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Establishing a Method for analysing Metaphors in Higher Education Teaching
A case from business management teaching

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Establishing a Method for analysing Metaphors in Higher Education Teaching A case from business management teaching

It has been suggested that metaphors have a crucial influence on the way we perceive and construct the world. As a result, metaphor analysis has been used as a way to reveal, analyse and understand conceptions of teaching in higher education. This paper introduces a different way to analyse metaphors for teaching than previously used in higher education. By focusing on temporarily stable, spontaneously uttered metaphors in conversation data the unfiltered metaphors for teaching are analysed. Through thorough analysis of eight interviews with teachers from business management, it is shown how teaching in this context is conceptualised as a vehicle on tracks and with levels as well as depths and width. It is discussed how the identified metaphors open a space of possibilities for the teachers and to which extent these results can be generalised beyond this context.

Keywords: metaphors for teaching; metaphor analysis; conceptions of teaching; higher education teaching; business management

Introduction

The concept of teaching is abstract and higher education researchers struggle to find ways to gain access to teachers' understandings, beliefs and values about teaching. A very common approach to analysing abstract phenomenon is my metaphor analysis. Prior research have found analysis of teachers' metaphors for teaching helpful in the search for insights about their conceptions for teaching (Martinez, Sauleda, & Huber, 2001; Sfar, 1998; Visser-Wijnveen, Van Driel, Van, Verloop, & Visser, 2009). Whilst these studies have produced valuable knowledge, we argue that they have mostly examined metaphors in higher education teaching as cognitive constructs revealing teachers' conceptions for teaching and learning. The methodological approach is generally to present interview respondents with direct and explicit metaphors and thereby to analyse their teaching beliefs. Thus, the studies rest on assumptions that metaphors are tokens of explicit individual or societal constructions already there in people's minds to be revealed. However, recent metaphor theory criticize this approach. Developments in metaphor theory over the thirty years since Lakoff and Johnson (1980) presented their ground breaking metaphor theory have criticised the understanding of metaphors as expressions of fixed epistemological beliefs (e.g. Gibbs, 2009; Ritchie, 2003; Steen, 2011). Rather, metaphors in conversations are mainly temporary stable, situated and context dependent (Cameron et al., 2009, p. 64). Metaphor analyses have been applied within a number of domains such as linguistics, management and cognitive psychology, showing that it is not possible, neither meaningful to identify pre-existing mappings of already established metaphor schemata (Cameron et al., 2009). When revealing metaphors in conversational data, presenting respondents with direct and explicit metaphors will only provide evidence for, if the metaphors are recognized. Thus, a recent and recognised strand of literature on metaphor theory suggest using a method extracting metaphors systematically

from conversational data, where the metaphors are *not* introduced directly in the interview, but analysed afterwards. The methodology allows the researcher to inductively “uncover people’s ideas, attitudes, and values” (ibid), and it will provide insight into which metaphors are constructed and referred back to in a conversation about teaching and which can be said to be temporary stable in the conversation.

The above trends call for application of findings and recommendations from recent metaphor theory to the field of higher education teaching. Consequently, we applied a structured method for metaphor analysis in this study not previously introduced in the context of higher education research. We tried it out on a specific data set carefully chosen because it included current conversational data from an interview study with eight higher education teachers strategically sampled from one department (Business Management). Interviews were semi-structured and focused on teachers’ experiences with teaching, but teachers were not asked directly about their metaphors for teaching. Thereby, our interview data from Business Management served as a single case for exploring to what extent metaphors for teaching were temporary stable in interviews and present between the eight respondents, when metaphors were not introduced directly by the interviewer.

Aims of the study

This article elaborates on existing research on higher education teaching by applying a structured method for analysing metaphors for teaching. We answer the following questions:

- How does an inductive and structured approach to metaphor analysis challenge and supplement other metaphor studies in higher education?
- Which patterns of metaphors are present in conversations with teachers in business management when analysed inductively?

By answering these questions, we provide insight into metaphors for teaching in the specific context of business management. But first and foremost, we wish to provide a theoretical and methodological grounding for future studies of metaphors in the context of higher education and beyond.

Literature on Metaphors for Teaching in Higher Education

Sfard (1998) argued that metaphor analysis is a way to ‘elicit some of the fundamental assumptions underlying both our theorizing on learning and our practice as learners and as teachers’ (Sfard, 1998, p. 4). Her analysis pointed to two basic metaphors for learning and teaching derived from learning theories: an acquisition metaphor and a participation metaphor. A number of studies support this claim empirically through the analysis of teachers’ statements about teaching (e.g. Emerson & Mansvelt, 2015; Martinez et al., 2001; Wegner &

Nückles, 2015). In his seminal paper, Fox (1983) showed how it was possible to understand teachers' personal theories about teaching from looking at their use of images and metaphors. He identified simple theories of teaching as well as developed ones and argued that personal theories of teaching matter for how teaching is approached in the classroom. Recent studies have used analyses of metaphors as ways to gain access to teachers' conceptions about teaching. For example, Visser-Wijnveen, Van Driel, Van der Rijst, Verloop and Visser (2009) examined how teachers' conceptions of teaching were related to their conceptions of research and knowledge by asking teachers to identify the metaphor they were most likely to agree with from a set of examples. Authors developed their set of metaphors from previous studies where teachers and students formulated metaphors about teaching. Hence, their list contained a number of well-known metaphors for teaching such as 'Teaching is (like) gardening: every plant gets what it needs' (ibid, p. 678). Through teachers' choice of metaphors authors wanted to gain access to teachers' ideas about the abstract phenomenon of teaching, implying that metaphors are already there to be identified or revealed. They concluded that the use of metaphors was helpful in investigating academics' conceptions of teaching, research and knowledge because teachers talked freely about the topic of investigation (ibid, p. 684). However, they also mentioned that their findings rested on the assumption that it is possible to assign and order conceptions of teaching and it is this assumption the present paper challenges.

Visser-Wijnveen et al. examined metaphors in a deductive manner. Others have done it more inductively. Wegner and Nückles (2015) examined teachers' personal metaphors about teaching by asking them which metaphors came to mind when they thought about teaching and learning. They found that teachers in different disciplines tended to prefer different metaphors and that there was a relationship between metaphors used and approaches to teaching. Teachers using community growth metaphors tended to be more co-constructivist in their teaching approaches. Wegner and Nückles emphasised that the acquisition metaphor as well as the participation metaphor 'emanate from different epistemological understandings, and that epistemology seems to explain a whole range of phenomena related to teaching, learning and research.' (Ibid, p. 640-641) That is, differences in use of metaphors as well as conceptions of teaching stem from the differences in epistemological understanding. Consequently, the use of metaphors is understood as revelation of pre-existing schemata, which means the already existing understandings of what teaching is. Another approach to the analysis of metaphors was used by Emerson and Mansvelt in their two studies of constructions of metaphor for teaching (2014; 2015). They examined the consumer metaphor, its prevalence and its support (or the opposite) among teachers in tertiary education in New Zealand. Their argument was that the consumer metaphor is prevailing in higher

education and that 'teachers are hugely impacted by the connotations of the consumer model of education.' (Emerson & Mansvelt, 2014, p. 473). Therefore, they examined the extent to which teachers adopted or resisted the metaphor by asking teachers directly about the implications of the "consumer/customer" metaphor for their relationship with students and their opinion on the metaphor. They concluded that many teachers had adopted the metaphor but that some interpreted it into something else and in that way used the metaphor as starting points for discussions about ideas about and values behind teaching.

Recent linguistic and psychological Research on Metaphors

Common to the recent studies of teachers' use of metaphors for teaching is that teachers are asked directly about their metaphors. This approach to metaphors where respondents are primed to think about specific metaphors goes against other strong traditions in discourse analysis of more *spontaneous discourse* (Cameron et al., 2009). When priming respondents explicitly, the respondent's own metaphors will not be revealed. Thus, rather than showing metaphors for teaching, these studies are showing the recognition of and agreement with (Emerson & Mansvelt, 2014) or construction of (Wegner & Nückles, 2015) certain metaphors for teaching.

All of the above mentioned studies of metaphors in teaching build on the same fundamental finding in metaphor theory, Conceptual Metaphor Theory (CMT) put forward by Lakoff and Johnson in 1980 and revised in 1999 (Lakoff & Johnson, 1980; Lakoff & Johnson, 1999). However, the linguistic and psychological metaphor research has moved past the understanding of metaphors presented in CMT. The more recent research done in metaphors in discourse and metaphor identification as such ought to be applied in the higher education research as well. The claim in CMT is, that metaphors are mappings of conceptual domains. In this sense, it is reasonable to ask teachers explicitly about their metaphors for teaching and thus making explicit the mapping they have between the abstract phenomenon of teaching and some more concrete domain like "commodity", "gardening" etc. This approach implies that the metaphorical schemata are pre-existing and explicit to the respondents. This position is however challenged by Johnson himself in his own work (Johnson, 1987) as he writes: 'I have been trying to make sense of the claim that metaphors are sometimes creative in giving rise to structure within our experience. That is, they do not merely report pre-existing, independent experience; rather, they contribute to the process by which our experience and our understanding (as our way of having a world) are structured in a coherent and meaningful fashion' (ibid, p. 98).

This position is further elaborated by Fusaroli and Morgagni (2014) in their assessment of CMT 30 years after. They point to three elements of CMT which has been challenged by later research (ibid, p. 3): 1) basic

experiences include social and cultural dimensions, not just individual bodily experiences; 2) linguistic and conceptual metaphors are not fixed but emerge, develop, and are flexibly deployed on different time scales; 3) empirical research plays a crucial role in understanding how this happens.

In sum, metaphors are used creatively, flexibly and socially in conversations and meaning making, and should be investigated as such. When investigating metaphors for teaching among teachers in higher education, what we can expect to find is not a set of pre-existing metaphors explicit to the respondents. Rather, by talking about teaching, the respondents will most likely reveal a number of metaphors and metaphorical expressions. Thus, what we can expect to find from interviews with higher education teachers is a number of metaphors some of which will be stable throughout the interview and some of which will only be mentioned once or twice. Some metaphors will be present between respondents and some will be specific to one or two respondents. This tracing of trajectories of metaphors in interviews will provide an insight into how teachers in higher education reason and talk about teaching. However, it is beside the point of analysing trajectories of metaphors to express a global metaphor for teaching. This type of metaphor analysis will reveal the creative, conventional or spontaneous metaphors in relations to the topic of teaching and tracing the temporally stable trajectories in interviews and on that basis, it is possible to utter claims about metaphors for teaching among teachers in higher education within and between respondents.

It is not to be expected that respondents will present A is B-metaphors like Teaching is a commodity or Teaching is a train. Rather inferences uttered about teaching will imply how they reason about teaching, leading to trajectories of metaphors.

Method

Data Collection

The study was conducted among a group of teachers in a business administration department at a large research-intensive Danish university. Data consisted of eight in-depth interviews with teachers within the field of business management and marketing. The criteria for participant selection included willingness to participate in a recorded interview, that the respondents were researchers as well as teachers, and that they taught in the semester where the interviews were conducted. As the purpose of the study was to examine local academic practice, teachers were recruited from the same department and they all taught on the same programmes (undergraduate and postgraduate business management). Male as well as female teachers participated in the

study. Respondents are not further described to ensure their anonymity. Interviews were conducted throughout summer term 2014 and lasted between 54 minutes and 2 hours.

Teachers were not asked directly about their metaphors for teaching. Instead, they were asked about what they did when they taught students and why. To allow teachers to elaborate on their experiences and to take up themes that came to mind during conversation, a semi-structured interview guide was used. The interview guide focused on teachers' experience with teaching. Teachers were asked to describe their teaching practice (e.g., 'what do you do when you teach this course?'), their exams (e.g., 'will you describe what you look for in an assignment?') and their students (e.g., 'how would you describe a typical student?'). The purpose was to focus on their actions and the meanings ascribed to them. Furthermore, they were asked to explain their subject and the purpose and characteristics of the discipline and the end goal for students. The first author or one of four research assistants transcribed approximately nine hours of interviews verbatim. Transcriptions were conducted according to a set of written guidelines made by first author. A total of 200 pages were produced.

Steps in the Analysis

As implied above, the analysis of metaphors is inductive in nature. Rather than seeking confirmation of certain metaphors for teaching, the interviews were analysed by use of metaphor-led discourse analysis (Cameron et al., 2009). Each interview transcription was coded by use of Nvivo 11. Metaphors are traditionally divided into source domain and target domain (Lakoff and Johnson terminology) or in topic and vehicle. In the following the terminology will be topic (the abstract phenomenon, i.e. "teaching") and vehicle (the domain used to explain the topic). The topics were pre-set by the interview guide. They were: Students, Teacher, Education and Teaching. For the purpose of this study only results for the topic Teaching will be presented. The vehicle coding was inductive and developed from the data as proposed by Cameron et al. (p. 75) and inspired by the metaphor identification process (MIP) presented by the Pragglejaz group (Group, 2007). The steps in the analysis was as follows: 1) read the interviews in context. 2) identify utterances about teaching 3) if potential metaphors are present, i) a vehicle category was assigned ii) if the relevant category was already assigned, the potential metaphor was coded in here 4) when all interviews were coded, all vehicle categories were checked for consistency.

When in doubt of a certain expression could count as metaphorical, the procedure known from the MIP was applied. The vehicle term was looked up in the Den Danske Ordbog (The Danish Dictionary) and it was established if there is a difference between the basic meaning of the word and the contextual meaning. Eg. in the case of "Ehh, but I do not drop (I: no) to the level that some might wish for" [da: Øhm, men jeg dumper det ikke

ned (I: nej) på det niveau at nogen ville måske ønske.], the potential metaphor could be “Teaching has levels”. Looking up “Level” (Da: Niveau) in the dictionary will show that the basic meaning is ‘an object or surface’s relation to others, especially height’ whereas the contextual meaning is ‘position on a scale, in a hierarchy or in a structure reflecting quality, size,(...)’. When the basic meaning and the contextual meaning differ, the expression can be said to be metaphorically used. Coded in the same category is utterances like ‘I find that my responsibility lies in giving them the possibility to achieve the knowledge needed’ [da: jeg mener mit ansvar ligger i at give dem muligheden for at kunne opnå den viden der skal bruges] and ‘Yes, I have had a talk with myself concerning how low I will go’ [Ja. Jeg har selv sådan har haft en snak med mig selv om hvor langt ned jeg vil gå]. From the context, it is clear that the knowledge is not physically on a higher shelf and that the respondent is not walking down anything physically and is thus metaphorically used and coded as Teaching has levels.

After coding all vehicles in the topic Teaching, the vehicles were analysed and the results can be seen from Table 1 below. The findings are both presented quantitatively and analysed qualitatively in order to establish temporary stable trajectories of metaphors within and between respondents.

Results

The analysis of the interviews showed twenty-two different categories of metaphors. The metaphors fell into four groups: i) metaphors occurring often in all or in the majority of interviews, ii) metaphors occurring rarely but in the majority of interviews, iii) metaphors occurring often but only in one or two interviews, and iv) metaphors occurring rarely in only one interview. The first two categories are presented in the results section below because only they can be seen as temporarily stable metaphors. Table 1 shows the number of occurrences of each metaphor distributed on interview person. The top of the table shows the metaphors occurring most often.

Table 1. Number of metaphors for teaching among interviewees

| Vehicle for the topic ‘Teaching’ | SUM | David | Karen | Natalie | Louise | Christine | Neil | Peter | Carl |
|---|------------|--------------|--------------|----------------|---------------|------------------|-------------|--------------|-------------|
| Rows and lines | 50 | 8 | 1 | 3 | 3 | 12 | 6 | 16 | 1 |
| Drive | 38 | 5 | 4 | 2 | - | - | 6 | 11 | 14 |
| Depth and width | 38 | 6 | 2 | 14 | 1 | 4 | - | 9 | 2 |
| Level | 36 | 6 | 9 | 4 | 4 | 1 | 1 | 7 | 4 |
| Tool | 14 | 6 | - | - | 1 | 3 | - | 1 | 3 |
| Design | 13 | - | 2 | - | - | 1 | 1 | 1 | 8 |
| Building | 13 | - | - | - | 2 | 3 | 1 | 5 | 2 |
| Private | 10 | 4 | - | - | - | - | - | 6 | - |
| De-stick | 10 | - | - | - | - | - | - | - | 10 |
| Rule of the game | 7 | - | 2 | - | - | - | - | - | 5 |
| Central-periphery | 5 | - | - | - | - | - | - | 5 | - |
| Structure | 5 | - | - | - | - | - | - | 5 | - |
| Hook | 5 | 2 | - | - | - | - | - | - | 3 |
| Put forward | 3 | - | - | 3 | - | - | - | - | - |
| Liability | 2 | - | 2 | - | - | - | - | - | - |
| Create | 2 | - | - | - | - | - | - | 2 | - |
| Inherit | 1 | - | - | - | - | 1 | - | - | - |
| Lie (somewhere) | 1 | - | - | - | - | - | - | 1 | - |
| Cut | 1 | - | - | - | - | - | - | 1 | - |
| Stick | 1 | - | - | - | - | - | - | - | - |
| Exercise | 1 | - | - | - | - | 1 | - | - | - |
| Output | 1 | - | 1 | - | - | - | - | - | - |
| | 257 | 37 | 23 | 26 | 11 | 27 | 11 | 65 | 57 |

Metaphors occurring often - Teaching is on a track and can be high or low

The analysis showed how four metaphors were dominating across time and respondents. As Table 1 illustrates ‘Rows and lines’, ‘Drive’, ‘Depth and width’ and ‘Level’ were present in almost all interviews and occur more than once in each interview. This makes them temporarily stable throughout the interviews as well as stable between respondents. These four metaphor discourses are intertwined two and two. “Rows and lines” is related to “Drive” in that it has to do with teaching as linear. However, the two also differs, as will be described below. ‘Level’ and ‘Depth and width’ is likewise related in the up/down and down/out terminology. The frequency might point to the metaphors being conventional, at least in this specific context.

The category of ‘Rows and lines’ was present in all interviews (note that in English ‘rows’ would be translated into ‘series’). In sum it occurred 50 times. The category contained statements about lectures and the structure of teaching as being interconnected. For example, ‘... a track, which goes through the all the rows of lectures and

exercises' (Christine). It also referred to the structure of the study programmes with different specialisations called *lines* and teaching took place within the frame of these lines and it referred to the main points students needed to become acquainted with in teachers' subjects: 'the teacher has a responsibility to begin and think in lines, which goes across different parts of the curriculum.' (Peter). The analysis also showed how the majority of teachers experienced their teaching as a set of interrelated activities that needed to 'be connected' (*hænge sammen*) and lectures were like beads on a string, one after the other. Teachers focused on the connectedness of each lesson in order to create a sense of coherence for the students - a red thread through the semester.

The category 'drive' occurred in six out of eight interviews and was registered in 38 instances (note that 'drive' would translate into 'run' in English). Often it was a course that was driven during the semester. 'Over the process of the eight weeks where the seminar row drives there is actually an eh development' (Neil). In addition, metaphors related to driving was found in this category. Teaching was 'on parallel track', students could 'sit back and enjoy the ride' or student could 'stop and reflect' and move forwards afterwards.

Depth and width also occurred 38 times and was present in seven out of eight interviews. The statements mainly referred to the extent of students' knowledge and content of the subject area. The study programme was described as broad - graduates would come to possess a broad range of skills. Teachers explained how the education aimed at educating generalists. Therefore, students met width in the subjects taught. For some of the teachers the width was in direct opposition to depth of studying. Depth was meant positively 'how much you have learned in depth' (Karen) in contrast to broad and superficial knowledge. The width referred also to the characteristics of students enrolled in the study programme. 'So we might have more from the broad end here' (Carl). Several teachers mentioned their students as a diverse group with heterogeneous motives and abilities. Consequently, width also resonated with the differences in width and depth in relation to teaching.

The fourth category contained statements about levels. In total, metaphors about levels occurred 36 times and was present in all interviews. Level could refer to steps in qualifications e.g. basic levels and advanced levels. But it could also be that some students would always be 'down here' compared to students who would get high (good) grades. Teachers referred to amounts of knowledge students had to acquire to move up to next level. Some things were basic and described as ground level. The teachers also experienced themselves as being on a level. One teacher explained how teaching masters students would be more fun because they were on a higher level. Another one said that being a younger teaching would help students understand content because the teacher and students would be on the same level.

'Rows and lines' were connected to 'drive', as the driving described held the same linearity as implied in the 'Rows and lines'-metaphor. The two discourses stems from the same concept of teaching as something linear, however there is a difference between teaching as a row and teaching as a vehicle, and they are thus coded separately. The same is true for the two metaphor discourses 'Depth and width' and 'Level'. They both draw on up/down-connotations however they are not similar enough to be coded together as 'Level' has to do with 'up is good'-connotations and for the 'Depth and width'-category down is good in terms of thoroughness and width is good in terms of having a broad education. Nevertheless, the two categories draw on an up/down or a down/out-terminology.

To sum up, the temporary stability shows itself in that the same metaphor is used more than once and throughout the interview. E.g in the interview with David, the metaphors revolving around 'drive' and 'rows and lines' is present throughout the interview (metaphors in italics, quotes are translated by the authors. Note that some metaphors would be translated differently had the purpose been a normal translation, e.g. 'drive' would normally be translated as 'run' which is a different metaphor):

- l.32: So it [the course] *drove* both fall and spring
- l. 268: Because they have this attitude, that everyone should *be carried through*
- l. 274: *Drag* every [student] *through*
- l. 311: I will only tell them that *at the end of the lecture row*
- l. 312-13: You just *sit back and enjoy the ride* here *in the run* of the fall
- l. 315: and if you *stopped on the way* and reflected (...)
- l. 387: ... in my MBA-course which *drives* in the same way
- l. 472: ... typically some of those [teachers] who *drove* ehh economy [the study] before
- l. 552: (it is) ... sixth or seventh year I have *driven* this
- l. 553: ...different other teachers who have had *parts of the course*
- l. 557: ... they [teachers] gave them [students] a strange, *cut-up* teaching
- l. 560: ... try to get back *on track*
- l. 741: ... at the MBA-teaching they have *driven* these whole day modules
- l. 757: I'll *drive* it [the teaching] *over the finish line* from here

Over the course of more than 700 lines, David returns to teaching as something that drives, has parts and run in lines and as something, you can be carried through. Teaching as a vehicle on tracks seems thus stable as a metaphorical understanding of teaching as it is repeated throughout the interview. The same tendency is present in a number of the other interviews. However it is important to note, that David never utters the A is B-metaphor of 'teaching is a vehicle'. The metaphor is present beneath his utterances. This is an essential difference between this method and other methods presented above. This method emphasizes how respondents talk about teaching in their natural language and from that we can learn about the metaphors, they use to understand what teaching is. It provides less salient but more authentic metaphors for teaching. The implications of teaching being a vehicle on tracks is unfolded in the discussion.

Metaphors occurring rarely but in the majority of interviews - teaching is design, building and tools

The second group of metaphors occurred less often than the first group of metaphors but were still present in the majority of interviews. The categories contained metaphors about teaching as tools, teaching as design and teaching as buildings. It is important to note that these building/design/tool-metaphors are present in the same interviews as the metaphors mentioned above. Even though they might seem mutually exclusive, they seem not to be to the respondents.

Tools as metaphor occurred 14 times in five interviews and were what teachers hoped students to acquire during a lesson and through a course. 'I want to *give them some methods and tools* to be able to *see through* complex relationships and *handle them*' (Carl). Students needed tools to understand and to master coursework and assignments and tools were also the prize of their education - a well functioning tool box. Teachers showed tools and used tools too in order to give tools.

The second category, design, occurred 13 times in five interviews and related to the organisation of teaching and organisation of for example assessment. The design element was brought into the conversation when teachers talked about what they had done to create conditions for learning. 'I *take them through* some exercises I *have designed*' (Christine). Carl used 'design' eight times and it was characteristic for his use of it that it related to his choices related to teaching. He designed the groups, the learning space, and the discussions. In that sense, it seemed to be a temporarily stable metaphor for him but not necessarily for the others.

The third category in this group was teaching as a building. It occurred in five interviews and was mentioned 13 times. The metaphors often related to students' knowledge as under construction. Teaching was about adding to students' existing knowledge by building on top (Louise). Students could build a Master's degree on top of their degree (Neil). A large group of students could be broken down into smaller groups and lectures were build up in modules (Peter).

Common for these metaphors was that they were uttered in few or in only one interview. A metaphor's recurrence in a single interview might suggest a temporarily stable metaphor for this person in this specific setting. For Carl it made sense to describe teaching as something he designed. Karen also designed elements in her teaching and so did others. However, no others except Carl returned to the design metaphor during the interview and consequently it is not possible to say whether design or building metaphors capture these teachers' understandings of teaching. They might be uttered by coincidence in that moment.

Discussion

Revealing metaphors for teaching calls for an explication through metaphor analysis. From the analysis presented above it becomes evident that teachers in higher education use metaphors to talk about teaching. Some use a lot and some fewer. Some use the same metaphors a lot and some shift between different and potentially conflicting metaphors. This is what should be expected from conversational data, because we applied a methodological approach that was open towards a diverse range of metaphors and the connoted understandings of teaching. Instead of assuming that teachers have one metaphor for teaching of which they are aware, we allowed the respondents to use a variety of metaphors for teaching. We found that some were stable and some not, some shared and some not. Focusing on the shared and stable metaphors will potentially highlight conventional or shared metaphors. However, this cannot be established on the basis of the material itself. Language users use metaphors to make abstract concepts more comprehensible. However, they do not necessarily have one clear metaphorical concept, they are not explicitly aware of the metaphors they use, and as analysts we should be careful to extrapolate from one interview to the metaphorical conceptualization of teaching. That said the analysis presented above shows that teaching is a vehicle on tracks and that teaching has levels as well as depths and width.

Having a shared and/or stable metaphor for teaching opens a specific space of possibilities. If teaching is a vehicle on tracks, then it cannot fly, leave the tracks or be a plant. In using one dominant metaphor, the respondents show a set of characteristics, which they understand the concept and act of teaching in terms of. These can be elaborated, changed, or challenged, but to do either they have to be explicit and known. Previous research tends to assume that some metaphors indicate more advanced or better teaching abilities based on which metaphor is recognized or used. Participation metaphors are traditionally ranked higher than acquisition metaphors (Sfard 1998; Wegner and Nückles 2015) and transmission metaphors are perceived less advanced than conceptual change-metaphors (Martinez, Sauleda, and Huber 2001; Visser-Wijnveen et al. 2009). However, the complexity of the metaphor is not determined by the vehicle of the metaphor. Rather it has to do with the nuances and usage of the vehicle. Hence, a train could be fixed, collective, old, new, slow, fast, on time, always behind schedule etc. The nuance is not in the vehicle of the metaphor but in the connotations. In the example above of how David is using the metaphorical vehicles 'Rows and lines' and 'Drive' it is not the metaphors as such which are in focus, but how he uses them to unfold his teaching practice and understanding.

In other words, if teaching is a vehicle on tracks, it makes certain practices and inferences possible, which he elaborates on through the interview, showing that this way of conceptualizing teaching is stable with him.

In this respect our study challenge prior research, by suggesting that one should be careful about drawing too radical conclusions about teachers' beliefs and understandings based on their explicit metaphors. This is not to say that we should not pay attention to teachers' metaphors. If we want to change teaching practice and conceptualisations, one evident way to approach teaching development is through metaphor analysis. It is essential to know the underlying basis of how teachers talk about their practice and the context in which they utter metaphors. Then it is possible to change teaching practice and conceptualisations. By elaborating and explicating or introducing a completely new metaphor a new and more nuanced space of possibilities is made available. This is a way of challenging the recurrent practices in which discourses are embedded. This data does not allow us to conclude whether the presented metaphors are limiting or shaping practices in classrooms but the knowledge of their existence could help start a conversation about tacit assumptions about teaching and learning that has been shown to underlie practices (Trowler & Cooper, 2002).

Limitations and further research

As noticed above some respondents used many metaphors, some used few. This of course influence the relative weight of each respondent in the data set. In the data set, one of the eight respondents was non-native speaker (Louise). She used 11 metaphors, and this might be due to lack of fluency in Danish. However, Neil was native speaking and too only had 11 occurrences. Neil, however, used a lot of narratives and short stories about his experiences and understandings, which will not be revealed in the metaphor analysis. The differences in use of metaphors might also relate to the fact that the interview technique did not take into account any metaphors and did not pursue occurring metaphors. The lack of attention to the use of metaphors from the interviewer meant that there was a risk of probing with the interviewer's own assumptions. However, there is little evidence that this was in fact the case. Had the main interest been the metaphors, the interviewer could have asked the respondents to elaborate further on metaphors, once they were introduced. E.g. 'You say that teaching drives, could you elaborate on that?' Consequently, the respondents are not probed with certain metaphors and are given a chance to unfold their understanding. This in turn could reveal how deep and nuanced the metaphors were. However, as is evident from the analysis it is fully possible to gain insight into teachers' metaphors for teaching from conventional interviews.

The results give rise to the question whether the common metaphors are in fact shared and expressions of a shared teaching practice. Recent research has shown the importance of context, discipline and micro cultures for the understanding of teaching (Roxå & Mårtensson, 2012). Social structures set norms of appropriate behaviour in a certain context and can in that sense enable or impede changes in teaching practices. To see whether discourses are shared and shape the space of appropriate behaviour in a certain context, studies would need to be designed in a way that takes creation and negotiation of metaphors into account. Investigating how metaphors are co-constructed in groups would help to reveal if for example the rows, lines, drive, levels and width/depth are indeed shared by the teachers in this particular setting and it would give access to more aspects of the construction of discursive repertoires, the negotiation of power structures and other things at play in the settings around teaching (Trowler, 2008). For example, who introduces metaphors? Who picks them up? Are they stable over time? These aspects are not covered in interviews with individuals.

Conclusion

This study set out to examine how a structured metaphor analysis enlighten the understanding of teaching in spontaneous discourse among teachers from business management. The article puts forward answers to the two research questions. Firstly, this article has shown how an inductive and structured approach to metaphor analysis challenges and supplements other metaphor studies in higher education. Previous studies have examined the recognition of metaphors among teachers but claim that they uncover true understandings of an abstract phenomenon. The assumption that metaphors are stable tokens of cognitive schemata is debated in newer metaphor research. In line with this research, this article introduced another method for analysing metaphors in conversation data where focus is on the space of possibilities presented in the metaphors. Secondly, the analysis showed which patterns of metaphors were present in conversations with teachers in business management when analysed inductively. Some metaphors were stable over time and across respondents. The dominating metaphors related to rows, lines, levels, and driving and they were often connected to each other. In addition, metaphors related to teaching as a building, design and tools occurred but were not dominating.

The article criticises existing research for assuming that teachers have metaphors that reveal their conceptions of teaching. This position assumes that the concept for teaching is an explicit metaphor with the teacher. Rather metaphor theory would suggest that conceptualizations are tacit and that they are being shaped by language rather than revealed by it. Instead, it was suggested that metaphors contribute to shaping a certain space of possibilities and to expand this space, existing metaphors need to be revealed and understood. From this analysis, it is not possible to tell whether the metaphors are in fact shared or uncover the same

understanding of teaching. It showed how teachers without prompting used a wide range of metaphors about teaching and that some of them were contradictory and some shared. Future research should address these findings by e.g. group interviews and by asking the respondents to elaborate on metaphors, they spontaneously present in the course of the interview. This data showed how this particular sample of teachers from business management uttered a concept of teaching characterized by linearity, mobility and levels up, down and out. This is not to be characterised as conventional metaphors in terms of what other metaphor studies in higher education have found. Thus, our study emphasizes the need for a new methodological approach as well as a more nuanced perception of the concept of teaching.

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