

How university teachers can support the linking of theory and practice in lesson debriefings with student teachers

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Abstract

Considering professionalism as a paradigm of higher education in university settings, it seems crucial to establish supportive spaces in which reflection, regarded as a mediating process between theory and practice, can be initiated. Within the conceptual framework of UntAdFoKo supervision, developed and tested in pre-service teacher education, N=10 lesson debriefings of university teachers and student teachers in the practical semester of teacher training were qualitatively analyzed to find out how and to what extent reflection can be initiated by connecting practical teaching situations with theory-based principles of learning-effectiveness and dimensions of teaching quality. First results indicate that in lesson debriefings using the conceptual UntAdFoKo supervision, linking of theory and practice occurred more as twice as often as the description of teaching situations and that university teachers are the main initiators of the linking process. These findings give insights into the effect of conceptually linking theory and practice on reflection processes.

Keywords: *Linking theory and practice; reflective practice; teacher education; lesson debriefings; practical semester; teacher training.*

1. Theoretical Framework

1.1. The Paradigm of Professional Development in Higher Education

Higher education faces the challenge that faculty members “typically have been trained in their subject matter but not in pedagogy” (Pesce, 2015, p. 1). However, assuming that tertiary education pursues the objective of professionalism, the development of a “critical reflective professional practice” (Davis & Moon, 2015, p. 30) seems inevitable to pursue a professional development among university teachers. The call for professionalism is considered as a university paradigm in the context of a “discourse of excellence” (Readings, 1996), but this, on the other hand, is also a “challenge of excellence” (Light & Roy, 2001, p. 8). In order to comply with the idea of excellence as a predominant feature of higher education (Light & Roy, 2001), the call for conceptual frameworks in a time of supercomplexity (Barnett, 2000) seems reasonable. The expectations set on higher education have a particular impact on the university-based learning support of student teachers as well. What is the purpose of university-based practice phases in teacher training? These university-based practice phases are not about conveying teaching routines, but rather about bringing together theoretical-conceptual analysis and practice (Baumert et al., 2007, p. 8), always having in mind the ideal of the “reflective practitioner” (Schön, 1983). However, if universities want to train student teachers to become reflective practitioners, ways must be found to make university teachers “reflective professionals” (Light & Roy, 2001, p. 13 ff.) in the first place. Based on the assumption that the ability to reflect is a way to support the development of a professional teaching role (Korthagen, 2001, p. 53), this paper presents a concept on university-based learning support for practical semester students in teacher training and empirical data on the connection of theoretical dimensions of teaching quality to concrete teaching behavior and lesson situations.

1.2. Lesson Debriefings as a Learning Opportunity for Student Teachers

First of all, it is important to specify that practical phases in university-based teacher training cannot claim to implement a high degree of teaching experience, but should rather be considered as an opportunity to learn how to reflect, thus to connect practical teaching situations with scientific knowledge in the sense of reflexive knowledge (Herzog et al., 2001, p. 19f.). The question, then, is how university teachers can design their lesson debriefings in a way so that they become a space for initiating reflexive knowledge in student teachers in order to pave their way for professional development in their future practice. In a German study from 2005, the author concludes that “postconference feedback hardly ever lives up to its frequent qualification as an ‘interface between theory and practice’” (Schüpbach, 2007). Important learning processes in teacher education seem to take place uncontrolled and unconsciously, leaving essential aspects of professional development to chance (Hascher, 2006, p. 145f.). But why is reflection of high relevance in the setting of lesson debriefings?

Reflection is not only significant to justify pedagogical action but also to deal with the discrepancy between theory and practice or between knowledge and skill (Neuweg, 2011, p. 33ff.). Considering reflection as a mediating process between theory and practice (Leonhard & Rihm, 2011), it seems crucial to create spaces in which reflective practice can be habitualized (cf. Helsper, 2001, p. 13). The UntAdFoKo concept presented here, aims to explicitly connect specific teaching situations to educational knowledge and thereby create reflective spaces within university-based learning settings.

1.3. UntAdFoKo – A Concept for Lesson Debriefings to Foster Learning-Effectiveness

UntAdFoKo, i.e., lesson debriefings - adaptive, focused, criteria-oriented, is a comprehensive, interdisciplinary concept for lesson debriefings between university teachers and student teachers in the practical semester of teacher training. It has been used and pilot tested in teacher training programs at the Technische Universität Berlin since 2018 in the project "Digitalization in Vocational Teacher Education " (DiBeLe¹) with the aim of increasing the learning-effectiveness of lesson debriefings. In the following, the embedded tools included in the UntAdFoKo concept are outlined: The process script (1) helps the university teacher mentally plan and structure the course of the lesson debriefing, the reflection sheet (2) is used by both university teacher and student to prepare and document the debriefing session in a written form and it also helps to support the process of establishing links between specific teaching situations to 17 basic principles of learning-effectiveness that originate from the psychology of teaching and learning and are listed in the criteria tool (3). The principles of learning-effectiveness are based on the three basic dimensions of teaching quality (Gärtner et al., 2021) that can be defined as superordinate categories:

- *Support of acquisition of competencies* (includes principles such as: learning activities aim clearly at a specific acquisition of skills; cognitive activation that was achieved; task(s) adequately fit the performance level of school students)
- *Motivation* (includes principles such as: learning activities were suitable for promoting self-efficacy; pupils had a scope of autonomy; learning activities aroused interest)
- *Classroom management* (includes principles such as: clear program of action in class; flow of instruction was well managed; all pupils actively involved in learning activities)

Based on the outlined theory and former research, the current study addresses the following research question: How and to what extent can university teachers initiate reflection

¹ <https://projekt.dibele.tu-berlin.de/wiki/doku.php?id=en:start>

processes by conceptually linking theoretical principles of learning-effectiveness to practical teaching situations in lesson debriefings with student teachers?

2. Methods

$N = 10$ lesson debriefings were audio recorded in the practical semester 2020/21 with a total quantity of 3 university teachers and their assigned student teachers studying Prevocational Education or vocational disciplines. The analysis focuses on a section of the debriefing session in which successful and less successful teaching situations were named, explained and each to be linked to one of the above mentioned theoretical basic dimensions of teaching quality or to one of the principles of learning-effectiveness, and eventually associated with an alternative course of action for the less successful situation. The conversations were verbatim transcribed, deductively coded in Atlas.ti using qualitative content analysis (Mayring, 2014). For the purpose of qualitative analysis, all the material was divided into speaker turns (Sacks et al., 1974), each of which was identified on the basis of speaker change. Based on the assumption about the above mentioned importance of habitualizing a reflexive practice (Helsper, 2001, p. 13), the material was first examined to determine which levels of reflection, according to a model by Fund et al. (2002), occur in the lesson debriefings. The authors present a two-dimensional framework that contains the dimension of *content* and also the dimension of *form* (Fund et al., 2002). Their evaluative tool is developed on the basis of Hatton and Smith's work on levels of reflection (Hatton & Smith, 1995). Four categories are focussed: Description, Personal Opinion, Linking and Critical Bridging (Fund et al., 2002, S. 490) that are used to assess student teachers' reflective abilities. Using the tool by Fund et al. (2002) seemed reasonable to better evaluate the gradation of reflection in "lower-level reflection" (referring to a specific lesson) and "higher-level reflection" (going beyond a specific situation) (Fund et al., 2002, S. 491). Furthermore, the reflection level "linking" seems particularly suitable as a category, not only to be able to make statements about whether a connection between practical teaching situations and theory-based principles of learning-effectiveness came about, but also to find out to which of the theory-based basic principles a connection was made, i.e., which objects or contents within the theoretical framework were addressed. Overall, the levels of reflection according to Fund et al. (2002) - Description, Personal Opinion, Linking and Critical Bridging – were coded and additionally, within the category *linking*, the 17 theory-based principles of learning-effectiveness and the 3 basic dimensions of teaching quality from the criteria tool were deductively coded as well. Although the basic dimensions function as a superordinate category for the principles of learning-effectiveness, the distinction between both was made in the coding system. This is because there are students who refer to both, the basic dimension and the identified principle. In each case, the basic dimension was coded separately when explicitly mentioned by the student teacher or the university teacher and was not coded

implicitly as a superordinate category of the mentioned principle(s). If one and the same principle of learning-effectiveness or one and the same basic dimension of teaching quality occurred twice within the same speaker turn, the corresponding code was only assigned once.

3. Findings

In the lesson debriefings that were conducted within the UntAdFoKo framework, the percentage of the category *Description* (“what” and “how”) was only 7%, while the *Linking* category that comprises the connection of practical teaching situations to theory-based principles of learning-effectiveness and basic dimensions of teaching quality accounted for 17%. This means that *Linking*, considered as higher-level reflection (Fund et al., 2002, p. 491), occurred more than twice as often as the *Description* of teaching situations, considered as lower-level reflection (ibid.). The results indicate that the majority of linking impulses was given by university teachers, namely 61% (79 out of 129 times), while the linking impulses given by students were only at a percentage of 39% (50 out of 129 times). The results can be interpreted in a way that university teachers seem to play a key role in linking practical teaching situations to theory-based principles of learning-effectiveness. Giving these linking impulses does not seem to be a matter of course that happens automatically but should rather be structurally supported on the part of the university teacher. On the other hand, the percentage of linking impulses initiated by students (39% or 50 out of 129 times) shows that applying the UntAdFoKo tools also seems to help students initiating linking processes by themselves. Considering the percentage of linking impulses on both sides, students and university teachers, the structural approach and the embedded tools within the UntAdFoKo framework seem to promote the connection of practical teaching situations with theory-based principles of learning-effectiveness instead of mainly describing teaching situations, which can be considered as an increase in levels of reflection. The category *Personal Opinion* (Fund et al., 2002, p. 492) accounted for the largest percentage of the lesson debriefings at 46%, in which personal concerns of the “what” or “how”, relying on feelings or intuitions (ibid.) about a lesson situation that is perceived as functional or dysfunctional, are expressed. Although the *Personal Opinion* category can be considered as “lower-level reflection” (Fund et al., 2002, S. 491), it still represents an increase within the levels of reflection on the side of the students by moving from mere description to a student’s standpoint (Fund et al., 2002, S. 490) which, in addition to describing, includes the reflection on “reservations, hesitation or agreement of the student, in connection with the subjects in the first dimension” (ibid.). The *Critical Bridging* category, in which there is a critical analysis of the “what” or “how” and where the student “generalizes; reaches general conclusions [...]. Suggesting alternatives with explanations and reasons” (ibid.), only occurs at 0.53%. Looking at the contents of reflection, it can be stated that almost half (49%) of the total amount of basic dimensions relate to the dimension of *motivation*. The other half is distributed almost equally between

classroom management (27%) and *support of acquisition of competencies* (24%). *Motivation* was the basic dimension favored by both student teachers and university teachers alike. There are both overlaps and differences between the university teachers and the student teachers in the frequency of the mentioned principles of learning-effectiveness. The 3 most frequently mentioned principles of learning-effectiveness by university teachers are: Presence of a clear program of action (11 codes); connection to prior knowledge (10 codes); cognitive activation (10 codes). The 3 most frequently mentioned principles of learning-effectiveness by student teachers are: students' sense of autonomy (7 codes); clear action program (7 codes); cognitive activation of students (5 codes). The results indicate that university teachers can support the linking of practical teaching situations to theory-based principles of learning-effectiveness and basic dimensions of teaching quality by dialogically inviting students to establish this connection by means of embedded tools within a conceptual framework. Knowing which objects or contents are generally most common in the reflection process within the UntAdFoKo framework, makes it possible for university teachers to adjust the selection of contents so that the student teacher's learning outcomes can be increased. However, the results suggest that on the one hand the use of a concept seems helpful in establishing the link between theory and practice, but on the other hand the role of the university teacher seems to be a crucial for supporting the linking and thereby reflection processes. Overall, the findings indicate that by preparing, structuring, and conducting the lesson debriefing by means of the process script, reflection sheet and criteria tool, the university teacher is able to provide a conceptual framework for student teachers within a higher level of reflection through linking theory and practice can be achieved.

4. Discussion

Following Beckmann and Ehmke (2020), the findings of the current study suggest that the conscious connection of theoretical knowledge and practical teaching situations seems to be useful for student teachers' learning. The concept presented here can contribute to counteracting the many variants of structural implementation of lesson debriefings (Brack, 2019) by having university teachers follow a conceptually structured procedure for lesson debriefings with the help of conceptually embedded tools. In addition to lesson debriefings as a verbal and joint form of reflection (Christof et al., 2018), it would be interesting to find out if theory-based frameworks such as the UntAdFoKo concept can also be applied in other settings of higher education reflection. These could for example be e-portfolio work or practical semester reports as a written matter of reflection or reflective talks among colleagues as another verbal form of reflection (ibid.). The further application of a conceptual framework like UntAdFoKo, which combines theory and practice, would need to be adapted to the particular form of reflection and cannot be adopted unchanged. However, the tools presented here could be a starting point to develop suitable tools for further reflection-promoting settings within higher education. In order to draw conclusions about the learning

efficacy of lesson debriefings, it would be useful to conduct a contrastive comparison in which the rather small sample of $N=10$ is expanded by analyzing lesson debriefings of a comparison group of student teachers without UntAdFoKo concept supervision presented here. This would help to gain insights into whether the establishment of theory references occurs primarily through the application of the UntAdFoKo tools or whether the embedding of theory references also occurs independently regardless of the use of conceptual tools. The individual behavior of both, university teacher and students, should be taken into consideration in order to be able to make statements about the establishment of linking processes regardless of reflection-promoting concepts. In this case, it could be investigated whether the embedding of theory references is basically individually dependent on the university teacher or whether the conceptual embedding is causal and decisive for the production of theory references made by student teachers. For further research, it would also be helpful to analyze the extent to which students teachers' individual dispositions, such as self-efficacy or learning-goal orientation, influence the linking of theory and practice in lesson debriefings. With regard to the university teacher, it would also be conceivable to include his or her conversational role by using the MERID model (Crasborn et al., 2011) in order to be able to assess the extent to which the university teacher's role in the mentoring dialogue (active or reactive, directive or non-directive) contributes to the establishment of theory references.

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