Abstract

Besides achievement, students' interest and self-concept in physics are by themselves highly important outcomes. Teacher enthusiasm has been identified as a relevant factor impacting students' motivational outcomes; however, it remains unclear to what extent physics teachers in particular show enthusiasm. Thus, in this study, we analysed German physics teachers' enthusiastic teaching on a descriptive level by rating their physics lessons using an adequate rating system and investigated the impact of enthusiastic teaching on students' interest and self-concept. The results showed that German physics teachers are moderately rated as enthusiastic; highly enthusiastic teachers are very rare. Secondly, small to moderate positive relations to students' outcomes were found. Implications of these findings for future research and the role of enthusiasm in teaching for overall instructional quality are discussed.

1 Theoretical Background

Physics, as a subject, is generally not very popular with students. Large-scale cross-sectional and longitudinal studies show that students acutely lack interest in all science domains, particularly so in physics (Häussler, 1987; Häussler, Hoffmann, Langeheine, Rost, & Sievers, 1998). This is by no means a German phenomenon (Bybee & McCrae, 2011).

Yet, beyond subject knowledge, high motivation and self-concept can also be considered as desirable outcomes of our educational system (Schiefele, 1998), as they positively impact achievement (e.g., Möller, Retelsdorf, Köller, & Marsh, 2011; Retelsdorf, Köller, & Möller, 2011) and career choice (e.g., Nagy, Trautwein, Baumert, Köller, & Garrett, 2006; Taskinen, Asseburg, & Walter, 2009). This is particularly crucial, given the prevalent shortage of skilled workers in Germany and in western countries, particularly in technical, and science, technology, engineering and mathematics (STEM)-related domains (Buhr & Hartmann, 2008).

From another perspective, when fostering students' motivation and interest, enthusiastic teaching invariably comes up (also see Pajares & Urdan, 2008). Enthusiastic teaching is considered a particularly effective mode of instruction (see Kunter et al., 2008) and can be described in terms of lively expressive behaviours denoting the teachers' enjoyment of and excitement in teaching their subject. In fact, its positive influence on student outcomes (achievement; motivational, affective and behavioural outcomes) is documented in the literature (see Keller, Neumann, & Fischer, 2014).
In physics instruction, the way the subject is taught might be more important to students’ development of interest than their learning of the topic itself (Häussler, 1987); thus, enthusiastic teaching could be a way for fostering students’ interest and self-concept.

In the present study, we investigated German physics teachers’ enthusiastic teaching based on videotaped physics lessons, and how enthusiastic teaching impacts students’ interest and self-concept in physics. That is, unlike previous chapters in this volume and studies within the overall QuIP project, we aimed at investigating the effects of instruction on students’ affective/motivational outcomes—besides students’ achievement—without providing any country comparisons (i.e., only German subsample was studied).

1.1 Enthusiastic Teaching and its Effects on Student Learning

In the vast majority of studies, teacher enthusiasm is considered as an instructional feature and described as the way materials and contents are presented (also see Kunter et al., 2008; Madsen, Standley, & Cassidy, 1989).

Besides very general descriptions and ratings of teacher enthusiasm—for example, those used in course evaluation instruments at universities, with a sample item being: “instructor is enthusiastic about teaching” (Marsh, 1982, p. 90)—a more detailed look on the specific behaviours connected with enthusiastic teaching reveals its conceptualization as expressive, mostly nonverbal, behaviours of teachers. Based on Rosenshine’s (1970, 1971) findings, Collins (1978) described enthusiastic teaching using eight indicators (see Table 1), thus operationalising enthusiastic teaching by means of nonverbal behaviours of expressiveness. These behaviours are fairly congruent with the results of Murray’s (1983) study and were also used later in several, mostly experimental, studies investigating teacher enthusiasm (Bettencourt, Gillett, Gall, & Hull, 1983; Brigham, Scruggs, & Mastropieri, 1992; McKinney et al., 1983; Patrick, Hisley, & Kempler, 2000). Furthermore, these behaviours are nearly identical to operationalisations of teacher immediacy (e.g., Richmond, Gorham, & McCroskey, 1987; Richmond, McCroskey, & Johnson, 2003)—a construct stemming from communication research and describing the degree of physical and psychological closeness between teachers and their students. It is reasonable to assume that most results originating within immediacy research are generalisable to enthusiastic teaching, when they are considered as nonverbal behaviours of expressiveness as well (also see Babad, 2007).
Table 1: Indicators and Their Description for Enthusiastic Teaching (Collins, 1978, p. 53)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Description</th>
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<tbody>
<tr>
<td>Vocal Delivery</td>
<td>Great and sudden changes from rapid excited speech to a whisper, varied, liltiing, uplifting intonations, many changes in tone, pitch</td>
</tr>
<tr>
<td>Eyes</td>
<td>Dancing, snapping, shining, lighting up, frequently opened wide, eyebrows raised, eye contact with total group</td>
</tr>
<tr>
<td>Gestures</td>
<td>Frequent demonstrative movements of body, head, arms, hands and face, sweeping motions, clapping hands, head nodding rapidly</td>
</tr>
<tr>
<td>Movements</td>
<td>Large body movements, swings around, changes pace, bends body</td>
</tr>
<tr>
<td>Facial Expression</td>
<td>Appears vibrant, demonstrative, changes denoting surprise, sadness, joy, thoughtfulness, awe, excitement</td>
</tr>
<tr>
<td>Word Selection</td>
<td>Highly descriptive, many adjectives, great variety</td>
</tr>
<tr>
<td>Acceptance of Ideas and Feelings</td>
<td>Accepts ideas and feelings quickly with vigor and animation, ready to accept, praise, encourage or clarify in a non-threatening manner, many variations in responding to pupils</td>
</tr>
<tr>
<td>Overall Energy</td>
<td>Explosive, exuberant, high degree of vitality, drive and spirit throughout lesson</td>
</tr>
</tbody>
</table>

1.2 Effects of Enthusiastic Teaching

Teacher enthusiasm is generally considered a desirable characteristic of good teachers (Witcher & Onwuegbuzie, 1999) and continuously included in multi-faceted instruments for course evaluation at universities (e.g., Jackson et al., 1999; Marsh, 1982). This is undoubtedly due to the fact that teacher enthusiasm is assumed to favourably influence students’ outcomes; thus, being taught by an enthusiastic teacher should make learning more enjoyable, increase interest and achievement. This assumption is supported empirically, although the degree of support is not as overwhelming as one would assume.

Even though enthusiastic teaching has been connected to increasing students’ achievement (Brigham et al., 1992; Feldman, 2007; Rosenshine & Furst, 1971), this effect is assumed to only occur indirectly, possibly mediated by students’ attention and affective learning (Bettencourt et al., 1983; Rodríguez, Plax, & Kearney, 1996; Witt & Wheeless, 2001). Thus, teacher enthusiasm is assumed to first and foremost impact students’ affective outcomes (e.g., enjoyment) and motivational outcomes (e.g., interest). In a study by Frenzel and colleagues (Frenzel, Goetz, Lüdtke, Pekrun, & Sutton, 2009), students’ enjoyment was connected to high levels of perceived teacher enthusiasm. Patrick et al. (2000) could show that students’ intrinsic motivation increased when taught by an enthusiastic teacher (see also Brigham et al., 1992).
1.3 Measuring Enthusiastic Teaching

Previous studies, in which enthusiastic teaching was rated, often employed students' perceptions as a data source, especially so in studies of teacher effectiveness (e.g., Marsh, 1982) and studies on teacher enjoyment or dispositional enthusiasm (Frenzel et al., 2009; Kunter et al., 2008). Students' perceptions of teacher enthusiasm are generally studied on a very global and abstract level, for example, "Our mathematics teacher teaches with enthusiasm" (Frenzel et al., 2009, p. 708).

In studies where enthusiastic teaching is conceptualised as expressive teacher behaviours and used for teacher training, enthusiastic teaching is often observed via classroom recordings by external raters to ascertain the effectiveness of training (e.g., Bettencourt et al., 1983; Collins, 1978; Patrick et al., 2000). Collins devised eight indicators (e.g., gestures, movements in space, intonation, etc.) for enthusiastic teaching and external observers rated them on a four-point scale, thus inferring on teachers' enthusiasm (see Table 1). Even though Collins' rating system is now already more than thirty years old, it was used successfully in several studies (see Patrick et al., 2000). To date, no other rating system for enthusiastic teaching exists. Furthermore, this approach of measurement is corroborated by research results in communication education research, where teacher immediacy is operationalised via almost identical indicators as enthusiastic teaching discussed earlier in this chapter. Teacher immediacy also is successfully rated by external observers, as well as students' perceptions (e.g., Richmond et al., 2003).

2 Research Questions

The present study aimed at investigating physics teachers' enthusiastic teaching behaviours, by adopting prevalent conceptualizations of enthusiastic teaching as behaviours of expressiveness, and how these behaviours relate to student motivational outcomes: students' interest and self-concept.

Although the instrument developed by Collins (1978) was successfully implemented in subsequent experimental studies (Bettencourt et al., 1983; Brigham et al., 1992; McKinney et al., 1983; Patrick et al., 2000), yet its validity still remains unclear. Furthermore, the natural variation in teachers' enthusiastic teaching behaviour and whether it can explain between-class variations in students' outcomes have not been investigated. Based on the uncertainty of successfully rating physics teachers' enthusiastic teaching behaviour, we believe that any additional source of variance such as between-country variation, would only complicate the interpretability of results. Thus, only the German subsample is included in this chapter. Based on this consideration, the research questions for the current study were:

(1) How enthusiastic are teachers in German physics lessons?
(2) How is enthusiastic teaching related to student motivational outcomes?
3 Methods

3.1 Procedures

First, we aimed at taking inventory of current levels of enthusiastic teaching which physics teachers enact in usual physics lessons. A rating system was then developed based on Collins (1978), and enthusiastic teaching behaviours were rated by external observers using the information of the videotaped physics lessons.

Second, we investigated whether enthusiastic teaching covaries with students’ levels of self-concept and interest. As teacher enthusiasm was shown to be a predictor for favourable student outcomes, we hypothesized that enthusiastic teaching behaviours correlate positively with students’ interest and self-concept.

3.2 Sample

In this chapter, only the study on the German subsample of the overall QuIP sample is reported. The German subsample included 45 classes with student and teacher data and the videotapes of the lessons. The teachers ($N = 44$; 39 males; 5 females) were on the average 49.1 years old ($SD = 8.8$ years) and had a teaching experience of 16.0 years ($SD = 11.9$ years).

The students ($N = 1,075$) were in the 45 classes with a mean class size of 23.37 students; their average age was 15.69 years ($SD = 2.64$ years). About half of the students in the sample were girls (49.4%) and 1.4% of the students did not indicate their gender.

3.3 Instruments

Rating of Enthusiastic Teaching

Based on the indicators developed and employed by Collins (1978), enthusiastic teaching was rated using the information of the videotaped lessons on a four-point rating scale ranging from (1) not enthusiastic, to (4) enthusiastic. Each measurement level was described in a detailed way with the description of Collins (1976), stated and refined throughout the training process for the raters (see Table 2).
Table 2: Description for Measurement Levels of the Rating Scale for Enthusiastic Teaching

<table>
<thead>
<tr>
<th>Measurement Level</th>
<th>Description</th>
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<tbody>
<tr>
<td>1. Not enthusiastic</td>
<td>• Monotone voice without changes, no changes in intonation</td>
</tr>
<tr>
<td></td>
<td>• Very reticent body language</td>
</tr>
<tr>
<td></td>
<td>• Expressionless face</td>
</tr>
<tr>
<td></td>
<td>• No gestures or movements of body/ head</td>
</tr>
<tr>
<td></td>
<td>• Does not react at all or dull when responding to students’ comments/ questions, seems bored</td>
</tr>
<tr>
<td></td>
<td>• Static and passive; only moves when activities require it</td>
</tr>
<tr>
<td></td>
<td>• Stiff, distanced and aloof posture</td>
</tr>
</tbody>
</table>

| 2. A little Enthusiastic | Normal level and use of gestures (beats; McNeill, 1992); only slightly accentuating  |
|                        | Mostly monotone voice and speech, but small changes and variations in tone (differentiation to Level 3: more formal speech, less like talking between equals)  |
|                        | Eye contact not entirely present while talking, looks sometimes away when students talk (differentiation to Level 3: not so focused on students)  |
|                        | Somewhat stiff posture  |
|                        | Little movements of head or body while talking  |
|                        | Little, lazy and slow movements through classroom  |
| Differentiation criteria between Levels 1 and 2: Vocal delivery, gestures |

| 3. Somewhat enthusiastic | Gestures not exuberant, but demonstrative and punctuating; used in selected instances  |
|                        | Casual style of speech, not like in a presentation but more like in a conversation  |
|                        | Not overly intonating; change in tone and pitch  |
|                        | Does not move fast and constantly through the room, but oftentimes  |
|                        | Often in the middle of classroom/students; when moving away from students, not always turning his/her back on them  |
|                        | Not exuberant, but interested, alert, lively  |
|                        | Looking for eye contact during talking with students  |
|                        | Attentive to worries and feelings of students  |
|                        | Seems casual and relaxed  |
|                        | Punctuating movements of head during talking  |
| Differentiation criteria between Level 2 and 3: Relaxed posture, gestures; NOT: Vocal delivery |

| 4. Enthusiastic | Continuous, frequent changes in intonation and pitch  |
|                | Sweeping, illustrating gestures, almost continuously  |
|                | Casual style of speech as compared to Level 3, but with changes in intonation  |
|                | Teacher moves continuously and much, also when not involved in activities; is lively in his/her movements  |
|                | Laughs with students; makes jokes sometimes  |
|                | Expressive facial expression  |
| Differentiation criteria between Levels 3 and 4: Vocal delivery, facial expression |
The rating was conducted by two raters who had training through several cycles of rating classroom videos, obtaining agreement, refining level descriptions and clarifying differences in rating results, as well as repeating the rating. The rating of the videos during training was not part of the main study. At the end of the training, agreement, in terms of intraclass correlation (ICC), was determined for eight training lessons, \( ICC_{\text{train}} = .86, F(7,7) = 12.000, p = .002, N = 8 \), and for eight randomly chosen lessons of the main study videos, \( ICC_{\text{main}} = .76, F(7,7) = 6.913, p = .010, n = 8 \). Based on the cut-off-criterion for the intraclass correlation (ICC) values greater than \( .70 \) (Wirtz & Caspar, 2002), objectivity of the rating for enthusiastic teaching was thereby achieved. The lessons of the present study were rated as single lessons (i.e., one rating was obtained for 45 minutes of teaching, although a large number of the lessons were double lessons) and then the mean rating values of the two single lessons for every teacher was obtained for enthusiastic teaching.

**Students’ Self-Concept**

For measuring students’ self-concept, we relied on the PISA scale (Organisation for Economic Co-operation and Development, 2006) and adapted it for physics instruction. It included six items, with a sample item being: “Learning advanced physics topics would be easy for me”. Students could answer all items on a six-point rating scale ranging from (0) *totally agree* to (5) *totally disagree*; the items were reversely coded for further analyses so that higher values indicate higher levels of self-concept. Internal consistency in term of Cronbach’s alpha (\( \alpha \)) of the scale was found to be high (\( \alpha = .93 \)).

**Students’ Interest**

Students’ interest was assessed with the Swiss version of the PISA 2006 scale (Bundesamt für Statistik, 2011), of which five items were included for this study (sample item: “I enjoy reading about physics”). Again, the items were answered on a six-point rating scale from (0) *totally agree* to (5) *totally disagree*; the items were reversely coded for further analyses so that higher values indicate higher levels of interest. Internal consistency of the scale was found to be high for this sample (\( \alpha = .93 \)).

### 3.4 Analyses

For the analyses in this chapter, we aggregated the student measures onto the class level and investigated effects of enthusiastic teaching on class mean ratings of students’ self-concept and interest in a path model using AMOS (Arbuckle, 2006). Aggregating measures on a student level onto the class level usually leads to a loss of power (Snijders & Bosker, 2012); however, a disaggregation of class-level variables—such as enthusiastic teaching—onto the class-level would lead to rejection of the null hypothesis too often or, in other words, finding significant results that are totally spurious (Hox, 2002). Thus, we decided to aggregate students’ interest and self-concept onto the class level, keeping in mind that statistical power would decrease.
However, intraclass correlations for students' interest and self-concept revealed that only a very small amount of variance lay between classes (intraclass correlations of .04 and .03 for self-concept and interest, respectively). As such, it might be difficult to predict between-class variation in students' self-concept and interest by enthusiastic teaching.

4 Results

4.1 Descriptive Results and Preliminary Analyses

Descriptive statistics for the rating of enthusiastic teaching behaviours showed that physics teachers in our German sample are perceived to be enthusiastic to some extent (see Table 3). Enthusiastic teaching was rated on a four-point rating scale ranging from (1) not enthusiastic to (4) enthusiastic. Self-concept and interest were rated on a six-point Likert scale from (0) agree not at all to (5) agree totally; the scales were recoded before analysis so that higher values reflect higher self-concept and interest, respectively.

<table>
<thead>
<tr>
<th>Study Variables</th>
<th>M</th>
<th>SD</th>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Enthusiastic teaching</td>
<td>2.41</td>
<td>0.62</td>
<td>-</td>
<td>.27*</td>
<td>.28*</td>
</tr>
<tr>
<td>(2) Students' self-concept</td>
<td>3.71</td>
<td>1.13</td>
<td>-</td>
<td>-</td>
<td>.64***</td>
</tr>
<tr>
<td>(3) Students' interest</td>
<td>3.32</td>
<td>1.27</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

*p < .10, ***p < .001.

The variance of 0.38 on the four-point scale used was rather small; only a small number of teachers (n = 7) were rated below Level 2 as "Not enthusiastic", whereas no teacher was rated as Level 4 and only one as Level 3.5. Thus, the vast majority of teachers were rated as a little or somewhat enthusiastic. This indicated that further refinement of the rating system is necessary to allow raters to better differentiate between teachers' enthusiastic teaching behaviours currently being rated as Levels 2 and 3.

For enthusiastic teaching, we further investigated whether gender, age and teaching experience influence the extent to which a teacher is rated as teaching enthusiastically. For teacher gender, we conducted an analysis of variance (ANOVA) which yielded a marginally significant small effect, $F(1, 44) = 3.451, p < .10$, part $\eta^2 = 0.073$. To account for the disproportionate distribution of male versus female teachers, the Kruskal Wallis test (the nonparametric equivalent to ANOVA), was conducted as well, which yielded a similar result; thus, female teachers showed higher levels of enthusiastic teaching behaviours ($M = 2.90, SD = 0.55$) than did their male colleagues ($M = 2.37, SD = 0.62$). Correlations of enthusiastic teaching behaviour with teacher age and gender indicated that the older and more experienced a teacher was, the less he or she was rated as being enthusiastic (age: $r = -.27$, 


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$p < .10$; teaching experience: $r = -.31, p < .05$. Students' mean values on self-concept and interest are given in Table 3.

4.2 Effects of Enthusiastic Teaching on Students' Self-Concept and Interest

To investigate whether enthusiastic teaching behaviours have an effect on students' interest and self-concept, we estimated a path model; its results are shown in Figure 1.

![Figure 1: Path model for predicting students' interest and self-concept in physics by enthusiastic teaching ($' p < .10$, $* p < .05$, $** p < .001$)](image)

Thus, the path model showed that enthusiastic teaching was a predictor for both students' interest and self-concept: The more enthusiastic a teacher was rated via the videotaped lessons, the higher the students' level of interest and self-concept would be. The effect for students' interest was marginally significant ($p < .10$) and the effect sizes are only very small ($R^2 = .08/.09$).

5 Discussion and Conclusions

Regarding the evidence in the literature that students show low levels of interest in the science domains, particularly in physics, this study aimed at investigating enthusiastic teaching as one possible means of fostering students' interest.

Based on previous research findings, we aimed at (1) taking an inventory of physics teachers' level of enthusiastic teaching in German classrooms, and (2) investigating the relations between enthusiastic teaching and two motivational outcomes: students' interest and self-concept. Based on ratings of classroom videos on enthusiastic teaching behaviours, we showed that the vast majority of teachers were rated as a little to somewhat enthusiastic; yet it also revealed, that almost no teachers showed exceedingly high levels of enthusiastic teaching behaviours. We found small effects of enthusiastic teaching on students' interest and self-concept.
5.1 Limitations

As a limitation of almost all cross-sectional studies, our results cannot be interpreted in any causal way; when we spoke of effects, we only talked about inferential effects. Thus, it is not clear whether enthusiastic teaching impacts students' interest and self-concept or the other way round. Certainly, reciprocal effects are likely and have also been partially confirmed in the literature so far (Kunter, Frenzel, Nagy, Baumert, & Pekrun, 2011; Stenlund, 1995).

Another limitation concerns the assessment that is operationalisation of enthusiastic teaching. In line with previous research on teacher enthusiasm adopting a behavioural conceptualization of enthusiasm, enthusiastic teaching behaviours in our study were assessed via observer ratings—a somewhat common approach in enthusiasm research (see, for example, Collins, 1978; Patrick et al., 2000)—that is, by rating videotaped classroom lessons and evaluating teachers' level of enthusiastic teaching by an external observer. However, undoubtedly, other perspectives on teachers' enthusiasm are important as well. For example, one might indeed argue whether students' perceptions of teacher enthusiasm is of at least equal importance to, if not even more important than, the evaluation of the teacher being enthusiastic by an external observer. Considering the student perspective might be important for two main reasons: (1) students' perceptions might be a central mediator in facilitating any positive effects of teacher enthusiasm on students' outcomes (e.g., Frenzel et al., 2009), and (2) students—as opposed to external observers—know their teacher intimately and would be able to adequately judge teachers' enthusiastic teaching. Also, with regard to a cross-validation for the rating instrument used in this study—for which there is so far only limited evidence in the teacher enthusiasm literature (see, for example, Patrick et al., 2000)—incorporating different perspectives on teachers' enthusiasm and enthusiastic teaching behaviours would be fruitful in developing a comprehensive conceptualization of teacher enthusiasm.

5.2 Implications for Future Research

Regarding the outcomes that were investigated in the present study, they were restricted to motivational outcomes (interest and self-concept). Yet, given that the nature of teacher enthusiasm was considered as a strongly affective characteristic of teachers in previous studies (Keller, Goetz, Becker, & Morger, 2013; Kunter et al., 2011; Kunter et al., 2008), it is possible that students' affective outcomes are influenced by teacher enthusiasm as well. As interest has an affective component (Krapp, 2007), it is possible that interest is among the affective outcomes which are presumably directly influenced by teacher enthusiasm. Self-concept, although it is a highly relevant construct in educational research, is very diverse and complex when it comes to its formation and development (see, for example, the role of frame of reference and comparison processes in Möller et al., 2011). Given other antecedents of self-concept, even though researchers could show that self-concept is also influenced...
by enthusiastic teaching, it is likely that teacher enthusiasm is not the most important factor influencing it.

Because we only found small effects of enthusiastic teaching on students' interest and self-concept, the question arises why that was the case. Among several possible explanations, we want to stress one in particular, that is, the method of assessing enthusiastic teaching as utilised in the present study. Although, measuring enthusiastic teaching by means of external observer ratings is quite common in enthusiasm research, we doubt whether this is the most effective means of assessing teacher enthusiasm when investigating its impact on student outcomes. More precisely, when it comes to students' formation of affective, motivational or self-concept, the crucial element is how supportive or detrimental students perceive their learning environment to be. This idea is supported by the findings of two previous studies on the mediating effects of perceived teacher enthusiasm on students' affective outcomes (Keller, Goetz, et al., 2013; Frenzel et al., 2009). Thus, objectively observable levels of enthusiastic teaching are only relevant insofar as they translate into students' perceptions of teachers' enthusiasm; however, it remains unknown under what conditions this translation can take place. This has to be addressed in future research.

Yet, for investigating the effects of enthusiastic teaching on students' outcomes, observation by means of classroom videos and external observers are likely not the instrument of choice for measuring teacher enthusiasm. However, although the rating system used in the present study possibly needs to be refined further to allow for more discrimination of little and somewhat enthusiastic teachers, it is fairly established in the literature (e.g., Patrick et al., 2000). Therefore, classroom observations can provide a source of information for teachers, giving them feedback on their teaching style. Thus, it can also potentially be used in teacher training.

5.3 The Role of Teacher Enthusiasm in overall Quality of Instruction

After decades of research focusing on structural aspects of instruction, in the last couple of years the teacher has come into focus again. The important role teachers play—in implementing high-quality instruction and impacting students' growth and development—has been recognized in the recent years (e.g., Baumert & Kunter, 2006; Hattie, 2002). Thus, not only teachers' cognitive prerequisites (e.g., their pedagogical content knowledge; see Ergöncenc, Neumann, & Fischer, this volume), but also their affective characteristics (e.g., emotions; see, for example, Keller, Frenzel, Goetz, Pekrun, & Hensley, in press) and motivational characteristics (e.g., goal orientations; see, for example, Butler & Shibaz, 2008) have been included within the pool of variables on the role of teachers in impacting overall quality of instruction and students' outcomes. Teacher enthusiasm—as a construct with a long-standing tradition—fits into this assorted set of variables nicely, including both affective and motivational elements (see, for example, Kunter et al., 2008).
The approach taken in the present study was to consider in a first step enthusiastic behaviours of teachers on a process level of instruction, and investigate how they relate to students' outcomes. Yet recent considerations of teacher enthusiasm broaden its concept, defining it as an affective component of teachers' intrinsic motivation (see Kunter et al., 2008) and thus as a teacher characteristic. For future studies, it is important to (a) include both elements into an overarching concept of teacher enthusiasm, and (b) investigate how the two elements relate to each other and impact students' outcomes. It follows that our position, as also stated earlier in this chapter, is that teacher enthusiasm first and foremost impacts students' affective and motivational outcomes.

When it comes to high-quality instruction and its definition in terms of students' outcomes (i.e., good instruction leads to good outcomes), students' affective and motivational outcomes need to be included as these two outcomes can guide students' future career choices (e.g., Nagy et al., 2006; Taskinen, Asseburg, & Walter, 2009). By that rationale, teacher enthusiasm as a predictor for these outcomes, is an integrative element for consideration regarding quality instruction. It complements the set of teachers' characteristics necessary for providing high-quality teaching (see, for example, Baumert & Kunter, 2006) and motivating students so that, ideally, enthusiastic teachers make learning enjoyable.

References


