

Author: Bilge Gencoglu

Examining students' perceptions of teaching behavior:
Linking the effective teaching framework to the self-
determination theory

Your full name: Bilge Gencoglu

Affiliated authors with institutions: Michelle Helms-Lorenz, Ridwan Maulana, Ellen Jansen

Affiliation: University of Groningen, Groningen, the Netherlands

Ph.D. Student

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Abstract

The conceptualization of teaching quality varies across research traditions, which results in a diversity of definitions and measurements. In this study, we use the term teaching behavior as an aspect of teaching quality to refer to teaching behavior, as well as, teacher characteristics that have a significant and positive impact on student's academic and learning outcomes. This study aims to unravel students' perceived teaching behaviors in relation to their three basic psychological needs grounded in self-determination theory. Particularly, we aim to gain insights into (1) teaching behaviors reported by students in relation to their teachers' support for competence, autonomy, and relatedness, and (2) how each reported teaching behavior is distributed among teachers' support for competence, autonomy, and relatedness. A qualitative open-ended questionnaire was distributed to 277 students from three secondary education schools in the northern part of the Netherlands. The qualitative analysis (using Atlas.ti) revealed 11 teaching behavior domains. Results also revealed how students associated their teaching behaviors with the teacher support of three basic psychological needs. The results may help to improve our understanding of students' perceptions of their teachers, as well as, contribute to the knowledge base about both the conceptualization and measurement of teaching behavior from the lens of students. In particular, the findings provide insights into complementary and novel domains and indicators to improve the measure of student perceptions. Based on students' open-ended responses, the present study determined to what extent student perceptions are in agreement with the existing effective teaching quality framework. It also contributes to the measurement of teaching quality beyond the common use of Likert-scale questionnaires to measure perceptions of teaching behavior and basic psychological needs.

Extended summary

Introduction and theoretical background

The burgeoning interest in teacher effectiveness research about teaching behavior has ensued the categorization of teaching behavior into several domains that have a significant and positive impact on student's academic and learning outcomes, such as engagement and motivation (e.g., Kyriakides et al., 2020). Van de Grift (2007) identified six observable effective teaching behavior domains that influence students' learning and outcomes.

Research using the framework of self-determination theory (SDT; Deci & Ryan, 2000; Ryan & Deci, 2000) has shown that the teacher's fulfillment of students' basic psychological needs (BPNs) is indispensable for their engagement and motivation (e.g., Kaplan & Assor, 2012). Well-structured (vs. chaotic and demeaning) contexts support competence, autonomy-supportive (vs. controlling) contexts support autonomy, and warm and responsive (vs. cold and neglectful) contexts support relatedness (Vansteenkiste et al., 2010).

However, what remains underexplored is the potential link between what teaching behavior students desire and how this relates to their BPNs. Studying this link from the students' vantage may enhance the knowledge for the conceptualization of teaching behaviors based on SDT. This link is equally important to understand how teachers can direct their behaviors towards the different needs of students.

Aims

This cross-sectional study sets out to determine what students perceive as desirable teacher behaviors in relation to their BPNs. We aim to answer (1) which teaching behavior students associate with teachers' competence, autonomy, and relatedness support, (2) how teaching behaviors are distributed in relation to teachers' competence, autonomy, and relatedness support.

Methods

A total of 277 students were recruited from three secondary education schools in the northern part of the Netherlands. More than half of the students (N=166, 60%) were females, and students were enrolled in different types of programs and study year (i.e., first to sixth graders).

We formulated six open-ended questions benefitting from the items on the questionnaires (Belmont et al., 1988; Williams & Deci, 1996), both of which were frequently used in the literature to test SDT based on students' reports of interactions with teachers. Because both of the instruments are limited to Likert-scale measures of student perceptions using pre-determined teaching behavior domains, the findings based on students' responses to open-ended questions may provide novel teaching behavior domains with regard to students' BPNs.

Competence support (feeling efficient and confident with regards to student learning):

“What a teacher must do to help me learn ...”

“Teacher characteristics I like with regards to my learning ...”

Autonomy support (feeling self-determined and not being controlled with regards to their learning):

“What teachers do to help me become an independent learner ...”

Relatedness support (feeling connected to the school and peers):

“What teachers do to make me like to go to school...”

“What teachers do to make me like them...”

“What teachers do to help me feel accepted as I am in the class...”

Two researchers were involved in the qualitative coding. After the coding, the codes with similar meanings were merged and grouped into larger code groups considering the theoretical framework of six observable effective teaching domains (van de Grift, 2007).

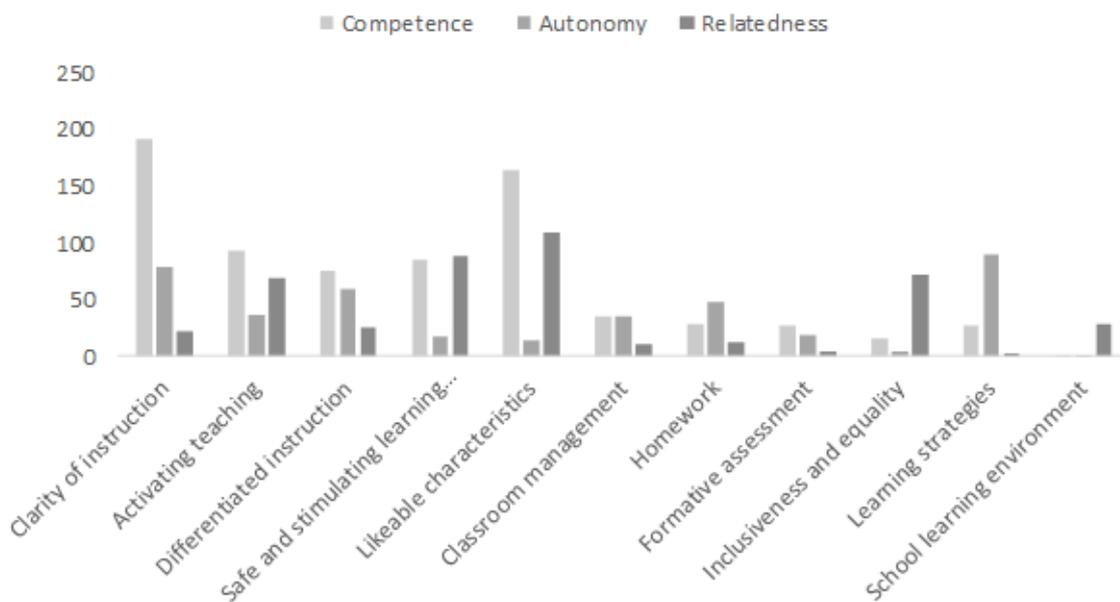
Results

Qualitative analysis revealed 11 different teaching behavior domains of which five were not part of the six teaching behavior domains (van de Grift, 2007). Figure 1 shows the frequency distribution of 11 code groups per BPNs. For supporting competence, students report teachers giving clear

instruction, holding likeable characteristics, activating teaching, providing a safe and stimulating learning climate, and displaying differentiated instruction. For supporting autonomy, students prefer teachers to support the development of their learning strategies, provide clear instruction, and apply differentiated instruction. For supporting relatedness, students emphasize teachers' likeable characteristics, safe and stimulating learning climate, and inclusiveness and equality. Table 1 shows examples of student responses to demonstrate how students report teaching behaviors associated with the support of BPNs.

Figure 1

Frequency Distribution of 11 Code Groups Given the BPNs



Note. Due to the uneven number of questions corresponding to competence and relatedness questions (two and three questions, respectively), the average frequency scores were reported.

Table 1

Examples of Quotations from Student Responses per BPNs

Competence	Autonomy	Relatedness
Giving insights into what is important to learn	Explaining the material clearly and then letting us make our summaries on our own	Organizing fun things that the teacher participates in as well
Clear lessons and summaries	Less and less help so I can do it myself	Showing that they are interested in you as a person
Seeing that there are different levels in the classroom	Giving more freedom	Getting everyone to work with each other and providing solutions together
Good, clear explanations	Asking if we want to work together or alone	The teacher for me should be a kind of friend, not someone who is high
Keeping order in the classroom		

Being clear, not going too fast	Letting me figure things out on my own but being ready for help Learning at my own pace	above me. I always value a strong bond with a teacher If a teacher respects me, I will also respect the teacher
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Significance

We combine two influential theoretical frameworks to understand the student perspectives with regard to their preferred teaching behavior. Given that students' academic achievement and non-cognitive outcomes are intertwined with their basic needs, it is important to understand the role of teachers for the need fulfillment and the expectations of students from their teachers.

Teachers could benefit from these findings to align their behaviors to students' specific needs. Teacher educators emphasizing the student learning may benefit from the findings to enhance their curriculum, and mentors may support student teachers to focus on facilitating students' BPNs. Education researchers and schools may improve measurement and feedback procedures to foster the continuous professional development of teachers.

Relevance to the QUINT ambition

The results may help to improve both the conceptualization and measurement of teaching behavior. Based on students' open-ended responses, the present study revealed to what extent student perceptions of teaching behavior are in agreement with existing effective teaching quality frameworks. Similarities and differences found contribute to the existing measurement instruments which typically use Likert-scale questionnaires to measure teaching behavior and basic psychological needs. Accordingly, the measurement instruments that measure student perceptions of teachers' BPNs support may be improved to tap the complex nature of teaching more comprehensively.

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