and everyday problems and situations (see, for example [17] (p. 33); [44,47]), these findings indicate an overall low deviation on this dimension from the pedagogic optimum.

As indicated, this enables an adequate evaluation of the subjective significance of the *life and experience (D6)* dimension. Relevance to life and experiences can be justified on the basis of the findings of the *real-life orientation (D2)* and *prior knowledge (D4)*, since the case study represents a real-life issue to be solved independently by learners and also corresponds to their experiential world. This also reflects the fact that the case study is designed realistically for the target group: in its subjective significance, it allows for an active examination of the problems and learning content but also takes into account the learners' world of experience and interest. There is, therefore, a high degree of accordance with the pedagogic optimum.

The next dimension to be considered as a reference point of a case study is *complexity* (*D7*). A company's working and business processes can only be partially analysed through the case study situation. The *degree of networking* is dichotomous: the internal relationship, i.e., the effects within the company, are highly undifferentiated, which facilitates only shallow analysis and reflection of the internal business processes or the marketing ideas and implementation (the impact of decisions on the company itself). However, the case study allows for the interconnected analysis of the marketing concepts and processes in the external relationship, prompting consideration of the associated impact on the brand, etc., of, for example, decisions concerning whether to drop or change a marketing concept. This, in turn, underpins an ultimate decision from the management's point of view. This meets the pedagogic claim of *polytelics*: conflicts between objectives in the external relationship may arise from the analysis and both need to be resolved by the students but also increase the complexity of the case. However, the strict structuring of the case study into individual sections also encourages an isolated view of individual marketing steps/processes and an excessive reduction of the complexity of the teaching and learning arrangement for the students. This conflicts with the aim of allowing the target group to process the overall context of the case and use this for the analysis on the basis of the independent working and learning method required in their course of study. In the further interpretation of the case in terms of underlying complexity, scaling content analysis is predominantly used: the degree of control in terms of case study design can be divided into the *support dimension*, the *analytical dimension* and the *conceptual dimension*. A distinction is made between a narrow and an open case study design. The analysis shows that the *support dimension* reflects an open case study design but with a slight tendency towards a narrow case study design, since the case study initially poses introductory questions such as: 'Was Red Bull outgrowing its anti-establishment status? Did it need to transition to a more traditional marketing approach?' [61] (p. 1). These questions should be seen as reflective questions in the context of the case study situation as they do not provide any solution paths for the subsequent problem solving (see *D8*), so learners need to carry out the analysis independently. With regard to the *analytical dimension*, these introductory questions should be seen more critically, since they present the problem to the learners and therefore do not enable an independent development of the problem. However, no criteria regarding evaluation or alternative analysis are anticipated, so in terms of complexity, there is a tendency towards open design. Regarding the *conceptual dimension*, the case study is based on complex conceptual knowledge about different marketing theories. It can therefore be assumed, in accordance with an open case study design, that the students' procedural knowledge (practical knowledge) is challenged by the case.

The *complexity of the content* of the case study can be classified as *complex* with a tendency to be *less complex* since the problems and aspects of analysis mentioned in the case study and the connections between the problem areas are well structured. However, the case study does not address traditional marketing concepts and measures, so students may have to rearrange their prior knowledge of marketing in order to use it in a new context to analyse the case study. In addition, the shortcomings of the above-mentioned dimensions have an influence on the degree of complexity of the case study in view of existing interdependencies; for example, there is little stimulus of a change of perspective to reflect different stakeholders and interest groups and a rather high level of deviation from the pedagogic optimum with regard to the problem orientation of the case study situation. The addressed *knowledge dimension* and the *cognitive process dimensions* can therefore be classified using the taxonomy matrix set out by Anderson and Krathwohl [59]: from the interpretation of the degrees of control, the addressed *knowledge dimension* of the case can be assigned to the area of *procedural knowledge*. Ultimately, the *cognitive process dimension* underlying the case study can also be assigned to the level of *evaluation* in combination with the information from the teaching note, since the case study does not focus on the development of new concepts and strategies [34]. This can be derived from the following questions within the teaching note: 'In which segments are the greatest growth opportunities? Can buzz be leveraged by any company?' [61] (p. 4). According to the criteria of the analytical framework, this corresponds to the ideal type of case study in HE defined for this paper, but a rather low (but still existent) deviation from the pedagogic optimum is evident with regard to the overall complexity.

The findings on the dimension of *open approaches and solutions* (*D8*) are of interest, too. The questions set out in the case study can be seen as reflection questions on problem areas but do not provide any approaches to a solution with regard to the case processing (*solution process*), so the analysis, the evaluation and the decisions can be made by the students themselves without recourse to existing *solution instruments*. In addition, it is crucial in the context of problem solving that the case study allows for different results in terms of *openness of results* in order to create a learning situation that is as authentic as possible in terms of (solution) openness. The analysis carried out shows that a sample solution or a guiding path that suggests only one direction of the solution is not evident in the case study situation: 'A mass advertising approach could undermine Red Bull's perceived authenticity. [...] Some feared that if Red Bull became a sort of Austrian Coca-Cola with mass appeal, its carefully cultivated mystique could "vanish like bubbles in the brew". Others were less concerned and felt Red Bull was ready for prime time' [61] (p. 11). Instead, students have to make independent decisions on the basis of the information and materials available in the case study (unless the teacher prescribes further questions, etc.). Consequently, on this dimension, the case study is close to the pedagogical ideal.

The *structure of the process of action* (*D9*) dimension is set out in the case study. As far as the objective of the case study is concerned, it provides sufficient content and material as well as a *common theme* throughout its structure. The case study situation begins with information on the background of the company and goes on to present various marketing processes as well as the measures carried out in connection with them. A concluding section of the case study situation focuses on the discussion of current company evaluations as well as future marketing that needs to be considered with regard to the analysis. In terms of learning objectives, the teaching note contains only indirect information, such as '[...]

students need to consider how the strategic options would affect the brand and its core user segments' [61] (p. 4). However, the case study is supplemented by appropriate media (for example, as appendices) that contribute to a better understanding of the situation (*contextual coherence*). Contents and materials ensure *completeness* of the case study, so that the learners can deal intensively and successfully with the problem set out in the case study. There is, therefore, a high degree of accordance with the pedagogical ideal.

The analysis of the case has shown that the indirectly derivable learning objectives can be achieved independently through the case study context, enhancing *self-direction* in the *autonomy* (*D10*) dimension. As already mentioned, the questions integrated into the case study text do not restrict independent analysis and decision making but, rather, reduce the complexity content of the case study, also with regard to the problem orientation. As pointed out above, the independent problem identification as well as the related planning of problem solving are central characteristics of the case study method. Consequently, it is evident how important the enhancement of independence is both within research and for the future world of work. In relation to the case study method, this is, as outlined, a characteristic to be demanded and encouraged. Thus, there is a high level of accordance with the idea of the *autonomy* dimension.

The analysis of the accompanying materials shows that the teaching note contains sufficient information on the following aspects: target group, prior knowledge, synopsis, (subject-specific) academic background, and discussion questions and answers that can be used for teaching. However, from a pedagogical perspective, there are some deficits: the learning objectives on which the case study is based are mentioned only indirectly in the form of a list of the subject areas of marketing covered by the case study, and there are no precise statements about which learning objectives are intended or which learning processes are enhanced by the case study. The key competencies promoted by the case study must be derived by the lecturers themselves, as these are not addressed. The academic background of the case study, on the other hand, is explained in more detail. The teaching note contains three *assignment questions* sections, which focus on the *success factors* and *brand essence*, *growth opportunities* and *traditional* vs. *non-traditional marketing* and are prepared for lecturers by linking them to the subject-specific content of the case study situation, as well as reflection questions on the case analysis. A time frame of 30 min is allowed for each section, but there is no information on where the questions should be used. In addition, there is a lack of information about the teaching and learning process, including the aspect of the *social context*. There is only information about which content areas of marketing are dealt with in the case study: 'It could also be used in more advanced brand management courses, to help address product/brand lifecycle, brand essence, and brand extension issues, as well as inter-segment dynamics' [61] (p. 3). However, it is left unclear whether the questions provided should be used (or are needed) by students to work on the case study or whether they should be used at the end of the case study work in the context of the plenary discussion. Nevertheless, the preparation note at the end of the teaching note is a positive addition. This note includes a reference to the company website and a video that enables lecturers to identify the features of the company addressed. Furthermore, the appendix to the teaching note includes a blackboard picture that can be used for the lecture or as a basis for discussion.

The summary of the analysis results for case study A shows that the pedagogic quality of a case study depends on several dimensions and that these in turn are interdependent. Overall, it can be stated that case study A, in combination with the teaching note, fulfils the majority of the quality criteria. These overall findings can be depicted graphically to visualise the deviation from the pedagogic optimum with regard to the dimensions used for the case study analysis (Figure 2).

4.2. Aggregation of Findings

The detailed findings of the individual case studies will now be presented in aggregated form. Figure 3 below visualises the quality of the nine case studies analysed in a general overview. A summary view of the findings of all nine case studies enables the central findings of the study to be identified and the case studies to be compared. There are clear deficits in the *problem orientation*, *complexity* and *authenticity* dimensions. Further weaknesses can also be identified in some case studies regarding the autonomy, structure of the process of action, open approaches and solutions, multiple contexts and perspectives, life and experience, and prior knowledge dimensions, while with regard to the real-life orientation dimension, most case studies have a high level of accordance with the pedagogic optimum.

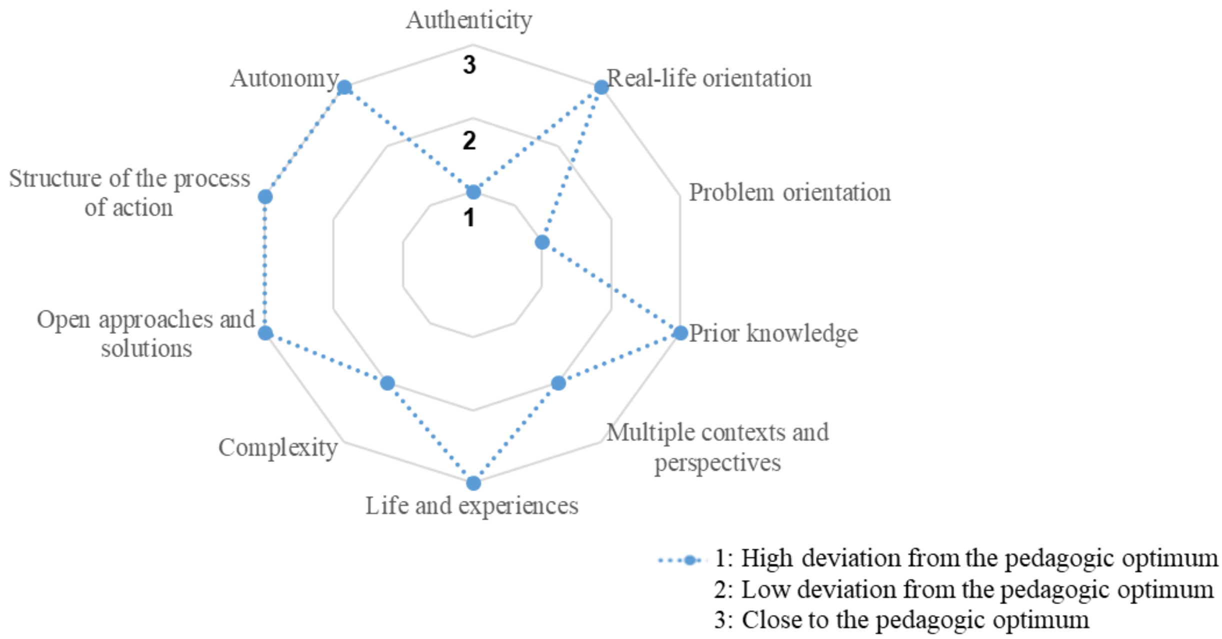

Figure 2. Case study A—quality (deviation from the pedagogic optimum).

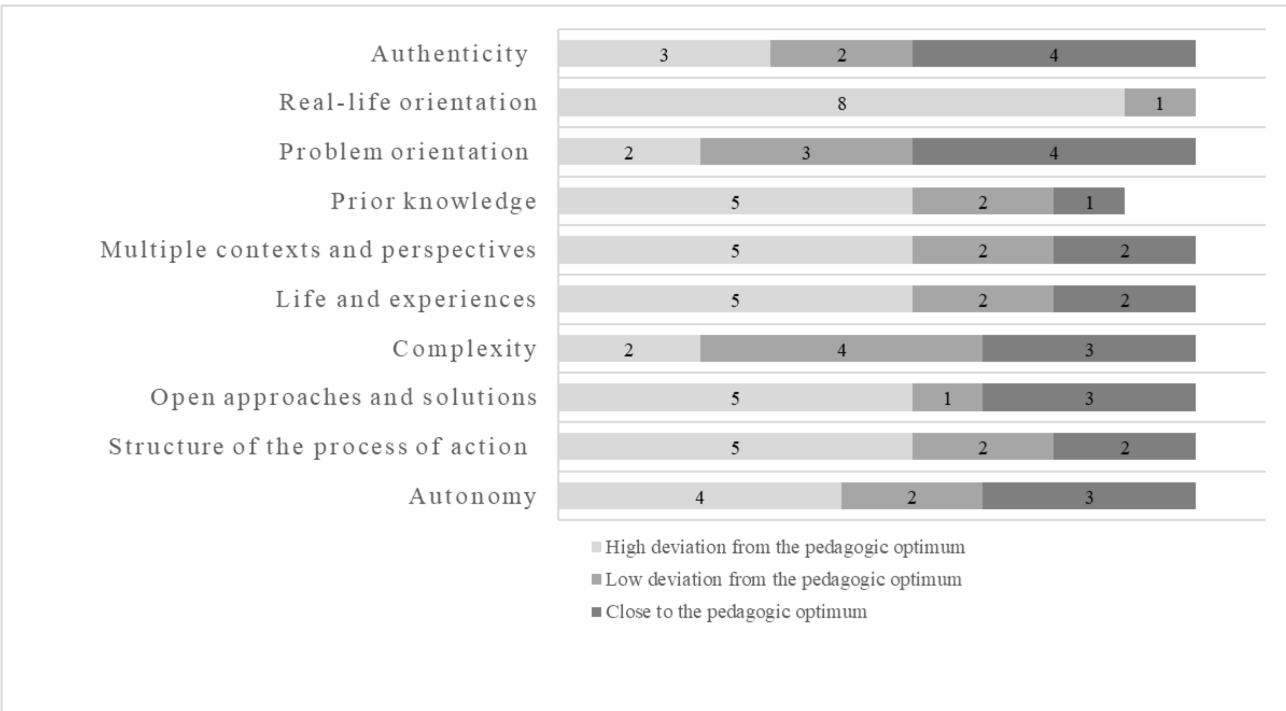

Figure 3. Quality of all case studies by number (deviation from the pedagogic optimum).

Authentic design is an important characteristic of a case study. The findings show that case studies often have a narrative form and are only rarely characterised by dialogues and actions that depict realistic business processes, instead often reproducing corporate events and backgrounds as information reports based on original sources. This makes it particularly difficult for learners to identify themselves as one of the actors in the case study context and also affects the situational representativeness of the case study situation. In addition, the inadequate design of the case study situation (form, structure, and content) intensifies this problem in some case studies, although three case studies show a particularly high degree of authenticity of the design. One case study has a high degree of authenticity because of the dialogues and actions of the actors within a problem situation that is present throughout the case study.

On the *real-life orientation* dimension, Figure 3 initially suggests a high level of accordance with the pedagogic optimum in almost all cases. One of the reasons for this is that the case study situations were developed on the basis of real company contexts. However, the findings also show that the attempt to completely reproduce reality in the context of corporate situations often neglects the inherent learning process in the development of a case study. From a pedagogic point of view, this deficiency is reflected in the underlying interdependence of the dimensions, including *authenticity*, *problem orientation*, *complexity and structure of the learning* and *process of action.* Furthermore, because of inadequate design elements and the inherent limited problem and case study situations, discovery learning is made more difficult in several cases.

The analysis of the teaching notes, however, produces fewer positive findings. Here, all the accompanying information shows deficits that ultimately hinder a targeted and, from a pedagogic point of view, fruitful use of the case study for the lecturer. The learning objectives are for the most part imprecisely stated or can be derived only from the context of the teaching note, while subject-specific learning objectives are generally barely addressed, if at all. Furthermore, all teaching notes contain preparation, work, or discussion questions, but pedagogic information for their use is missing, as is information for the design of the learning process, as well as its sequence for students. In summary, all case studies lack information about the sequence of the learning process, the facilitation of social contexts (for example, cooperative/collaborative learning), and possible competence development through the case study and organisational framework. A positive feature of some case studies is the personal writing style, which guides the lecturer in a certain way (personal involvement) and also describes best practice experiences from teaching. A timeframe or a course plan for the design of the course is available in only three case studies and refers exclusively to the plenary discussion and, in the teaching note, to the questions provided for this purpose.

5. Limitations

The evaluation of these findings requires great caution because our qualitative study has some limitations. As already mentioned before, the small sample (nine case studies) is a limitation. However, this approach allows a more precise description and interpretation of the pedagogic content of case studies at the individual case study level. It should also be borne in mind that the chosen sample explicitly includes excellent case studies from a single source. However, it is precisely this selection that could involve influences since the central measure of the award is not necessarily the quality of the case studies but their popularity with lecturers [32]. It is not, therefore, possible to transfer the findings of our study to all other business case studies existing.

A further limitation relates to the measurement of learning success or the transfer of competencies. The results of this work demonstrate only the pedagogic potential and deficits of the case study situations and the associated teaching notes considered. The research project does not allow for examples of optimal case studies that would represent a concrete improvement. Neither does it include a review of the case studies within academic teaching with regard to their pedagogic content and the associated learner success. However, the measurement of learning success could be implemented against the background of the application of the analytical framework in a future study. Since only a few studies have so far examined the use of case studies and their consequences for learning, the findings and insights of this work may contribute to further closing the research gap and also offer scope for using them for further research work.

6. Conclusions

As outlined at the beginning, there are hardly any findings on the systematic analysis of business cases with regard to their pedagogical quality. Our study can therefore contribute to reducing this research deficit, at least to some extent. In this context, we were therefore able to generate some important research findings.

The findings from teaching and learning research and the requirements formulated from the perspective of HE pedagogics indicate that application- and competence-oriented teaching using the case study method is not yet universal. In this respect, based on the findings we have collated, the research question posed at the beginning with regard to the pedagogic content of business cases can be described as ambivalent.

All nine case studies address business contexts and structures, facilitating the acquisition of domain-specific knowledge in different business topics. Since the case studies deal with business contexts that are taken from the corporate context of different sectors, the issues described can largely be tackled using models and theoretical approaches that the learners (target group) have usually already been taught during their studies. However, deficits can be identified specifically with regard to the adoption of multiple perspectives, since individual case studies either focus on a single sphere (for example, profitability) or inhibit or fail to stimulate a change of perspective because of inadequate design (among other things, the lack of goal orientation, the near-impossible stimulation of the independent learning process and the greater difficulty of considering multiple perspectives in a networked way).

The later application of the learning content is negatively influenced by the partly inadequate problem orientation of the case studies and the restrictions with regard to the independent ability to analyse, criticise, solve and make decisions in such a way that the learner's independent and active learning process is limited (i.e., independent analysis, decision making and solution processes in everyday working life). In addition, the findings prove in some respects that the one-to-one representation of reality means that the learning process is no longer prioritised in the case study situation as well as the teaching note. This complicates or prevents active examination of the problem background and the associated analysis and solution processes.

On the basis of our small study, it can be concluded that a number of business case studies used in HE are designed in line with pedagogical principles. Others, on the other hand, are only based on these principles to a very limited extent and therefore at least do not directly take into account the research findings from the field of teaching and learning (see above). However, this critical finding does not automatically mean that less pedagogically designed cases cannot lead to learning success for students. Research in the tradition of the evaluation of teaching materials cannot make any statements about the implementation in the classroom, because well-trained lecturers can at least partially compensate for the deficits of teaching materials, e.g., by adapting the case material, providing supplementary material or by giving classroom impulses [39,41].

It should be noted here that the origin of the case studies has not yet been discussed in detail. The authors are mostly university education staff (professors and research assistants) in the field of management and business studies. This suggests that trained HE pedagogues are rarely involved in developing case studies, so it cannot be assumed that the majority of the authors have sound knowledge of pedagogically modelled teaching and learning processes but, rather, design case studies on the basis of their teaching experience and their own understanding of academic teaching. Like other providers (for example, Ivery Business School), The Case Centre platform provides case study writing workshops and relevant publications, but our findings at least suggest that very few authors have intensive prior pedagogic knowledge and training. The evaluation of the literature on the topic presented above also shows that pragmatic and formal elements dominate in the relevant guidance literature on case study preparation, while findings and consequences of teaching and learning research [41] and other sub-disciplines of pedagogics are only rarely referred to and applied. Consequently, stronger networking of the various scientific discourses is recommended, both with regard to the HE pedagogic offers for lecturers in the field of management and with regard to the guiding literature, as has fruitfully been the case for some time in the field of vocational business education [63,64].

In the context of HE pedagogic practice, it should also be pointed out that the findings can be considered for the future design of case studies. The analytical framework developed within this work, in connection with its associated pedagogic understanding, enables direct application in lecturer training.

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