TEACHER RESPONSIBILITY:

ITS MEANING, MEASURE, AND EDUCATIONAL IMPLICATIONS

by

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

Introduction

Teachers' personal sense of responsibility potentially influences their instructional practices, psychological well-being, and ultimately their students' learning and performance. Various conceptualizations of teacher responsibility have been linked to such outcomes as positive attitudes toward teaching and professional dedication (Halvorsen, Lee, & Andrade, 2009), job satisfaction (Winter, Brenner, & Petrosko, 2006), positive affect toward teaching (Guskey, 1984), teachers' beliefs in their ability to influence students, teachers' willingness to implement new instructional practices (Guskey, 1988), and with student achievement (Lee & Smith, 1996, 1997). Furthermore, the assumption that teachers are personally responsible, or that they should assume personal responsibility for their students' educational outcomes—primarily test performance—is at the core of high-impact educational policies such as the implementation of accountability systems in American schools (Linn, 2006, 2010; Schraw, 2010).

Yet, as will be discussed in detail in the following chapters, the extant literature on teacher responsibility is plagued by conceptual and operational ambiguity: the term responsibility has been used interchangeably with related constructs such as internal locus of control and teacher efficacy, measurement instruments have incorporated items originally designed to assess other constructs such as efficacy, and have generally failed to acknowledge the multidimensional nature of teacher responsibility, and the literature lacks a comprehensive and consistent definition of the term. Accordingly, in a programmatic series, this multiple

1

manuscript dissertation includes three published or in-press articles: a theoretical review and synthesis of research on teacher responsibility, an analysis of its measurement, and a phenomenological study of teachers' beliefs about their professional responsibility.

Specifically, Chapter II presents a review of the theoretical status of teacher responsibility in the context of current education policy and a comprehensive definition of the term. Chapter III is an empirical study focusing on the measurement of teacher responsibility that (a) reviews existing measures of teacher responsibility, (b) introduces a multidimensional assessment of teacher responsibility for critical educational outcomes such as student motivation, student achievement, for having positive relationships with students, and for providing high quality instruction (the Teacher Responsibility Scale), and (c) demonstrates that teacher responsibility and teacher efficacy are conceptually and empirically distinct. Chapter IV examines how teachers conceptualize their professional responsibility and how they perceive its antecedents and consequences. The concluding Chapter V discusses the current status of teacher responsibility research, and outlines directions for future research.

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CHAPTER II

Taking Teacher Responsibility Into Account(ability): Explicating Its Multiple Components and Theoretical Status [1]

Abstract

Accountability systems have important implications for schooling. Missing from discussions about their implementation, however, are ways they affect teacher responsibility. Responsibility has been insufficiently explicated in the education literature, including its impact on teacher motivation, emotion and behavior. We propose that a multidimensional approach is required to capture the complexity of teacher responsibility and describe the extensive connections between teacher responsibility and existing psychological frameworks. Directions for future research and implications for teachers' professional lives are discussed.

Taking Teacher Responsibility into Account(ability): Explicating its Multiple Components and

Theoretical Status

The controversy surrounding unsatisfactory educational outcomes, primarily poor student performance on standardized tests and high dropout rates, has increasingly focused on teachers as both responsible for the problem and for its solution (cf. Linn, 2006; Schraw, 2010). The emphasis on teachers has prompted educational policies and accountability systems in American schools designed to improve their instructional practices. The correspondence between accountability and responsibility would appear to be straightforward, with accountability and responsibility often considered synonymous. However, the exact nature of that relationship remains unclear, both in the public discourse and in educational theory and research (Schalock, 1998). Whereas systems of accountability are typically explicit (often codified contractually), responsibility is a much more elusive construct that has multiple determinants and psychological consequences. An examination of teacher responsibility would thus serve a critical clarifying function in the context of current educational policy discussions, with implications for instruction, teacher motivation and student outcomes, and with the potential for improved accountability systems.

Responsibility has been studied from a number of perspectives, which imbue it with a variety of meanings. The many meanings of responsibility include construing it as a character trait such as being self-determined and self-critical (Bierhoff et al., 2005; Winter, 1992), defining it in terms of normative/moral expectations (Bovens, 1998; Lenk, 1992), and examining responsibility for specific outcomes such as academic success or failure (Weiner, 1995). Despite general attention to responsibility, relatively little research has focused specifically on teachers. Furthermore, there is insufficient critical analysis and empirical evidence regarding such

5

questions as: What are the different meanings of responsibility? For what do teachers feel responsible? Can teachers be made to feel responsible by making them accountable? and Under what circumstances do teachers feel responsible even if not accountable? These questions are addressed by clarifying the complex meaning of teacher responsibility as a psychological construct and its implications for formal accountability systems. Specifically, we propose to: (a) demonstrate the importance of teachers' internal sense of responsibility in addition and in contrast to formal accountability, (b) present a conceptual framework that integrates different perspectives of teacher responsibility, and (c) describe its links to existing psychological frameworks and research. We begin by explicating necessary conceptual distinctions between responsibility and formal accountability in the current education policy climate.

Responsibility in an Era of High-Stakes Accountability

The emphasis on educational accountability in American schools, as implemented in the No Child Left Behind (NCLB) Act of 2001, stipulates that teachers and schools are accountable for student performance and provides corresponding sanctions and incentives (Forte, 2010)[2]. Despite the promise of desired outcomes, there is accumulating evidence of unintended side effects of strong accountability systems based on students' test scores. For example, teachers are more likely to focus instruction on test-specific skills (Jacob, 2005) and to cheat, as indicated by unexpected test score fluctuations and unusual patterns of test answers among students in the same classroom (Jacob & Levitt, 2003; Nichols & Berliner, 2007). Teachers are also more likely to classify students as learning disabled, which might be an attempt to prevent these students from lowering average test scores (Cullen & Reback, 2006; Jacob, 2005). Because of unintended side effects and concerns about the rationale and implementation of test-based

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[2] Strong emphasis on test-based accountability systems is likely to remain after the reauthorization of the Elementary and Secondary Education Act (U.S. Department of Education, 2010), and through programs such as Race to the Top (U.S. Department of Education, 2009).

accountability systems, there is increasing scrutiny of such systems in American schools, specifically whether the potential benefits of accountability systems outweigh their negative consequences (for a review see a recent Special Issue in Educational Psychologist edited by Schraw, 2010). How teachers construe their own responsibilities under such systems plays an important role in that debate.

Dee and Jacob (2009) proposed that accountability system issues can be understood as a principal-agent problem. According to this model, the interests of a principal (e.g., policy makers representing parents and voters) and an agent (e.g., teachers and school administrators) do not fully overlap, and the principal has limited ability to monitor the actions of the agent. Accountability systems and performance-based sanctions and rewards are invoked as an attempt to align the interests of the agent with those of the principal and thus to resolve the principal-agent problem. The model also implies that teachers' non-compliance (e.g., focus on test-specific skills, cheating, and reclassifying poorly performing students) is a manifestation of the divergent interests and goals of principals and agents. From the perspective of many teachers, however, changes in teachers' role responsibilities mandated by high-stakes accountability are inconsistent with their beliefs about good teaching; this includes focusing on basic skills at the expense of cognitively complex instruction, a shift from concerns about students' problems and needs to their test scores, and fast-changing policy demands considered difficult or even impossible to fulfill within the prescribed deadlines (Pedulla et al., 2003; Valli & Buese, 2007). Whereas teachers understand the importance of professional accountability, many of them also perceive the emphasis on standardized test scores in accountability systems as unfair (Jones & Egley, 2004). Decreasing teacher motivation, inferred by the exit of qualified teachers from low performing schools (Clotfelter, Ladd, Vigdor, & Diaz, 2004; Herman, 2007), also suggests the

presence of a "gap" between teachers' internal sense of responsibility and formal test-based accountability.

Understanding the reasons for and potential reduction of this gap requires distinguishing between feeling responsible and being held responsible. Accountability systems assume that those who are *held* responsible but fail to identify themselves as such need to be controlled for compliance. However, it can also be assumed that those who *feel* responsible are self-determined and willing to invest the effort required to produce high-quality outcomes, without the necessity of external control (cf. Bacon, 1991; Bovens, 1998; Ryan & Deci, 2002, 2006). Whereas those who are *held* responsible are judged as such externally, those who *feel* responsible act as their own judges of responsibility and hold themselves accountable, which implies internal regulation. This also implies that teachers may voluntarily accept responsibility for work-related outcomes well beyond their formal obligations (cf. DiPaola & Hoy, 2005; Fischman, DiBara, & Gardner, 2006). Such valuable aspects of professional responsibility are largely neglected in the current implementation of accountability systems and deserve further consideration. An explication of teachers' internal sense of responsibility may provide ways to accomplish desired improvements in educational outcomes other than through the use of external incentives and sanctions.

What Is Responsibility?

The fluid nature of responsibility is manifest in the variety of perspectives from which it has been studied. Winter (1992) and Bierhoff et al. (2005), for example, consider responsibility a relatively stable personality disposition, Lee and colleagues (Lee & Loeb, 2000; Lee & Smith, 1996) have explored the shared sense of responsibility among teachers, and Guskey (1981, 1982) and Rose and Medway (1981a, 1981b) have studied the intersection of teacher responsibility and locus of control. The sense of responsibility has also been associated with career success

(Winter, 1991), goal commitment, achievement motivation, self-efficacy (Bierhoff et al., 2005; Guskey, 1988) and student achievement (Lee & Loeb, 2000; Rose & Medway, 1981b).

In the absence of an overarching, agreed upon definition, a more fruitful approach is to construe responsibility as a multi-relational construct (Auhagen & Bierhoff, 2001). Such multi-relational systems assume that responsibility consists of from three to six components (Auhagen & Bierhoff, 2001; Lenk, 1992; Werner, 2002). According to Lenk's (1992, 2007) six component model,

> *someone*: the subject or bearer of responsibility (a person or a corporation), is responsible *for: something* (actions, consequences of actions, situations, tasks, etc.), *in view of: an addressee* ("object" of responsibility), *under supervision or judgment of:* a judging or sanctioning *instance*, *in relation to:* a (prescriptive, normative) *criterion of attribution of accountability, within: a specific realm of responsibility and action.* (Lenk, 2007, p. 180)

Lenk's model holds considerable promise for capturing the essential elements of teacher responsibility. Because this model is domain-general, however, it is necessary to examine its applicability to educational and psychological domains, which we address with six questions that correspond to each component of responsibility: (a) Who is responsible? (b) For what? (c) For/to whom? (d) Who is the judge? (e) In relation to what criteria of responsibility? and (f) In what realm of responsibility? The answers to some of these questions are more complex than others and are discussed in greater detail. Each dimension and its corresponding specifications in the literature are shown in Table 1.1. Following the discussion of each dimension, we examine factors that potentially influence teachers' internal sense of responsibility and conclude with a discussion of implications for educational research and for teachers' professional roles.

Insert Table 1.1. about here.

Component 1: Who is Responsible?

The component most readily associated with responsibility focuses on who is responsible for education-related outcomes. There are three general approaches to the conceptualization of "being responsible": (a) responsibility as a relatively stable personality characteristic, suggesting that some people are more responsible than others, (b) responsibility as a situation-dependent variable, suggesting that one is only responsible to the extent that a set of criteria apply in a given situation (e.g., whether one has caused an outcome), and (c) responsibility as a component of social relationships such as role responsibilities, psychological contracts and commitments. In addition, because the sense of responsibility can also be shared among other agents (e.g., among students, parents, school administrators, and policy makers; see Schalock, 1998) it is possible to divide responsibility into its personal and collective forms. The following section identifies elements that determine the status of "being responsible" in answer to the question "who is responsible." We conclude by proposing a definition that captures the essential characteristics of responsibility according to the extant literature.

Responsibility as a personality characteristic. Personal responsibility (from the perspective of the individual) has typically been considered a trait. Winter (1992) defined responsibility as a relatively stable disposition that develops as a function of socialization. Based on a content analysis of Thematic Apperception Test (TAT) stories, Winter and his collaborators identified two types of responsibility indicators. The first reflects a "must" component that is focused on present and past outcomes and includes three factors: (a) reference to a moral or legal standard (good/bad, right/wrong), (b) internal obligation, and (c) critical self-judgment. The second component consists of two factors that reflect a social dimension oriented toward: (d) concern for others such as sympathy or help, and (e) concern for consequences of one's own actions. These components appear directly relevant for teacher responsibility: following ethical

standards and educational regulations, feeling an internal obligation to provide the best possible education for children, self-evaluation of one's own teaching methods, concern for students' needs and educational outcomes, and concern about the consequences of teaching.

Bierhoff and his colleagues (2005) have examined the construct of personal responsibility from a personality perspective in work environments. According to this approach, more responsible workers are characterized by their initiative, evaluation of alternative options of action, deliberate choice of the best-evaluated option, intentional and self-determined action, and commitment to goal attainment. These characteristics imply that in organizational contexts, someone with high personal responsibility would choose the alternative with the highest likelihood of success (as opposed to, for example, selecting the least effortful alternative) and be self-determined (as opposed to other-directed). This definition incorporates both reactive and proactive components. Scores on their scale of personal responsibility (in German) in three samples consisting of professionals and college students were positively related to goal commitment to solving a challenging task and were moderately related to conscientiousness and openness to experience in the Big Five framework, as well as to self-efficacy, achievement motivation, social desirability and social responsibility [3]. Similar to the TAT measure of responsibility cited above, this scale was designed to capture an aspect of personal responsibility that is relatively context free—the extent to which one can be described as a responsible person.

Whereas the previous two frameworks are domain-general, Guskey (1981, 1982) and Rose and Medway (1981a, 1981b) have focused specifically on teachers. These researchers

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[3] Social responsibility—the tendency to adhere to social norms and to engage in prosocial behaviors (Bierhoff, 2000)—and personal responsibility are moderately correlated and share many conceptual similarities, such as self-initiative and goal commitment. According to Bierhoff et al. (2005), whereas personal responsibility is focused on individual goals and options of action, social responsibility is oriented toward others. It should be noted, however, that personal goals may derive from concern for others or that helping others is an important personal goal. Therefore, personal and social responsibility may often overlap and it might be more appropriate to distinguish between different targets of responsibility (responsible for personal versus other's needs and goals) rather than between different types of responsibility.

examined teachers' personal sense of responsibility in terms of locus of control and developed

similar measures to assess whether teachers perceive themselves versus external factors that are

outside of their immediate control to be the cause of positive or negative student outcomes[4].

They proposed that "internal" teachers perceive themselves in control of classroom-related

outcomes, whereas "external" teachers tend to attribute such outcomes to student characteristics,

luck or other external influences (Guskey, 1982; Rose & Medway, 1981a). Elementary level

teachers with internal control had positive classroom outcomes such as fewer disciplinary

commands to students, more student self-directed activity, and less student inappropriate

behavior (Rose & Medway, 1981a); which teacher behaviors contribute to these outcomes,

however, is unclear (Rose & Medway, 1981b). In addition, whereas the teacher-specific measure

predicted teachers' willingness to adopt new instructional methods after in-service training, a

general measure of locus of control did not (Rose & Medway, 1981a), which underscores the

importance of domain specificity.

    As is evident from the previous conceptualizations of responsibility, however, a view of

teacher responsibility based on locus of control is relatively narrow. It is the case that individuals

with internal locus of control are likely to see themselves as the primary cause of positive or

negative events in their lives (i.e., these events are seen as contingent upon their own behavior or

their own characteristics) and thus to accept personal responsibility for those events (Guskey,

1981, 1982; Rotter, 1966); accordingly, locus of control and responsibility may share the

dimension of personal causality. However, causality is not considered sufficient to define

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[4] In Guskey's (1981) teacher responsibility scale teachers are asked to distribute 100 percentage points between two alternatives. A sample item is "If a student does well in your class, would it probably be (a) because that student had the natural ability to do well, or (b) because of the encouragement you offered?" Rose and Medway's teacher locus of control scale has a similar format, although the teachers are asked to choose between two alternatives and do not assign different weights. A sample item is: "When the grades of your students improve, it is more likely (a) because you found ways to motivate the students, or (b) because the students were trying harder to do well."

responsibility, since causality refers to the internal or external reasons for "what is" or "what has been," whereas responsibility also refers to "what should be" or "what should have been" (Ames, 1975; Weiner, 1995). For example, Ames (1975) proposed that: "…it may make perfectly good sense for teachers to say that students failed because they did not try hard enough while ultimately viewing themselves as responsible for arousing student interest" (p. 675). In addition, even if someone does not feel responsible for having caused a negative outcome, one may still feel responsible to find a solution (Brickman et al., 1982). Finally, perceptions of internal control do not necessarily imply feelings of internal obligation to exercise this control. It is possible for teachers with comparable levels of internal control for an outcome such as low student performance to assign different degrees of personal importance to this outcome and thus to feel different degrees of responsibility. In sum, the multifaceted nature of teacher responsibility has not been captured by theory and empirical research on locus of control, which has focused primarily on the causality component of responsibility.

Responsibility as a situation-dependent variable. In addition to its conceptualization as a personality disposition, responsibility has been considered to be situation-dependent. According to this view, a person is responsible only to the extent that a set of responsibility criteria apply in a given situation. This includes such criteria as social norms and roles that are situation-specific (e.g., a teacher may feel responsible to teach students in class, but not during his or her free time). Additional examples of situation- and outcome- specific criteria are causality, controllability, and mitigating circumstances (e.g., the extent to which a teacher caused and had control over a classroom outcome, as well as possible excuses and justifications; cf. Weiner, 1995). Although it is possible that responsibility is solely determined by the situation (e.g., as a function of his or her social role, *any* teacher would be responsible to teach students

while in class), the focus here is on interactions between personal and situational influences that result in different degrees of felt responsibility. For example, felt responsibility may vary as a function of perceptions of the organizational context, the teacher's prior experiences and beliefs, or how the teacher perceives and evaluates different situation-specific responsibility criteria. Criteria that determine the sense of responsibility in a given situation constitute a component of the multi-relational definition of responsibility proposed in Lenk's model that will be discussed in a separate section (see below, "criteria of responsibility"). Our purpose here is to acknowledge that "being responsible" is not only a characteristic of the individual but is also influenced by criteria of responsibility that are situation- and outcome- specific.

Collective responsibility, diffusion of responsibility, and responsibility as a component of social relationships. Collective responsibility represents responsibility that is shared among individuals. We identified two approaches to the operationalization of collective teacher responsibility. First, Lee and Loeb (2000) used data provided by the Consortium on Chicago School Research to examine teachers' perceptions of how many of their colleagues felt responsible for factors related to student learning in 264 K-8 public schools[5]. Lee and Loeb found that collective teacher responsibility was positively related to student achievement (for a more comprehensive review and analysis of these data, see Bryk, Sebring, Allensworth, Luppescu, & Easton, 2010). Second, using a nationally representative teacher sample from the National Educational Longitudinal Study, Lee and Smith (1996) approached collective teacher responsibility as a composite of teachers' efficacy in their teaching practices, internal locus of control, commitment to all students' learning, and personal responsibility for students' learning outcomes, which formed one psychometrically coherent factor. Collective responsibility was

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[5] Sample items are: "How many teachers in this school feel responsible when students in the school fail?" and "How many teachers in this school feel responsible to help each other do their best?"

14

assessed as an aggregate of individual teacher beliefs within a school. Operationalized this way, higher collective responsibility and the consistency of such evaluations among teachers at the same school were significant positive predictors of students' achievement gains from the eight to the tenth grade in mathematics, reading, history, and science (Lee & Smith, 1996).

Although both operationalizations suggest a positive relation between collective teacher responsibility and student achievement, the extent to which these operationalizations capture the same underlying construct, and potential differences in their predictive validity, have not been empirically examined. There are limitations to both operationalizations that should be recognized; most important for our analysis is the indefinite relation between teachers' individual and collective sense of responsibility. A limitation of asking teachers about how many of their colleagues are responsible for different educational outcomes is that such questions do not capture the degree of responsibility teachers ascribe to themselves as part of the collective. A limitation of measuring collective responsibility as an aggregate of individual teacher beliefs is that such measures do not indicate the extent to which individual teachers view their professional responsibility as shared. A combination of both operationalizations would help to understand the dynamics between individual and collective responsibility. Another concern specific to Lee and Smith's study is the assessment of responsibility as a composite of related constructs such as teacher efficacy and locus of control. Additional research is needed to determine the discriminant validity of this measure.

Whereas collective responsibility is based on a commonly accepted norm that all agents are responsible, diffusion of responsibility may occur if responsibility is shared but no one feels explicitly responsible (Latané & Darley, 1970). The diffusion effect, which results in a decreased sense of individual responsibility, is particularly pronounced if the outcome is negative and there

15

are many responsibility agents (Leary & Forsyth, 1987). Thus, teachers may blame poor student performance on family factors (cf. Diamond, Randolph, & Spillane, 2004), and educational administrators may blame poor outcomes on teachers and students (Kumar & Mitchell, 2004).

Available evidence also indicates that responsibility may diffuse unevenly throughout the network of responsibility agents, which could explain why some teachers attempt to compensate for lack of responsibility on the part of other agents rather than decrease their own degree of responsibility (cf. Fischman et al., 2006). Experimental research suggests that in group settings a greater sense of personal responsibility is associated with an agent's centrality within the group (e.g., the degree of leadership), with the availability of special expertise, and with the amount of individual contribution to group outcomes (Forsyth, Zyzniewski, & Giammanco, 2002; Leary & Forsyth, 1987). The perceived social roles of teachers within their professional networks and their professional expertise may thus influence how much responsibility they accept relative to others.

Additional characteristics of responsibility as a component of social relationships include concerns about others (Winter, 1992), psychological contracts reflecting beliefs in mutual obligations (Rousseau, 1995), and responsibilities attached to social roles (Twiss, 1977). Although neglecting the needs of others may be irresponsible, however, we contend that the social aspect of responsibility is better captured by Lenk's "responsible for what" dimension, rather than by a different type of responsibility (e.g., feeling responsible for others).

Taken together, responsibility is characterized by an internal sense of obligation and commitment, self-determination, and critical self-judgment. Responsibility also has a social dimension such that responsible persons are not entirely focused on their own needs and goals but also take into consideration the needs of others. This social dimension can also be considered

an outcome of rather than a different type of responsibility. In addition, whereas some individuals may be more likely than others to assume responsibility across different domains (responsibility as a personality characteristic), their sense of responsibility is also likely to fluctuate as a function of contextual characteristics (responsibility as situation-dependent variable). Finally, the phenomena of collective responsibility and diffusion of responsibility add to the complexity of understanding "who is responsible."

There are both conceptual and assessment challenges to conceptualizing who is responsible and to distinguishing between this dimension of responsibility and closely related constructs such as locus of control and teacher efficacy. The essential difference is the ingredient of obligation and personal commitment—the "must" and "should" that is uniquely associated with responsibility. That is, *responsibility reflects a sense of internal obligation and commitment to produce or prevent designated outcomes or that these outcomes should have been produced or prevented*. Although general approaches exist, there is insufficient theoretical clarity or research in educational settings about the origin and development of teacher responsibility to better understand the interplay between teacher responsibility and such variables as organizational climate and the demands of accountability systems.

Component 2: Responsible for What?

According to Lenk's model, one can be responsible for one's own actions, the consequences of these actions, the actions of others for whom one is vicariously responsible, or tasks (Lenk, 1992). Some aspects of teachers' responsibilities are well defined in such areas as teaching, evaluating student assignments, and other job requirements (e.g., being on time). However, teachers' personal responsibility beliefs may extend beyond contractual obligations to voluntary work and responsibility for student needs over and above academic issues (DiPaola &

Hoy, 2005; Fischman et al., 2006), which renders "for what" a moving target. Therefore, instead of specific outcomes, in the following we discuss more general questions such as the distinction between feeling responsible and being held responsible for something, being responsible for a problem versus for finding a solution, and being responsible for positive versus negative outcomes.

Feeling responsible versus being held responsible for something. The distinction between feeling and being held responsible has important implications for responsibility and accountability because, as noted earlier, it introduces the potential for discrepancies and issues of compliance. According to self-determination theory, higher internalization of assigned goals (i.e., the degree to which an actor engages in goal-directed behaviors for internal as opposed to external reasons) generally leads to increased personal commitment, persistence, and higher quality of engagement, as well as to positive self-perceptions (Deci, 1975; Ryan & Deci, 2000, 2002). Bacon (1991, referring to students) proposed that a similar rationale can be applied to responsibility; specifically, that those who *feel* responsible are internally motivated and self-regulated whereas those who are *held* responsible but do not identify with that responsibility are likely to invest effort only in proportion to the degree of external control. In addition, evidence with teachers suggests that negative consequences can result when formal obligations restrict teachers' sense of personal autonomy and self-determination (for a review, see Reeve, 2009; Ryan & Brown, 2005). Deci and colleagues (1982) demonstrated in an experimental study that impressing on teachers (undergraduates who served as teachers) responsibility for high levels of student performance lead them to be more controlling and critical of their students[6]. In addition, a field experiment using a slightly modified version of Deci et al.'s (1982) experimental

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[6] The instructions to these participants were "Your role is to ensure that the student learns to solve the puzzles. It is a teacher's responsibility to make sure that students perform up to standards. If, for example, your student were tested on the puzzles, he (or she) should be able to do well" (Deci et al., 1982, p. 853).

manipulation indicated that in-service teachers who were externally pressured to produce high student performance were not only more controlling but also less effective in their teaching than were teachers who were asked to help their students (Flink, Boggiano, & Barrett, 1990). Furthermore, the more teachers perceive that they must comply with a curriculum, with colleagues' teaching methods, and with performance standards (i.e., "pressure from above"), and their students to be non-self-determined (i.e., "pressure from below"), the less they were self-determined toward teaching and the more they were controlling (Pelletier, Seguin-Levesque, & Legault, 2002).

Goal setting theory (Locke & Latham, 1990, 2006) represents another theoretical framework that is relevant for the distinction between feeling and being held responsible for an outcome. According to this theory, specific and difficult goals lead to increased task performance when the person is committed to the goal, has sufficient ability, and does not have conflicting goals (for a review, see Locke & Latham, 2006). Goal commitment, an important concomitant of internal sense of responsibility, is one of the key moderators of goal setting and is enhanced by sense of efficacy and personal importance (cf. Locke & Latham, 2006). Additional moderating factors are the availability of informative feedback, task complexity, situational constraints, and appropriate learning goals (Locke & Latham, 1990, 2006).

Thus, both theoretical frameworks—self-determination theory and goal setting theory— suggest that making someone *formally* responsible is not sufficient to elicit positive outcomes. Rather, it is necessary to consider concomitants of *internal* sense of responsibility such as goal commitment and self-determination, as well as factors such as learning goals, available coping strategies and resources, and sense of efficacy. It is also important to note that these theoretical

frameworks specify factors that can potentially bridge the gap between feeling and being held responsible.

Being responsible for a problem versus being responsible for a solution.
Underscoring the richness of the "responsible for what" dimension is the distinction between responsibility for having caused a problem and responsibility for finding a solution. According to Brickman and colleagues (1982), there are four possible constellations: people may feel responsible for finding a solution to a problem that they have not caused (*compensatory model*), for causing a problem, but not for finding a solution (*enlightenment model*), for both (*moral model*), or neither (*medical model*). These four models are related to people's coping and helping strategies in the face of problems such as interpersonal conflicts and academic difficulties (Brickman et al., 1982).

Brickman and colleagues hypothesized that the moral and the compensatory models would be most beneficial for student performance, because having students take responsibility for their own learning is likely to increase their sense of competency and confidence. The teacher's responsibility, according to these models, would be to provide students with sufficient resources to solve academic problems. In agreement with this prediction, Clary and Thieman (2002) found that students' sense of responsibility for finding a solution to their academic problems, but not for having caused these problems, predicted students' grades at the end of the term. The implications of teachers' own sense of responsibility for student problems, however, have not been examined within this framework.

Being responsible for positive versus negative outcomes. Responsibility for positive versus negative outcomes can be viewed as a generalization of models of responsibility for having caused a problem (which has a negative connotation) and for finding a solution (which

has a positive connotation). Teachers' sense of responsibility for both positive and negative student outcomes (operationalized as internal attributions of causality) has been linked to positive change in student learning and achievement (Guskey, 1984), as well as to a higher likelihood of implementing innovative educational practices after in-service training (Rose & Medway, 1981a). Research indicates that teachers' attributions for positive and negative student outcomes are only weakly correlated, and although the preponderance of evidence suggests that teachers generally feel more responsible for positive than for negative outcomes (Guskey, 1982; Matteucci, 2007; Matteucci & Gosling, 2004; Rose & Medway, 1981a), some studies indicate the opposite pattern (Ames, 1975; Ross, Bierbrauer, & Polly, 1974). The results are mixed even when one distinguishes between studies that assess attributions of causality versus ascriptions of responsibility (typically based on single-item measures of responsibility), as well as studies conducted with teacher versus non-teacher samples (Ames, 1975; Duval & Silvia, 2002; Matteucci, 2007; Matteucci & Gosling, 2004; Ross et al., 1974).

In an attempt to provide an explanation for such discrepant findings, Duval and Silvia (2002) proposed that on the one hand, people often attribute positive outcomes internally and negative outcomes externally in order to enhance their self-esteem when they succeed and to protect their sense of self-worth in the face of failure (i.e., they display a self-serving bias; cf. Shepperd, Malone, & Sweeny, 2008); yet on the other hand people are willing to accept self-blame for negative outcomes, despite temporary decrease in self-esteem, if there is a high subjective probability of improvement (Duval & Silvia, 2002). This suggests that contexts that provide teachers with opportunities for personal growth and improvement, as well as personal characteristics that are related to more optimistic expectations about the future (e.g., self-efficacy), may foster internal judgments of responsibility even in the face of adverse outcomes.

In agreement with this assumption, Guskey (1982) found in a sample of elementary and secondary level teachers that higher general teacher efficacy (teachers' beliefs in their capability to produce desired educational outcomes) was positively related to internal attributions for student outcomes, even when these outcomes were negative. Further research is needed to clarify the relative importance of teachers' sense of responsibility for positive versus negative educational outcomes and the implications of this distinction for students and teachers.

Component 3: Responsible for/to Whom?

The target of teachers' responsibility is generally considered to be their students; a qualitative study conducted with high school teachers indicated that teachers may also feel responsible to parents, employers, colleagues, the community, to their families, and to themselves (Fischman et al., 2006). The two components of responsibility—for/to whom and for what—are highly intertwined such that different areas of responsibility are closely tied to particular addressees (e.g., to students or to school administrators). Teachers and the agents for or to whom they feel responsible—students, parents, school administrators, and others involved in the education of children—are part of a dynamic network of shared responsibility, which has implications for how teachers define their professional roles. According to Fischman and colleagues' analysis, some teachers work to compensate for less responsible agents within this network; for example, when they believe that the family or the larger society are not willing or able to meet student needs. At the same time, in the context of accountability, teachers often struggle with how to reconcile their own understanding of "good work" with the expectations of others to whom they feel responsible (e.g., school, state, and national requirements). Thus, the network of shared responsibility incorporates not only mutual support and collective effort, but also tensions between conflicting goals.

Component 4: Who is the Judge?

Multiple agents and institutions as well as teachers themselves can function as judges of teachers' responsibility. It is important to consider the perspective from which responsibility is being judged since different judges may have different beliefs about whether and for what teachers are responsible (cf. Guskey, 2007). Our focus here is on teachers' self-judgments; a comparison of different judges' perspectives (e.g., of teachers, school administrators, parents, policy makers) is beyond the scope of the present discussion.

Component 5: In Relation to What Criteria?

Judgments of responsibility can be based on different criteria. For example, Twiss (1977) proposed three senses of responsibility for which different criteria are particularly relevant. For *descriptive responsibility*, the primary criterion is whether there is a causal relationship between an action and its outcome. For *normative responsibility*, the criterion is based on adherence to a normative standard (e.g., a moral standard). And for *role responsibility*, which is closely related to norm responsibility, the criterion is fulfillment of duties attached to some social role and social relations such as employer-employee, parent-child and teacher-student. Thus, one may feel responsible because one has caused an outcome, because a normative expectation applies, or by definition of one's social role.

Among these three types of responsibility, descriptive or causal responsibility has been the major focus in attribution theory. According to Weiner (1995), the criteria we typically employ to judge someone responsible are personal causality, controllability and mitigating circumstances. For example, teachers would be judged responsible for students' poor performance if they provided a low quality education (personal causality) and if they could and

should have prevented this outcome (controllability and responsibility)[7]. Mitigating circumstances, such as lack of time and resources, may reduce the extent of responsibility ascribed to the teacher. Additional criteria proposed in the literature are intentionality, forseeability, the actors' awareness of the consequences of their actions, lack of coercion from external forces, and moral standards (Heider, 1958; Kelley, 1967).

Several studies have examined teachers' responsibility attributions for their students' academic success or failure. In general, teachers who attribute students' failure to lack of effort (as opposed to lack of ability) ascribe more responsibility to students and are more likely to express negative emotions such as anger and lack of sympathy and to endorse punitive strategies (Matteucci & Gosling, 2004; Reyna & Weiner, 2001; Weiner, 1995). Furthermore, a vignette study with elementary school teachers indicated that when teachers perceive that a student's problematic behaviors are intentional and controllable (e.g., defiance), teachers are more likely to endorse short-term coping strategies such as punishments or threats, whereas when the student's behaviors are perceived to be unintentional and uncontrollable (e.g., distractability), teachers' coping strategies are more productive; for example, they tend to provide verbal encouragements (Brophy & Rohrkemper, 1981).

Relatively few studies, however, have focused on the responsibility teachers ascribe to themselves, and the relations between self-ascriptions of responsibility and potential criteria such as causality, controllability, and mitigating circumstances remain unclear. Available evidence within the attribution theory framework suggests that teachers' self-ascriptions of responsibility

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[7] Weiner (1995) discussed the element of "should" and "ought" as a characteristic of responsibility at a later stage of his theory development, stating that "…I believe that I erred in my prior conceptual analysis: Causal controllability is not to be equated with responsibility. Controllability refers to the characteristics of a cause—causes, such as the absence of effort or lack of aptitude, are or are not subject to volitional alteration. Responsibility, on the other hand, refers to a judgment made about a person—he or she "should" or "ought to have" done otherwise, such as trying harder, eating less, or paying more attention when driving" (p. 8).

for student outcomes can be different from their attributions of causality (Ames, 1975; Weiner, 1995) and that, at least among female participants, there is a positive relation between internal locus of control and personal responsibility (Brandt, Hayden, & Brophy, 1975). The evidence regarding teachers' self-ascribed responsibility for student outcomes and its relevance for teachers' beliefs, behaviors and emotions is inconclusive (Matteucci, 2007; Matteucci & Gosling, 2004)[8]. Overall, teachers' *internal* ascriptions of responsibility within the attribution framework have been understudied. The vast majority of research has focused on how people judge others responsible (e.g., the degree to which teachers view students as responsible for their poor performance) rather than on self-judgments (Reyna & Weiner, 2001; Weiner, 1995) or assumes that self-judgments are made according to the same criteria as judging others (Shaver & Drown, 1986). More research is needed to examine the relevance of attributional criteria for teachers' internal ascriptions of responsibility.

Unlike causality, which can only be determined for past events, social norms and roles serve as prospective criteria of responsibility (e.g., parents are responsible for their children). Normative standards can be conceptualized as implicit or explicit behavioral expectations that guide the individuals' values, beliefs, and behaviors (Bargh, 1990; Twiss, 1977). Research suggests that in the case of negative outcomes, deviations from normative expectations lead to higher responsibility ascribed to the actor (Alicke, 2000; Devos-Comby & Devos, 2001). Accordingly, responsibility is often judged by one's compliance with social expectations—what

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[8] Matteucci and Gosling (2004) found that Italian junior high school teachers accepted more responsibility for a student's low performance when they attributed this outcome to the student's low ability than to insufficient effort, but this finding was not replicated with high school teachers. The teachers' self-ascriptions of responsibility, reported for the entire sample of junior high and high school teachers, were related to felt sympathy and to lower likelihood of failing the student (Matteucci & Gosling, 2004), but these relations were not replicated in subsequent studies with high school teachers (Matteucci, 2007; Matteucci & Gosling, 2004). Teachers' self-ascriptions also varied as a function of culture; French high school teachers reported higher self-responsibility for student failure than Italian high school teachers (Matteucci & Gosling, 2004). Overall, the status of teachers' self-ascriptions of responsibility is unclear.

is generally accepted as proper behavior. Normative expectations, however, may change across situations and contexts such that a teacher may perceive different behaviors to be appropriate in different contexts (e.g., in the classroom versus in the hallway), different classrooms (e.g., advanced class versus support class), and for different students (e.g., high versus low achievers).

Diamond, Randolph and Spillane (2004) demonstrated the powerful impact of normative expectations on teachers' sense of responsibility in a qualitative study in five schools with predominantly low-income minority students. In most schools, the organizational habitus—the shared beliefs, expectations, and practices among school members—reflected low expectations of student capabilities and low teachers' sense of responsibility for student learning. For instance, teachers typically attributed low teaching effectiveness to students' problematic family backgrounds, taught less demanding material, set more lenient evaluation criteria for students' work and provided students with little wait time for answering their questions. In one of these schools, however, high teacher responsibility was instilled and maintained despite the challenging teaching circumstances. Deliberate efforts by the school leader, such as providing professional development sessions and frequent interactions with staff, contributed to this positive organizational habitus. As a consequence, teachers arrived early and stayed late, adapted classroom practices to better serve students' learning needs, and better articulated their educational principles, for instance, through banners and wall hangings in the school. Thus, criteria of responsibility such as normative expectations can influence not only the individual but also the collective sense of responsibility.

Component 6: In What Realm?

Different responsibility criteria may apply in different contexts or "realms" of responsibility. For example, there is an important distinction between job situations and

voluntary work: the context of the classroom presents a realm and set of obligations according to which teachers are expected to work with students. However, teachers are not contractually obligated to work with students during their free time and may feel morally responsible to do so or may not feel responsible at all.

The distinction between these two realms of responsibility—formal obligations versus voluntary work—has been documented in studies of organizational citizenship. Organizational citizenship behavior (OCB) is discretionary work that is not directly or explicitly subject to the formal reward system (Organ, 1988). Examples of OCBs in schools are teachers who help each other, make innovative suggestions and volunteer for extra-curricular activities and committees, help students after school during their free time, and do not give them "busy work" (DiPaola, Tarter, & Hoy, 2005). Faculty OCB has been operationalized as a collective measure encompassing teachers' perceptions of their colleagues rather than themselves and positively predicts student achievement, even after controlling for students' socioeconomic status (DiPaola & Hoy, 2005). More recently, Woolfolk Hoy, Hoy and Kurz (2008) adapted this instrument to assess teachers' self-reported OCBs, which were related to academic optimism comprised of teacher efficacy, trust in parents and students, and teachers' self-reported emphasis on academic tasks.

Different realms of responsibility can also be defined according to teachers' perceived social roles. For example, as employees, teachers may feel an obligation to follow school norms and to fulfill requirements imposed by accountability systems (i.e., responsibility within the realm of the school). As professionals, however, teachers may be guided by their own perceptions of professionalism and high quality teaching irrespective of the specific context and local requirements (i.e., responsibility within the realm of the profession).

Conceptualizations of bureaucratic responsibility provide five different frames of reference for responsible decision making and behavior (Bovens, 1998). First, hierarchical responsibility refers to strict loyalty to one's own organization and superiors. Responsible behavior in this context means following the instructions of superiors and fulfilling one's formal obligations within the organization (e.g., being on time, preparing lessons and teaching the curriculum). Second, personal responsibility refers to personal ethics and conscience (e.g., following own standards of proper behavior and using the self as a frame of reference to determine what is right or wrong). Third, social responsibility refers to norms of decency, collegiality, and loyalty to one's peers within the organization (e.g., protecting the interests of colleagues, possibly covering their deficiencies from superiors). Fourth, professional responsibility refers to professional ethics and loyalty to one's professional group (e.g., adhering to professional as opposed to just school- specific norms). And fifth, civic responsibility refers to loyalty to civic values (e.g., helping students become contributing citizens of society).

Factors That Contribute to a Sense of Personal Responsibility

The multidimensional nature of teacher responsibility just described implies that a set of factors could affect one or more of its six components. Overall, two complementary levels of analysis are suggested: teacher responsibility as a relatively stable disposition, and situational factors that influence or interact with teachers' sense of responsibility. A personality disposition (e.g., Bierhoff et al., 2005; Winter, 1992) would imply that some teachers generally feel more whereas others feel less responsible across situations. However, this approach provides little guidance regarding the factors that may foster an internal sense of obligation and duty in specific instructional settings. The situation-specific conceptualization of teachers' sense of responsibility, by contrast, calls for a fine-grained analysis of contextual characteristics (e.g.,

work design, organizational climate) and situation-specific responsibility criteria. Yet the dispositional and the situation-specific notions of responsibility are complementary since teacher responsibility as a personality characteristic can interact with contextual factors (e.g., take charge, assume leadership roles when given the opportunity to do so). In the following section, we discuss such contextual factors and personal characteristics that are likely to influence the individual sense of responsibility, as shown in Figure 1.1. We conclude the review of contextual and personal influencing factors with a discussion of the importance of learning opportunities that can improve the fit between the organizational environment and personal dispositions.

Insert Figure 1.1. about here.

Contextual Influences

Job autonomy. Among the factors and conditions with the potential to foster an internal sense of responsibility, most research has focused on its relation to autonomy. For example, Hackman and Oldham's job characteristics model is widely used in the field of organizational psychology to study the relation between structural characteristics of the work context and the degree of personal responsibility for job related outcomes (Hackman & Oldham, 1975). In this model, responsibility reflects the extent to which "the individual feels personally accountable and responsible for the results of the work he or she does" (Hackman & Oldham, 1976, p. 256). Hackman and Oldham (1975, 1976) proposed that job autonomy (degree of independence and freedom in how people do their work) leads to an increased sense of responsibility and thus to increased work motivation and performance. A recent meta-analysis provided support for this hypothesis and demonstrated that perceived responsibility mediates the positive effects of job autonomy on job satisfaction, intrinsic motivation, and (partially) subjective job performance

(Humphrey, Nahrgang, & Morgeson, 2007). A study with elementary and secondary level teachers using Hackman and Oldham's measures indicated that, compared to workers in other occupations with similar educational levels, teachers report relatively high job autonomy and high responsibility (Ellis & Bernhardt, 1992). Although teachers may have considerable autonomy for some aspects of their work (e.g., their instructional decisions), however, it is important to acknowledge that their degree of influence over school, district and state policies is typically limited. Thus, teachers' degree of job autonomy may vary for different aspects of their work, and it is unclear how such variation may affect their sense of responsibility for work-related outcomes.

Autonomy in the job characteristics model is considered a structural variable (degree of freedom in how people do their work), whereas autonomy in self-determination theory is conceptualized as a basic psychological need for personal freedom and self-determination (Deci & Ryan, 2000; Ryan & Deci, 2006). Research in self-determination theory suggests that teachers' sense of autonomy can be restricted by contextual factors such as accountability pressures, external reform pressures, and other demands (Assor, Kaplan, Feinberg, & Tal, 2009; Deci et al., 1982; Pelletier et al., 2002; Reeve, 2009; Ryan & Brown, 2005). However, Assor and colleagues (2009) proposed that when the principles of self-determination theory are taken into account, the negative impact of external reform pressures on teachers' autonomous motivation can be reduced. The authors demonstrated that when educational reforms support teachers' basic needs for competence, relatedness and autonomy, teachers are more likely to internalize these reforms and to implement them successfully—an outcome that likely indicates an internal sense of responsibility for constructive change.

Structural models of work design such as the job characteristics model have been criticized for their lack of attention to proactive forms of responsibility (e.g., initiating organizational change and taking charge behavior; Fuller, Marler, & Hester, 2006; Parker & Turner, 2002). Being proactive and taking charge constitutes a core component of the definition of responsibility proposed by Bierhoff and colleagues that was discussed in previous sections (see above, Bierhoff et al., 2005). In the organizational literature, internal sense of responsibility for constructive change has been defined as "an individual's belief that he or she is personally obligated to bring about constructive change" (Morrison & Phelps, 1999, p. 407). This proactive component of responsibility has important implications in an era of educational reforms as it implies that responsible teachers can be change agents aspiring to initiate and carry out constructive organizational change in order to meet students' educational needs (cf. Schalock, 1998). Fuller, Marler and Hester (2006) examined whether job autonomy, as reported by the employees' direct supervisors in a not-for-profit municipal utility company, is an antecedent of felt responsibility for constructive change. The authors found a positive correlation between the two constructs, although the analyses were inconclusive about the predictive power of job autonomy relative to other constructs. In view of Assor et al.'s (2009) findings, it is possible that the operationalization of autonomy as a psychological need within the self-determination framework is a stronger predictor of felt responsibility for constructive change than is job autonomy as a structural variable reported by supervisors. Further research is needed to resolve this issue.

Position in the organizational hierarchy. In addition to autonomy, Fuller and colleagues (2006) proposed that one's position in the organizational hierarchy is important because of the role responsibilities associated with this position and because people in higher

positions not only bear responsibility for their own work but also for the work outcomes of others. The authors found moderately high correlations between position in the organizational hierarchy and job autonomy, as well as a positive correlation between position and felt responsibility for constructive change. Because there is relatively little variation in teachers' positions within the hierarchical organization of schools, however, it is possible that a direct measure of teachers' perceived role responsibilities as professionals and employees might be a more powerful predictor of teachers' felt responsibility for change.

      Availability and distribution of resources. Fuller and colleagues (2006) proposed that there are three types of socio-structural variables that are likely to foster an internal sense of responsibility for constructive change: access to resources (e.g., equipment, time, funding), access to strategy-related information, and role ambiguity. These researchers found a positive relation between perceived availability of resources at work (types of resources not specified) and felt responsibility for constructive change for employees with proactive personality (dispositional tendency to be proactive; see below discussion of person influences on responsibility). Fuller and colleagues suggested that the autonomy to allocate and use organizational resources implies responsible decision making, and that the availability of resources often supports the generation and implementation of innovative ideas; however, in view of the moderating role of proactive personality, it is possible that available resources are better understood as a facilitator rather than an antecedent of responsibility.

      In addition to the availability of resources, the way that available resources are used could have important implications for the work environment and potentially that for which people feel responsible. For example, in their efforts to transform the school culture in two urban schools, Maehr and Midgley (1996) argued that organizational change is driven not only by the

availability of resources but also by their distribution—who gets what and for what reason—because resource distribution signals what is valued and can communicate the priorities of the organization. Thus, in some cases resources may be necessary for teachers to fulfill specific responsibilities (e.g., availability of adequate teaching materials), whereas in other cases the organization may foster responsibility through the distribution of and autonomy over the use of resources. It is also possible that teachers who feel more responsible for educational outcomes actively seek resources that allow them to fulfill their professional responsibilities.

Availability of information. Another important socio-structural factor is the availability of strategy-related information. Such information is critical for individuals to align their goals and behavior with organizational objectives (Fuller et al., 2006; Randolph, 1995). In addition, sharing sensitive information about the organization instills a climate of trust, provides members of the organization with a rationale for organizational decisions, and enables them to take responsibility for problem solutions and to contribute ideas for constructive change (Blanchard, Carlos, & Randolph, 1999; Randolph, 1995). In addition, Assor and colleagues' (2009) analysis suggests that both the availability of information about the underlying principles of educational reforms and the ways in which this information is conveyed to teachers (e.g., autonomy-supportive versus controlling ways) is important for teachers' identification with and successful implementation of educational reforms.

As noted previously, the individual's perceived social roles constitute important criteria of responsibility (see above "criteria of responsibility"). The dynamics among different roles, such as role ambiguity, conflict and overload, also can have critical implications for responsibility. Role ambiguity refers to lack of clarity with respect to one's responsibilities within the organization (Rizzo, House, & Lirtzman, 1970). Low ambiguity and, respectively,

high role clarity is indicated by "certainty about duties, authority, allocation of time, and relationships with others; the clarity or existence of guides, directives, policies; and the ability to predict sanctions as outcomes of behavior" (Rizzo et al., 1970, p. 156). Role ambiguity can lead to hesitancy, lack of confidence in one's decision making, and decreased job satisfaction (cf. Sawyer, 1992; Schaubroeck, Cotton, & Jennings, 1989; Spreitzer, 1996). In addition, there is a negative relation between ambiguity and job autonomy, feedback from the job, social support (Humphrey et al., 2007; Sawyer, 1992), and empowerment in the workplace (Spreitzer, 1996). Role ambiguity can have implications for responsibility because individuals cannot act responsibly if they are not clear about what being responsible means in a given context.

In addition to role ambiguity, role conflict (responsibility for incompatible roles) and role overload (high volume of demands associated with one's role in the organization) also negatively impact well-being and organizational commitment, which refers to different forms of psychological attachment to the organization (Jawahar, Stone, & Kisamore, 2007; Schaubroeck et al., 1989). For example, in a sample of primary level teachers in Greece, Papastylianou and colleagues (2009) demonstrated that role conflict and role ambiguity were related to teachers' sense of emotional exhaustion. In addition, in a sample of high school teachers, Reyes and Imber (1992) found that teachers who perceive their workload as unfair—an indication of perceived role overload—reported lower levels of faculty morale, lower commitment, and lower job satisfaction than teachers who perceived their workload as fair. These findings suggest a possible curvilinear relation between felt responsibility and teachers' well-being such that too much responsibility and identification with too many poorly defined roles may lead to such negative consequences as burnout and decreased job satisfaction. However, role stress research has not taken into consideration possible variation in the degree of felt responsibility for different roles

and has not distinguished between teachers' internal and formal responsibility (e.g., Bacharach, Bamberger, & Mitchell, 1990; Conley & You, 2009; Papastylianou et al., 2009). A better understanding of the relation between role stress and felt responsibility would also require higher domain-specificity; for example, individuals may feel a strong sense of responsibility for some work aspects even when they generally experience role ambiguity in their work. Fuller and colleagues (2006), for instance, did not find a relation between role ambiguity and felt responsibility for constructive change, but it is not clear whether and to what extent the employees felt ambiguity specifically toward their role as change agents, perceived this role to be in conflict with other roles, or perceived role overload that limits their ability to fulfill this responsibility.

Person Influences

Factors discussed in the previous section constitute conditions in the organizational environment that enable the individual to assume responsibility. As such, these factors constitute opportunities for being responsible; whether or not different individuals will seize such opportunities, however, may depend upon their personal beliefs and such personal characteristics as perceived organizational support, proactive personality, perceived internal control, efficacy, trust, and personal work ethic.

Perceived organizational support. Perceived organizational support has been defined as the extent to which people believe that their contributions and well-being are valued in the organization in which they work (Eisenberger, Huntington, Hutchison, & Sowa, 1986). Perceived support positively predicts the individual's level of organizational commitment as well as well-being even after controlling for structural characteristics of the work environment such as role ambiguity, conflict, and overload (Panaccio & Vandenberghe, 2009). Perceived

35

organizational support is related to organizational commitment and to an internal sense of obligation because it sets the stage for social exchange. More specifically, social exchange models posit that when people are appreciated by the organization, they feel an internal obligation to reciprocate, which leads to increased commitment and willingness to invest effort for the benefit of the organization (Eisenberger, Armeli, Rexwinkel, Lynch, & Rhoades, 2001; Gouldner, 1960; Panaccio & Vandenberghe, 2009). Perceived organizational support negatively predicted absenteeism in a sample of private high school teachers (Eisenberger et al., 1986) and was positively related to felt obligation to support the objectives and welfare of the organization in a sample of employees in a mail-processing facility (Eisenberger et al., 2001). Furthermore, felt obligation mediated the positive effects of perceived organizational support on self-reported affective organizational commitment and supervisor-reported extra-role engagement and fulfillment of duties (Eisenberger et al., 2001)[9].

There are different paths through which organizations such as schools can demonstrate appreciation and concern for their employees. For example, Rosenholtz and Simpson (1990) found in a sample of elementary teachers that the sense of being protected from extraneous tasks by the school administration (perceived "principal buffering") predicted teacher commitment. It is possible that such forms of organizational support not only create a norm of reciprocity but also increase teachers' (perceived) ability to fulfill their professional responsibilities.

Proactive personality. Proactive personality is a relatively stable disposition toward taking action to influence one's environment as opposed to being passive and waiting for directions from others (Bateman & Crant, 1993). Fuller, Marler and Hester (2006) found that having a proactive personality type moderated the positive relation between availability of

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[9] The effects of perceived organizational support were moderated by the employees' exchange ideology, which reflects attitudes toward the appropriateness of having an exchange relationship with the organization.

resources and information and felt responsibility for constructive change. Proactive personality is likely related to personal responsibility because it implies a predisposition to take charge and initiative beyond one's formal obligations (cf. Thompson, 2005). Thompson (2005) demonstrated that the positive link between proactive personality and supervisor-reported job performance in a sample of business school alumni was mediated by the employees' network building and initiative taking (which indicates willingness to assume responsibility beyond formal job expectations). Erdogan and Bauer (2005) also proposed that moderators such as person-environment fit should be considered to better understand the effects of proactive personality. These researchers found in a sample of elementary and high school teachers in Turkey (Study 1) and in a sample of university professors in the United States (Study2) that high person-organization fit (congruence with organizational values) moderated the positive relation between proactive personality and job and career satisfaction. In addition, person-job fit (perceived fit between personal abilities and job demands) moderated the relation between proactive personality and job satisfaction in the teacher sample and between proactive personality and the research productivity of tenure-track faculty members in the sample of university professors. Erdogan and Bauer proposed that high person-environment fit increases the likelihood that proactive actions are fruitful and valued within the organization. Although responsibility was not examined in this study, a similar rationale may apply; sense of responsibility that is motivated by proactive personality may not always be in line with organizational goals (e.g., choice of a teaching approach that is not fully in line with school or policy requirements) and the "realm" of responsibility should also be considered (e.g., realm of the school versus realm of the profession).

Perceived internal control and self-efficacy. Perceived internal control and efficacy are additional personal characteristics that can enhance an internal sense of responsibility. Lee and Smith (1996) and Lee (2000) indicated that items that measure teacher efficacy (e.g., "I can get through to the most difficult student"), locus of control (e.g., "Students' success or failure is due to factors beyond me"), and responsibility (e.g., "Teachers are responsible for keeping students from dropping out") formed one psychometrically coherent factor, which supports the assumption that these three constructs are empirically as well as conceptually related. Only one out of 12 items, however, directly referred to responsibility, thus leaving the conceptual interpretation of this measure in need of further consideration. Here, we highlight the fact that perceptions of internal control over environmental outcomes (Rotter, 1966) and beliefs in one's capabilities to attain designated types of performances (Bandura, 1986) are likely to increase the willingness to accept responsibility. Such acceptance is likely, first, because the individual believes that he or she is capable of fulfilling this responsibility, and second, because of less concern with anticipated failure, which reduces the likelihood of strategic withdrawal and denial of responsibility as a means of protection from self-blame. In addition, responsibility has been conceptualized as a motivating factor underlying the decision to engage in behaviors, for which one feels efficacious (Silverman, 2010).

Trust. Trust has been defined as "an individual's willingness to be vulnerable to another based on the belief that another party is competent, honest, reliable, and concerned about the individual's own interests" (Spreitzer & Mishra, 1999, p. 159). Several of the factors and relations discussed so far are related to a climate of trust. For example, the principle of reciprocity implies a trusting relationship between the employee and the organization that rests on the expectation that each party will value and reward the effort and investments of the other.

A trusting relationship is also required to provide employees with structural support such as resources and sensitive information about the organization. The organization needs to trust that the individual will use these resources responsibly and to the benefit of the organization, whereas the individual needs to trust the organization that his or her decision making with regard to using these resources will not be sanctioned. Being responsible, in turn, is likely to instill trust so that the relationship between the two is probably bidirectional.

In a comprehensive review of the literature, Tschannen-Moran and Hoy (2000) identified two mechanisms through which trust can be initiated in the context of schools. First, administrators' behaviors such as consistency, integrity, willingness to apologize for unpleasant consequences, concern, clear communication and shared control cultivate trust because these behaviors provide a structured and safe environment (Tschannen-Moran & Hoy, 1998; Whitener, Brodt, Korsgaard, & Werner, 1998). Second, teacher behaviors that cultivate trust are mutual support among colleagues, sharing of resources such as teaching materials, and honesty (Tschannen-Moran & Hoy, 2000).

For teachers, the construct of trust applies not only to their relationship with the organization, as represented by the school administration and colleagues, but also to their relationship with students and parents. Teachers' trust in students and parents is reflected in their beliefs that students are willing and capable to learn and that students' parents are reliable, honest, and supportive of student learning (Hoy, Tarter, & Woolfolk Hoy, 2006; Woolfolk Hoy et al., 2008). Teachers' trust in students and parents, teacher efficacy (teachers' beliefs in their ability to produce positive classroom outcomes), and teachers' academic emphasis (emphasis on academic tasks) are correlated and form a higher order factor labeled academic optimism (Woolfolk Hoy et al., 2008). These three constructs in concert, as well as trust alone, have been

found to predict student achievement above and beyond students' socioeconomic status, prior achievement, and other demographic characteristics (Goddard, Salloum, & Berebitsky, 2009; Hoy et al., 2006).

Trust and the factors that cultivate it are likely to instill responsibility because they may reduce the sense of vulnerability associated with taking responsibility and being accountable. In addition, teachers who trust that their colleagues and school administrators will be supportive, that their students are capable and motivated, and that students' parents are honest, reliable, and supportive of student learning may be more willing to assume responsibility for student outcomes because they can share this responsibility.

Personal work ethic. Work ethic can be a critical antecedent of responsibility as it defines norms and standards that serve as criteria of responsibility. Work ethic has been defined as a set of beliefs and work attitudes that reflect personal commitment to the value and importance of work and has been considered a multi-dimensional construct (Miller, Woehr, & Hudspeth, 2002). Seven dimensions have been proposed and empirically validated. These seven dimensions reflect personal value and importance associated with: (a) work (e.g., personal importance of being able to work), (b) leisure and non-work related activities (e.g., personal importance of being able to have leisure time in addition to work), (c) self-reliance (e.g., being independent and self-determined), (d) being hard-working (e.g., considering hard work a virtue), (e) being a moral person (e.g., being fair and honest), (f) delay of gratification (e.g., preference for a larger distant reward rather than a smaller immediate reward), and (g) productive use of time (Miller et al., 2002). Six studies with college students and professionals indicated that this multidimensional measure of work ethic is related to job satisfaction, job involvement, organizational commitment, and supervisory performance evaluations (Miller et al., 2002). In

addition, unidimensional measures of work ethic are related to performance (Merrens & Garrett, 1975) and task persistence (Greenberg, 1977; Merrens & Garrett, 1975). In a study using scenarios, Christopher and Schlenker (2005) also found that Protestant work ethic was related to positive outcome expectations, more negative reactions to possible failure, and a tendency to hold others responsible for their actions. The authors concluded that high work ethic is related to the tendency to place high value on personal responsibility.

Learning – The Dynamic Link Between Contextual and Person Influences

The categorization of contextual and person characteristics is not meant to imply that responsibility will follow given the concurrence of the "right" personality and the "right" circumstances. On the contrary, learning opportunities can also lead to a person-environment fit since learning experiences not only shape personal beliefs about responsibility, but also enable the individual to shape the organizational environment. For example, without learning opportunities, teachers may lack the knowledge and skills necessary to adapt to different work conditions. Similarly, school administrators may not have the skills to create a supportive work environment.

There are several avenues through which such learning opportunities can nurture responsibility. First, through teacher education and professional development teachers may learn about "best practices" and normative expectations for good teaching and, consequently, about standards of professional responsibility (e.g., Buitink, 2009; Glazer & Hannafin, 2006). Second, when the subjective probability of improvement is perceived as high, people are more willing to accept responsibility even in the face of failure (see above, Duval & Silvia, 2002). Accordingly, to the extent that different forms of learning and professional development increase teachers' expectations to be successful with their students, learning should increase teachers' willingness

to take responsibility and to face their professional challenges. Third, because effective

professional development provides teachers with the opportunity to improve their teaching skills

and enhance their sense of efficacy, such learning opportunities are likely to increase not only

their willingness to take responsibility but also their ability to carry out the things for which they

feel responsible. Characteristics of effective professional development that are likely to elicit

such positive effects by increasing teachers' knowledge and skills and improving classroom

practices include a focus on content knowledge, opportunities for active learning, and coherence

with other learning activities such as continuing professional communication among teachers

(Garet, Porter, Desimone, Birman, & Yoon, 2001). These factors indicate that effective learning

needs to be embedded in and logically connected to the school context.

Conclusions and Implications

We adopted Lenk's (1992) six-component framework to capture the essential elements of

teacher responsibility: (a) Who is responsible? (b) For what? (c) For/to whom? (d) Who is the

judge? (e) In relation to what criteria? and (f) In what realm? Our analysis of different

conceptualizations of personal responsibility suggests that it reflects *a sense of internal*

obligation and commitment to produce or prevent designated outcomes or that these outcomes

should have been produced or prevented. Thus, responsibility can be domain-specific and it can

vary systematically across individuals, it can be approach-oriented (producing outcomes) or

avoidance-oriented (preventing outcomes), and it can be retrospective (e.g., in the form of

critical self-judgments) or oriented toward the future (e.g., taking charge). Different

conceptualizations of responsibility, including collective responsibility, have been associated

with such outcomes as career success (Winter, 1991), goal commitment to solving a challenging

task (Bierhoff et al., 2005), teachers' classroom behaviors (Rose & Medway, 1981b), and

positive change in student learning and achievement (Guskey, 1984; Lee & Loeb, 2000; Lee & Smith, 1996).

The outcomes for which teachers feel responsible (the second component of responsibility in Lenk's model) can vary in degree of specificity, positive or negative valence, and can refer to actions or tasks. According to the third and fourth components of the model, different areas of responsibility can be defined in relation to different addressees and different judges of responsibility. Tensions may occur if these responsibilities are not synchronized (e.g., responsibility to students versus to administrators) or if different judges (e.g., administrators, parents, teachers) emphasize conflicting goals. In addition, responsibility can be determined with respect to different criteria (the fifth component), including descriptive criteria such as causality, and normative criteria such as social/moral norms and roles (Twiss, 1977). It can also be determined in reference to realms of responsibility (the sixth component) in which different sets of criteria apply, including the realm of the work environment, of the profession, of personal ethics and conscience, of collegiality, and of civic responsibility (Bovens, 1998). The variety of criteria renders responsibility a highly dynamic construct, and it highlights the importance of context.

A common theme across all six components of responsibility is the distinction between internal versus imposed responsibility, which are, respectively, self-regulated or externally controlled. This distinction is important as it suggests that formal responsibility (e.g., as defined by an accountability system) does not guarantee personal commitment and an internal sense of obligation. There are different perspectives about how formal and internal sense of responsibility can be aligned. According to the rationale of accountability systems, teachers will assume responsibility for student outcomes in response to clear performance indicators and

corresponding incentives and sanctions. Given the multifaceted nature of responsibility, however, such an approach may considerably oversimplify teachers' sense of professional responsibility by reducing it primarily or even exclusively to narrowly defined performance indicators, and by discounting such critical factors as self-regulation and self-determination, and the degree of teacher commitment to competing professional standards and student needs.

This is not to say that professional accountability is unnecessary and that all teachers would be willing to assume responsibility. Rather, we propose that teacher responsibility is embedded in contextual factors such as job autonomy, position in the organizational hierarchy, availability and distribution of resources and information, role ambiguity, conflict and overload, as well as person factors such as perceived organizational support, proactive personality type, internal locus of control, self-efficacy, trust, and work ethic. It must also be stressed that these factors, and the relations between them, are not static given that teachers have the opportunity to adjust to and shape their professional environments. Thus, neither personal characteristics nor contextual factors should be conceptualized as fixed determinants of responsibility.

Analyses of how accountability systems support or interfere with teachers' sense of responsibility are necessary to identify alternative approaches other than the implementation of external monitoring and control mechanisms to align accountability and responsibility. For example, our review indicates that internal responsibility would require that accountability standards are accepted as meaningful and valid indicators of teachers' effort and professional achievement, teachers are equipped with the skills and resources necessary to achieve these standards, and the standards are perceived as worthy goals for teachers' efforts.

Given the importance of factors such as job autonomy, an additional concern is related to whether accountability systems are at odds with teachers' sense of autonomy and self-

determination. Self-determination theory suggests that performance feedback interferes with autonomy when this feedback has controlling rather than informational significance for the individual (Deci & Ryan, 2000; Ryan & Deci, 2006). Indeed, based on a comprehensive review, Firestone and Pennell (1993) conclude that "as feedback becomes less information oriented and more evaluative, teachers feel less responsible for their instructional choices and, consequently, less committed" (p. 505). Information oriented feedback is not punitive and indicates ways in which personal effectiveness can be increased (Deci & Ryan, 2000; Ryan & Deci, 2006). Accordingly, accountability standards not only need to be meaningful and valuable for teachers, but also to indicate ways their work can be improved. This also implies that accountability standards cannot be rigid, but rather flexible enough to acknowledge individual needs, local conditions and areas of improvement.

It is also important to note that withdrawing control and punitive feedback does not automatically engender autonomy, since lack of structure may lead to ambiguity rather than autonomy (Randolph, 1995). According to Randolph (1995), structure that leads to increased autonomy can be provided through such mechanisms as: (a) vision statements that emphasize responsibility and cooperation; (b) goal setting based on collaboration across hierarchical levels of the organization and oriented toward progress rather than end results; (c) decision making within clearly defined role responsibilities; (d) performance appraisals focusing on collaboration and continuous improvement and incorporating ongoing coaching and self-assessment; and (e) continuous training that enables employees to take responsibility. These mechanisms suggest that a climate of responsibility requires not only individual but also collective effort.

Accordingly, further consideration of individual versus shared responsibility is necessary, especially given the large network of responsibility agents involved in the education of children.

Darling-Hammond (2010) emphasizes the importance of reciprocal accountability proposing that accountability (that is aligned with responsibility) cannot be limited to the context of the school. Based on a detailed analysis of professional, organizational and system-wide accountability, she concludes that:

> In a system of shared accountability, *states* would be responsible for providing sufficient resources, for ensuring well-qualified personnel, and for adopting standards for student learning. *School districts* would be responsible for distributing school resources equitably, hiring and supporting well-qualified teachers and administrators (and removing those who are not competent), and encouraging practices that support high-quality teaching and learning. *Schools* would be accountable for creating a productive environment for learning, assessing the effectiveness of their practices, and helping staff and parents communicate with and learn from one another. *Teachers and other staff* would be accountable for identifying and meeting the needs of individual students as well as meeting professional standards of practice. Together with colleagues, they would continually assess and revise their strategies to better meet the needs of students. (p. 305)

Such an environment of mutual accountability suggests that if teachers and schools are accountable to produce high-quality outcomes, then states, too, should be accountable for providing the conditions under which high-quality outcomes can be achieved.

Directions for Future Research

Our analysis suggests many possible avenues for future research. We believe that research in educational psychology should focus on: (a) the operationalization of different components of teacher responsibility, which includes analyses of discriminant validity relative to conceptually similar constructs such as teacher efficacy and locus of control, (b) fine-grained analyses of the mechanisms through which responsibility affects student and teacher outcomes over time, (c) analyses of the dynamics between individual and collective responsibility, and (d) the interplay between internal responsibility and formal accountability.

The assessment of teacher responsibility poses a challenge, given the many ways in which responsibility has been conceptualized. Further alignment of the conceptualization and

operationalization of teacher responsibility is necessary since the term responsibility has been used relatively inconsistently in the literature, and not all studies capture its primary ingredients, namely a sense of obligation and commitment and a sense of "should." These ingredients are important for distinguishing responsibility from other conceptually similar constructs such as teacher efficacy ("I can" versus "I should") and locus of control ("something happened because of me" versus "something *should* have happened because of me").

One of the main challenges for future research on teacher responsibility is the analysis of mechanisms through which teacher responsibility affects student and teacher outcomes over time. It may be possible to identify teacher behaviors that are consistently associated with a high sense of responsibility (e.g., being on time, being reliable), but it is also possible that the same underlying sense of responsibility triggers different behaviors. For example, a teacher who feels responsible for student motivation may use different strategies to motivate students. Therefore, critical self-judgment, effort investment, and internal regulation to achieve desirable outcomes may be better indicators of teacher responsibility than would be specific actions. In addition, one would expect that teachers who feel responsible for student outcomes should be willing to modify their beliefs and instruction when they are not meeting desired objectives or their sense of personal responsibility for these objectives should decrease. The dynamic nature of responsibility calls for analyses of personal and contextual factors that affect teachers' sense of responsibility over time.

Finally, future research is needed to examine teacher responsibility in the context of a larger network of shared responsibility (including the relations between individual and collective responsibility) and formal accountability. The impact of accountability systems can be complex, with ramifications that extend beyond admonitions that teachers will be more "responsible"

when made more "accountable" for student outcomes. To the extent that the personal criteria of responsibility and the formal standards of accountability are discordant (reflecting a "responsibility-accountability gap"), accountability systems will be successful only in the presence of monitoring and high-stakes control mechanisms. If the criteria that determine teachers' sense of professional responsibility are not consistent with the criteria according to which they are judged accountable, an environment of accountability will not nurture responsibility, and as many have documented, will generate considerable resistance. A deeper understanding of the criteria and determinants of teacher responsibility is therefore essential, without which increasingly pervasive accountability systems may reduce rather than support teachers' internal sense of responsibility for educational outcomes and may fail to achieve their intended effects.

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Table 1.1. Components of responsibility and their specifications in the literature

| Component	Specifications in the literature
Who is responsible? ("subject" of responsibility)	Personal responsibility • Sense of internal obligation • Reference to a moral or legal standard (e.g., good/bad, right/wrong) • Critical self-judgment • Concern for others (e.g., own children, students) • Concern for consequences of own actions • Initiative and self-determination, deliberate decision-making • Internal locus of control
	Collective responsibility (e.g., among teachers) and diffusion of responsibility
For what?	Responsibility for own actions, consequences of these actions, actions of others for whom one is vicariously responsible, tasks, etc.
	Feeling responsible for something versus being held responsible for something
	Responsible for a problem versus for finding a solution
	Responsible for positive versus negative outcomes
In view of whom? ("object" of responsibility)	Responsible for someone (e.g., students)
	Responsible to someone (e.g., employer, parents, students)
Under the supervision or judgment of whom?	Self-judgment (e.g., teachers' internal sense of responsibility)
	Judging others responsible (e.g., teachers judge students responsible)
	Being judged responsible (e.g., teachers are held responsible by the school administration)
In relation to what criteria?	Prospective (e.g., what ought to be) versus retrospective judgments of responsibility (e.g., what should have been)
	Descriptive responsibility (e.g., causal relations between own actions and outcome determine responsibility) • Causality, controllability, mitigating circumstances • Intentionality, foreseeability, awareness of consequences, lack of coercion
	Normative responsibility (social expectations, norms, and moral standards)
	Responsibility attached to social roles (e.g., being an employee and a professional)
Within what realm of responsibility and action?	Formal obligations (e.g., contractual or legal obligations) versus voluntary work (e.g., organizational citizenship, personal values and work ethics)
	Hierarchical, personal, social, professional, and civic forms of bureaucratic responsibility
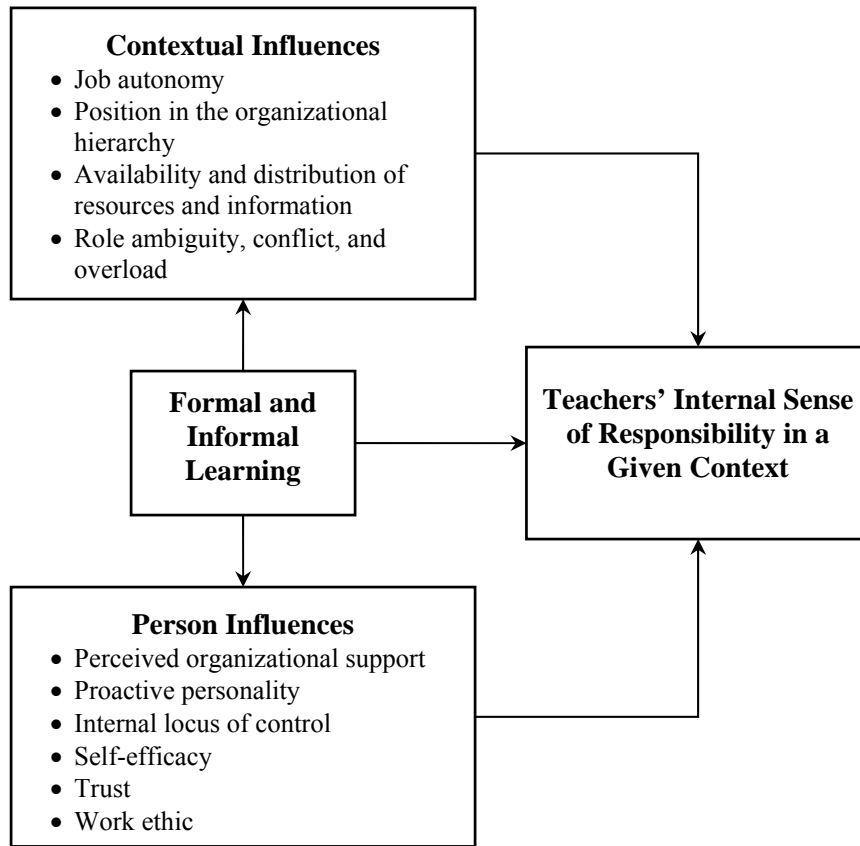
Figure 1.1. Contextual and personal characteristics that have the potential to foster an internal

sense of responsibility

CHAPTER III

The Meaning and Measure of Teachers' Sense of
Responsibility for Educational Outcomes[10]

Abstract

We provide a critical review of existing teacher responsibility measures, develop the rationale

for, and introduce a new Teacher Responsibility Scale (TRS). Evidence from a sample of

German pre-service teachers (Study 1) and American in-service teachers (Study 2) supported a

multi-dimensional model of teacher responsibility with four subscales that assess responsibility

for student motivation, student achievement, relationships with students, and teaching. The study

demonstrated that teacher responsibility is conceptually and empirically distinct from self-

efficacy, and that the associations between responsibility and self-efficacy vary by the type of

educational outcome. Implications for research on teaching and teacher education are discussed.

The Meaning and Measure of Teachers' Sense of Responsibility for Educational Outcomes

The current emphasis on performance-based accountability in schools places responsibility on teachers for ameliorating such unsatisfactory educational outcomes as low student performance and high rates of school dropout (Linn, 2006; Schalock, 1998). However, there is scarce evidence about how teachers themselves view their responsibilities and the conditions under which they are willing to accept personal responsibility for such outcomes. In particular, there has been insufficient attention to both the conceptualization and the assessment of teacher responsibility, including the distinction between responsibility and such closely related constructs as teacher efficacy (i.e., teachers' confidence in their capability to produce desired effects in their classrooms). Accordingly, we present two studies that were designed to: (a) introduce a newly developed measure of teacher responsibility, (b) demonstrate that this measure is conceptually and empirically distinct from teachers' sense of self-efficacy, and (c) compare the relations between responsibility and efficacy with regard to critical educational outcomes. In Study 1, information from pre-service teachers in Germany was used to develop a multi-dimensional assessment of teacher responsibility and to examine how it compares with teacher self-efficacy. Study 2 was then conducted to verify the factorial structure of the newly developed Teacher Responsibility Scale (the TRS) with in-service teachers in the United States. We begin by explicating different conceptualizations of teacher responsibility and the challenges associated with its assessment.

Conceptualization and Operationalization of Teacher Responsibility

Personal responsibility can be defined as a *sense of internal obligation and commitment to produce or prevent designated outcomes, or that these outcomes should have been produced or prevented* (Lauermann & Karabenick, 2011). According to this definition, responsibility can

67

be approach-oriented (to produce an outcome) or avoidance-oriented (to prevent an outcome), and it can refer to past, present, or future events. It can be considered a dispositional variable (i.e., some people are generally more likely than others to assume personal responsibility), or it can be domain- and outcome-specific (i.e., people's responsibility may vary for different types of outcomes).

Sense of responsibility is important for social relationships in formal contexts, such as feeling responsible to fulfill professional obligations, as well as in such informal contexts as feeling responsible to provide help. In addition, personal sense of responsibility can have important implications for motivation and self-regulation (cf. Higgins, 1997; Higgins, Roney, Crowe, & Hymes, 1994). In educational contexts, various conceptualizations of teacher responsibility have been linked to such outcomes as positive attitudes toward teaching and professional dedication (Halvorsen, Lee, & Andrade, 2009), job satisfaction (P. A. Winter, Brenner, & Petrosko, 2006), positive affect toward teaching (Guskey, 1984), teachers' belief in their ability to influence students, teachers' willingness to implement new instructional practices (Guskey, 1988), and with student achievement (Lee & Smith, 1996, 1997).

Despite such promising findings, however, educational research has faced critical challenges regarding the meaning and the measurement of teacher responsibility, which we review in detail in the following section. Although the topic of personal responsibility has been examined in various disciplines, including psychology, philosophy, and sociology, and from a variety of different perspectives (Auhagen & Bierhoff, 2001), relevant work with teachers has been limited to operationalizing teacher responsibility in terms of the following five approaches: internal versus external attributions of causality and control, single-item measures of responsibility, responsibility for specific outcomes such as education about multiculturalism and

diversity, generic measures of responsibility used with teachers, and measures of collective

teacher responsibility. Operationalization and sample items of existing measures are shown in

Table 2.1. In the following section, we outline these five approaches to the assessment of teacher

responsibility, discuss their conceptual and methodological limitations, and explicate the

distinction between personal responsibility and self-efficacy, which are often viewed as

conceptually intertwined.

Insert Table 2.1. about here.

Responsibility as locus of control. Guskey (1981) and Rose and Medway (1981a,

1981b) explored teachers' personal sense of responsibility from a locus-of-control perspective.

Within this framework, responsibility is defined as the degree to which teachers perceive

themselves, versus external factors that are outside of their immediate control, to be the cause of

positive or negative classroom outcomes (Guskey, 1981; Rose & Medway, 1981a). According to

this approach, responsibility is operationalized as attributions to internal and presumably

controllable causes such as the teacher's behavior (see Table 2.1.). Teacher responsibility,

operationalized as internal locus of control, has been positively linked to teacher efficacy

(Guskey, 1982, 1988). Guskey (1987) even proposed that responsibility and efficacy may be

conceptually indistinguishable, suggesting that teacher responsibility reflects "a teacher's belief

that 'I *made* this happen'," whereas self-efficacy reflects "a teacher's belief that 'I *can make* this

happen'" (p. 41) and consequently that only a temporal distinction differentiates the two

constructs.

There are several conceptual ambiguities, however, that warrant the need to distinguish

between teacher responsibility and locus of control, as well as between teacher responsibility and

teacher efficacy.[11] First, although responsibility and locus of control share the dimension of personal and presumably controllable causality (e.g., "Something happened because of me"), causality is not sufficient to define responsibility. Causal attributions reflect beliefs about the internal or external reasons for "what is" or "what has been," whereas responsibility also refers to "what should be" or "what should have been" (Ames, 1975; Weiner, 1995). For instance, Ames (1975) proposed that "it may make perfectly good sense for teachers to say that students failed because they did not try hard enough while ultimately viewing themselves as responsible for arousing student interest" (p. 675). Second, Weiner (1995) proposed that persons may not be judged responsible for an outcome that they have caused if there are mitigating circumstances (justifications or excuses) that alleviate or offset that responsibility. Finally, internal control and sense of efficacy do not necessarily imply feelings of internal obligation to exercise control over or to implement actions for which one feels efficacious. A belief that one is *able to* do something does not necessarily imply that one feels *personally responsible to* actually do it or that one *should have* done it. It is entirely possible for teachers with comparable levels of internal control beliefs and sense of efficacy to assign different degrees of personal responsibility for an outcome or to consider others more responsible. Therefore, it is important to distinguish between controllable causality and responsibility (cf. Weiner, 1995).

Single-item measures of teacher responsibility. Several studies have distinguished between "controllable causes" and teachers' self-ascriptions of responsibility, but these studies have typically used single items, asking teachers to rate their degree of responsibility for a student's performance on a single scale from "not at all" to "very much" or from "low" to "high"

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[11] Although our focus is on the distinction of responsibility from other closely related constructs, it is important to note that locus of control and self-efficacy are also conceptually distinct. Specifically, locus of control reflects the extent to which outcomes are perceived as contingent upon one's own actions; whereas efficacy indicates the extent to which a person believes that he or she is able to perform these actions (Bandura, 2006).

(see Table 2.1.; Ames, 1975; Matteucci, 2007; Matteucci & Gosling, 2004). The use of such single-item measures may be problematic given potential biases related to variability in wording and format, and due to undetectable measurement error (cf. Krosnick, 1999; Nunnally & Bernstein, 1994). In addition, single-item measures are not suited to assess responsibility as a multidimensional construct.

Forced-distribution scales have also been used as single-item measures. For instance, Ames (1975) employed a Washer Stacking Task, which asks instructors to distribute 100 washers among themselves, the student, and the "situation" according to each factor's relative degree of responsibility for the student's task performance. A problematic aspect of this assessment is that, unlike individuals, a situation cannot assume personal responsibility—it can only be a causal factor. Therefore, responsibility ascribed to the self and responsibility ascribed to the situation may have different meanings. Others (e.g., Brandt, Hayden, & Brophy, 1975) excluded attributions to the situation and asked participants to partial the responsibility for student performance only between themselves and the student. Such measures are appropriate only if comparative responsibility is of interest (i.e., how responsible the teacher feels relative to the student), since they do not indicate whether students and teachers share a lot or just a little responsibility.

Multi-item measures of teacher responsibility for specific educational outcomes.

Responsibility to provide education about diversity and multiculturalism. Silverman (2010) examined pre-service teachers' sense of responsibility to teach students about multiculturalism and diversity and included multiple responsibility items that conceptually distinguished between responsibility and other related constructs such as teacher efficacy. However, she assessed teacher responsibility as an underlying latent factor that includes teacher

71

efficacy, advocacy, and teacher beliefs about culture, multiculturalism, and diversity, and included responsibility items in more than one construct. For example, the subscale "Culture" combined such items as "The definition of 'culture' has become blurred" and "It is my responsibility to ensure all forms of culture are valued in my classroom." As a consequence, the empirical and conceptual distinctions between these constructs and their relations to responsibility are not entirely clear.

Responsibility for students with special needs. Another approach involves the assessment of teachers' sense of responsibility for working with students with special needs. Kauffman and colleagues (1991), for instance, used a modified version of the Inventory of Teacher Social Behavior Standards and Expectations (Walker, 1985; Walker & Rankin, 1983) to assess teachers' willingness to accept students who display problematic behaviors in their class and to take responsibility for dealing with the students' problems with or without technical assistance (see Table 2.1). Teachers' responsibility was assessed as their willingness to deal with students' problematic behaviors *with or without* technical assistance; teacher efficacy was assessed as teachers' preference to deal with students' problematic behaviors *without* technical assistance. The correlation between responsibility and efficacy was positive but not significant (Kauffman et al., 1991). This operationalization, however, is somewhat problematic. First, it is possible that even highly efficacious teachers prefer to receive technical assistance for students with special needs despite feeling confident in their capability to deal with such students on their own. Thus, this assessment may not capture the full spectrum of teacher efficacy. Second, it does not take into account the possibility that a teacher may feel highly efficacious to help a student but may not feel responsible to invest the necessary effort or resources to do so. This ambiguity

highlights the need to clarify the operationalization of teacher responsibility and its relation to efficacy.

Generic measures of responsibility. Several measures of responsibility can be considered "generic" because they capture the overall degree of perceived responsibility *without* referring to specific outcomes. The Job Diagnostic Survey (Hackman & Oldham, 1975, 1976), for example, is widely used in organizational contexts to capture the effects of different job characteristics (e.g., job autonomy) on such psychological states as responsibility, and the implications for work attitudes such as job satisfaction (Hackman & Oldham, 1975, 1976; Humphrey, Nahrgang, & Morgeson, 2007). Responsibility is defined as the extent to which "the individual feels personally accountable and responsible for the results of the work he or she does" (Hackman & Oldham, 1976, p. 256). Using an abbreviated version of the Job Diagnostic Survey with three responsibility items, Winter and colleagues (2006) found relatively low internal consistency of the scale, but general support for the job characteristics model— responsibility was positively related to such job characteristics as autonomy and positively predicted teachers' job satisfaction. An adapted version of the Job Diagnostic Survey for the teaching profession with German teachers, however, failed to identify a coherent responsibility factor (van Dick, Schnitger, Schwartzmann-Buchelt, & Wagner, 2001). Additional studies using the Job Diagnostic Survey indicated that U.S. teachers reported relatively higher levels of responsibility for their work compared to other workers with similar educational levels (Ellis & Bernhardt, 1992). Canadian teachers, however, rated themselves less responsible compared to employees in professional and service jobs (Barnabe & Burns, 1994). In sum, although there is general support for the job characteristics model for teachers, the assessment of teacher responsibility within this framework is problematic.

Another generic measure of teacher responsibility was developed by Lester (1987), who assessed responsibility as a component of job satisfaction. However, only three of eight items directly refer to responsibility, which indicates conceptual heterogeneity (see Table 2.1.).

Collective teacher responsibility. Rather than *personal* responsibility, Lee and colleagues examined teachers' sense of *collective* responsibility, which was positively related to student achievement across several academic disciplines (Lee, 2000; Lee & Loeb, 2000; Lee & Smith, 1996). However, the operationalization of collective responsibility varied across studies. For instance, using data provided by the Consortium on Chicago School Research, Lee and Loeb (2000) assessed collective responsibility in terms of teachers' perceptions of how many of their colleagues felt responsible for different educational outcomes (see also Bryk, Sebring, Allensworth, Luppescu, & Easton, 2010).[12] Lee and Smith (1996), on the other hand, studied the concept of collective responsibility as an aggregate of teachers' *self*-evaluations. Responsibility also was assessed as a composite of several theoretical constructs, such as teacher efficacy, internal locus of control, and personal responsibility for students' learning. Items representing these constructs formed one psychometrically coherent factor; however, most of the items were originally developed to assess teacher self-efficacy rather than responsibility, and only one of 12 items directly referred to responsibility.

Conclusions. A review of extant literature indicates, first, the need for a more comprehensive conceptualization and operationalization of teacher responsibility for important facets of their work, and second, the need to distinguish responsibility from self-efficacy, since the belief that "I can" (i.e., teacher self-efficacy) may not necessarily translate to a sense of "I should" (i.e., teacher responsibility). Accordingly, the present studies were designed to: (a)

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[12] Others have used a similar approach, but judgments of responsibility were mixed with such constructs as extra-role behaviors and perceived importance (Kardos & Johnson, 2007; Table 2.1.).

introduce a new measure of teachers' outcome-specific sense of responsibility, (b) demonstrate that confidence in one's ability to produce or prevent a designated outcome does not necessarily imply a sense of personal responsibility for this outcome, and (c) explore whether the relations between self-efficacy and responsibility vary according to those outcomes.

Scale Design

As explained subsequently, the TRS assessed teachers' willingness to assume personal responsibility for negative educational outcomes that they should have prevented (e.g., students' lack of interest). The rationale behind each of the design decisions is discussed in the following sections: (a) the target of teachers' responsibility (responsible for what), (b) level of item specificity, (c) authenticity (actual or imagined outcomes), (d) time frame (past, present or future), and (e) valence of the responsibility judgments (positive or negative).

Target of responsibility. In order to identify the target of teacher responsibility, it is necessary to distinguish between teachers' sense of responsibility for providing students with opportunities for academic success and teachers' responsibility for whether students are actually successful. In a seminal article, Coleman (1968) identified two diverging views about educators' professional responsibility: to provide educational services versus to ensure that these services result in desired student outcomes. Coleman noted that over the past century the responsibility for students' academic success had gradually shifted from students and their families to educators, concluding that "the responsibility to create achievement lies with the educational institution, not the child" (p. 22). The implications of such strong responsibility for teachers and students are not well understood, including such important questions as whether too much responsibility may put teachers at risk of burnout, and whether a stronger sense of responsibility on the part of the teacher implies a decrease in student responsibility. Yet the notion of outcome-

based responsibility is currently at the core of high-impact educational policies. Examples of such policies are the implementation of performance-based accountability systems (e.g., Frymier, 1998; Schalock, 1998; Schraw, 2010) and educational approaches such as the "No Excuses" model that has received empirical support and substantial popularity (e.g., Abdulkadiroglu, Angrist, Dynarski, Kane, & Pathak, 2009). Although this trend is most prevalent in the United States, the emphasis on teachers' performance-based accountability is increasing in other countries as well, including the United Kingdom and Germany (Levitt, Janta, & Wegrich, 2008; Maier, 2010). In view of these current trends in education, our design decision was to assess not only teachers' responsibility for providing educational services (e.g., preparing engaging lessons in order to increase student interest), but also for outcomes (e.g., whether or not students are actually interested).

A challenge related to our focus on outcome-based responsibility is that teachers may feel responsible for a variety of educational outcomes, including student motivation, learning, achievement, safety, relationships with students, and different teaching practices (e.g., Lauermann & Karabenick, 2009; Broadfoot, Osborn, Gilly, & Paillet, 1987, 1988). We selected five domains of teacher responsibility deemed important for students and teachers: responsibility for *student motivation* (interest, liking, and value of the subject taught by the teacher), *student achievement* (learning, performance, and academic progress throughout the school year), *students' self-confidence* (students' confidence in their ability to be successful in their classroom), for *having positive relationships with students* (students trust the teacher, rely on the teacher when they need help, and know that the teacher truly cares about them), and for *providing the best possible instruction* (the teacher's lessons are as effective and engaging as the teacher can possibly make them). Although a subset of domains cannot capture the full spectrum

of teachers' sense of responsibility, the goal was to focus on key responsibilities with which most teachers could identify, and thus to develop a scale that teachers would consider highly relevant for their professional lives.

Specificity. Responsibility can be operationalized with different degrees of specificity, from experimental studies and vignettes that describe specific situations (e.g., Ames, 1975; Weiner, 1995) to scales that assess personality characteristics and general behavioral tendencies (e.g., Bierhoff et al., 2005; D. G. Winter, 1992). For increased relevance we selected a moderate degree of specificity, asking teachers about situations that are likely to occur in any classroom (e.g., "I would feel personally responsible if a student of mine was not interested in the subject I teach" and "I would feel personally responsible if a student of mine had very low achievement").

Authenticity. Responsibility can be assessed in reference to hypothetical situations versus actual outcomes. Hypothetical situations are more abstract and may be considered less authentic. Their distinct advantage, however, is their applicability regardless of teachers' personal experiences. Therefore, statements included in the present scale were hypothetical and used the conditional stem: "I would feel PERSONALLY responsible if…" The advantage of using conditional items is especially important in the assessment of pre-service teachers, many of whom may have limited teaching experiences.

Time frame. Existing research has often focused on teachers' ascriptions of responsibility for past events (e.g., Ames, 1975; Matteucci, 2007; Matteucci & Gosling, 2004); however, teachers may also feel responsible to fulfill professional roles that apply across time (e.g., to teach about diversity; see Silverman, 2010), and may feel responsible to produce or prevent events in the future (e.g., student success or failure at the end of the school year). In

order to provide wide applicability, therefore, the proposed measure is based on hypothetical events that could occur at any time point.

Valence. Judgments of responsibility may also vary according to their positive or negative valence; for instance, there is a distinction between teachers' sense of responsibility to ensure that a positive outcome occurs in their classroom (e.g., to ensure that a student is interested in the subject taught by the teacher), and their willingness to assume responsibility if this outcome was negative (e.g., if a student was *not* interested in the subject taught by the teacher). Although both operationalizations are consistent with our definition of responsibility, the design decision was to focus on negatively valenced items. Whereas most teachers would likely agree that they are responsible to produce such important outcomes as student motivation and achievement, there may be greater variance in their willingness to hold themselves responsible if these outcomes did not occur (e.g., if student motivation and achievement were low). It was considered important to capture this aspect of critical self-judgment, first, because it has been identified as a core component of personal responsibility (cf. D. G. Winter, 1992), second, because teachers themselves consider critical self-judgment an important component of being responsible (Lauermann & Karabenick, 2009), and third because it can have implications for behavior regulation and performance improvement. For instance, in a comprehensive review of the literature on counterfactual thinking, Epstude and Roese (2008) point out that self-directed counterfactual thoughts, such as what the person could or should have done to improve a negative outcome, predict future performance. Positive or neutral events, on the other hand, are much less likely to prompt such thoughts. Similarly, several researchers indicate that responsibility judgments are typically prompted by negative rather than positive outcomes (Bovens, 1998; Weiner, 1995).

78

Study 1

Study 1 had three research objectives. The first objective was to test the factorial

structure of the TRS, which generated the following hypothesis:

Hypothesis 1: The newly developed scale would form five distinct factors: responsibility

for student motivation, for student achievement, for student self-confidence, for

relationships with students, and for teaching.

The second research goal was to demonstrate that teachers' internal sense of

responsibility for educational outcomes could be empirically distinguished from teachers'

confidence in their ability to produce or prevent those outcomes. This distinction was examined

by creating a teacher efficacy scale with items that were parallel to the responsibility items (see

Appendix). The objective was to demonstrate that—despite parallel item content—confidence in

teachers' capability (e.g., "I am confident that I can get any of my students interested in the

subject I teach") does not necessarily imply a sense of responsibility (e.g., "I would feel

personally responsible if a student of mine was not interested in the subject I teach"). These

considerations generated the following hypothesis:

Hypothesis 2: Teachers' confidence in their capability to produce or prevent designated

educational outcomes would be empirically distinguishable from their sense of

responsibility for those outcomes.

The final research goal was to test whether the association between teacher efficacy and

responsibility would vary by type of responsibility outcome (student motivation, student

achievement, student self-confidence, relationships with students, and teaching). It is possible,

for example, that some outcomes are perceived as controllable but may exceed teachers' sense of

professional responsibility, whereas other outcomes may be viewed as an important part of

teachers' role responsibilities but may be perceived as difficult to influence. In the absence of specific expectations based on prior research, the following hypothesis is non-directional:

Hypothesis 3: The relations between self-efficacy and responsibility would vary as a function of specific educational outcomes such as student motivation, student achievement, student self-confidence, relationships with students, and teaching.

Method

Sample. Data were collected from secondary-level pre-service teachers in a German university. Participants were recruited by the same instructor in two lectures they attended in their teacher education program. Overall, 315 pre-service teachers completed the survey (70% female, age range 18-37 years), corresponding to a 79% response rate. Thirty-nine percent (124) were recruited from a lecture for beginning students, and 61% (191) were recruited from a lecture for advanced students. In addition, the participants were enrolled in one of two teacher education programs: 77% (243) were preparing to teach in the highest academic track schools in the German school system (combined program for Gymnasium and Gesamtschule), whereas 22% (69) were preparing to teach in vocational schools (Berufskolleg; 1% non-response). About half (147) of the participants had experiences with teaching, typically in the form of tutoring individual students or small groups of students (3% non-response).

Procedure. All participants were invited to participate in an online survey, using their university email account. Items within each scale were presented in an order that was randomized across participants. In addition, because the content of the responsibility and efficacy items was matched, their order of scale presentation was also randomized such that some participants responded to the responsibility scale first, and others to the efficacy scale first.

Measures.

Responsibility. Teacher responsibility items were preceded by the statement: "Imagine that the following situations would occur when you are a teacher. To what extent would you feel PERSONALLY responsible that you should have prevented each of the following?" The scale included 21 items designed to represent five areas of responsibility: responsibility for student motivation (e.g., "I would feel personally responsible if a student of mine was not interested in the subject I teach"), student achievement (e.g., "I would feel personally responsible if a student of mine had very low achievement"), students' self-confidence (e.g., "I would feel personally responsible if a student of mine did not believe that he or she can be successful in my class"), relationships with students (e.g., "I would feel personally responsible if a student of mine thought he/she could not count on me when he/she needed help"), and teaching (e.g., "I would feel personally responsible if a lesson I taught was not as effective for student learning as I could have possibly made it"). The items were responded to on an 11-point scale with labels from 0 (*not at all responsible*) to 100 (*completely responsible*), in 10-point increments. The choice of this scale was informed by a pretest, which indicated that the participants were intuitively using a 0-to-100 percent scale in reference to their degree of personal responsibility.

Efficacy. The efficacy scale was parallel to the responsibility scale, with items preceded by the statement: "Imagine that you are a teacher. How confident are you about each of the following?" (e.g., "I am confident that I can get any of my students interested in the subject I teach"). Participants responded on an 11-point scale with labels from 0 (*not at all confident*) to 100 (*completely confident*), in 10-point increments.

Demographic information. Participants were asked to indicate their gender, age, current semester, academic track for which they are preparing to teach, and whether they have had any teaching experiences.

Results

The first set of analyses examined the factorial structure of the teacher responsibility scale. First, we present the descriptive analyses of the responsibility items. Second, we present the results of a cross-validation study with an exploratory and a confirmatory factor analysis (CFA) testing the a priori hypothesized factorial structure (*Hypothesis 1*). Third, we compare the responsibility scale with the efficacy scale in order to determine whether responsibility and efficacy represent two empirically distinguishable constructs (*Hypothesis 2*). Finally, we examine possible variation in the relations between responsibility and self-efficacy as a function of different educational outcomes (*Hypothesis 3*).

The comparative fit index (CFI), the Tucker-Lewis index (TLI), the root mean square error of approximation (RMSEA) and the standardized root mean square residual (SRMR) were used to evaluate the fit of the tested models. A good model fit is indicated if the CFI and the TLI are in the mid-90s or higher, and RMSEA and SRMR are less than .05; values of less than .08 for RMSEA and less than .10 for SRMR are considered acceptable (Hu & Bentler, 1999; Kline, 2005; Marsh, Hau, & Wen, 2004; Raykov & Marcoulides, 2006). All analyses were performed with Mplus, and missing data were estimated with the full-information maximum likelihood (FIML) algorithm.

Factorial structure of the Teacher Responsibility Scale. Each item was responded to by between 311 and 314 participants (i.e., maximum of 1.6% missing data on each variable); 298 cases (94%) had no missing data. With the exception of one item distribution, there were no substantial deviations from normality, as indicated by skewness ranging from -.93 to .38 and kurtosis ranging from -.73 to .78 (see Kline, 2005). One of the variables had skewness and

82

kurtosis greater than 1.0, but was excluded due to overall poor psychometric properties in subsequent analyses.

A confirmatory factor analysis (CFA) indicated that the expected five-factor model had only marginally acceptable fit to the data and thus required modifications, χ^2 (179, $N = 314$) = 433.81, CFI = .91, TLI = .89, RMSEA = .07, SRMR = .07. Specifically, an exploratory factor analysis was performed on one randomly selected half of the sample to modify the original model, and a confirmatory factor analysis was performed on the other half to test the replicability of the modified model (for more information regarding the use of exploratory factor analysis for model specification prior to cross-validation with confirmatory factor analysis, see Gerbing & Hamilton, 1996). The exploratory analysis was a principal axis factor analysis with oblique rotation, and factor extraction was based on eigenvalues greater than 1.0. Problematic items were eliminated if they failed to load on their designated factor, if they had high cross-loadings (>|.40|), if their variance was not well explained as suggested by low communalities, and if their loading on their designated factor was not strong (<|.60|). Overall, eight items were excluded based on these criteria. One of the factors—responsibility for students' self-confidence—was excluded due to unacceptably high cross-loadings of the items. The final solution thus consisted of four factors: responsibility for student motivation (three items), for student achievement (four items), for relationships with students (three items), and for teaching (three items). These four factors explained 63% of the total variance and had eigenvalues of 3.70, 2.78, 3.35, and 3.24, respectively. Factor loadings ranged from .63 to .85, and communalities ranged from .48 to .78. The final set of items is shown in the Appendix.

A CFA performed on the other half of the sample indicated that this modified model had good fit to the data, χ^2 (59, $N = 157$) = 76.49, CFI = .98, TLI = .97, RMSEA = .04, SRMR = .05,

which suggests that the identified four-factor structure was replicable. The fit of the four-factor model was then tested with the entire sample, which also supported a good fit to the data, χ^2 (59, $N = 314$) = 86.18, CFI = .98, TLI = .98, RMSEA = .04, SRMR = .04. Thus, as shown in Figure 2.1., the final solution included four factors: responsibility for student motivation (α = .84), for student achievement (α = .84), for relationships with students (α = .78), and for teaching (α = .79), in partial support of *Hypothesis 1*. This factor solution had good overall fit to the data and was more parsimonious than the original scale (with only 13 rather than 21 items).

Insert Figure 2.1. about here.

After confirming a satisfactory fit of the modified four-factor model, additional analyses were conducted to test alternative models. First, we compared the four-factor model to a one-factor model, which had inferior fit to the data ($\Delta\chi^2(6)$=549.83, $p < .001$; one factor: χ^2 (65, $N = 314$) = 636.01, CFI = .66, TLI = .59, RMSEA = .17, SRMR = .11). This provides support for the multi-dimensional structure of the scale. Second, because of the relatively high correlation between the motivation and the achievement factor ($r = .70$, $p < .001$, see Figure 2.1.), a three-factor model combining the motivation and the achievement factors into one factor was also tested. However, the four-factor model presented in Figure 2.1. had clearly superior fit to the data and was retained ($\Delta\chi^2(3)$ = 140.62, $p < .001$; three factors: χ^2 (62, $N = 314$) = 226.80, CFI = .90, TLI = .88, RMSEA = .09, SRMR = .05). Third, the correlations between the four factors in Figure 2.1. were moderate to high (.34 - .70), which may indicate a single higher-order factor. A model with a single higher-order factor provided an acceptable, yet significantly decreased model fit compared to the original model shown in Figure 2.1. ($\Delta\chi^2(2)$ = 26.51, $p < .001$; single higher-order factor: χ^2 (61, $N = 314$) = 112.69, CFI = .97, TLI = .96, RMSEA = .05, SRMR = .06). Our analyses in the following sections are therefore based on the four first-order factors.

Distinction between teacher responsibility and teacher efficacy. A second set of analyses was conducted to determine whether the responsibility and the efficacy scales measure two empirically distinguishable constructs. First, a four-factor model was tested in which each responsibility item was replaced by its corresponding efficacy item (see Appendix). Second, we tested whether an eight-factor structure, including four responsibility factors and four parallel efficacy factors, provides a superior fit to the data compared to a four-factor structure that combines responsibility and efficacy items.

The model fit of a four-factor efficacy scale—including 13 efficacy items that correspond to the responsibility items in our previous analysis—was satisfactory (χ^2 (59, $N = 315$) = 129.51, CFI = .97, TLI = .95, RMSEA = .06, SRMR = .03). In addition, the four efficacy factors had good internal consistencies: efficacy for student motivation ($\alpha = .83$), student achievement ($\alpha = .81$), relationships with students ($\alpha = .78$), and teaching ($\alpha = .82$). This suggests that the responsibility scale and the efficacy scale have parallel factor structures.

In order to test whether responsibility and efficacy are two empirically distinguishable constructs across educational outcome domains, we combined the previous analyses into one model with eight factors (four responsibility factors and four corresponding efficacy factors). This eight-factor model is illustrated in Figure 2.2, and the correlations between the eight latent factors are shown in Table 2.2. Correlations between error variances of responsibility and efficacy items with parallel content were also estimated.[13] The model fit of this eight-factor model was satisfactory, χ^2 (258, $N = 315$) = 443.58, CFI = .96, TLI = .94, RMSEA = .05, SRMR = .05.

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[13] The results were replicated without allowing intercorrelated error variances. However, this assumption is plausible because the content of the responsibility and the efficacy items was intentionally matched. Intercorrelated error variances indicate that there is a relation between items with the same content that is not explained by the underlying responsibility or efficacy factors.

Next, we tested whether a four-factor model that combines each pair of corresponding

responsibility and efficacy factors (e.g., efficacy for student motivation and responsibility for

student motivation) has a superior fit to the eight-factor model. The analysis indicated that the

proposed eight-factor model had a clearly better fit to the data ($\Delta\chi^2$ (22) = 1234.77, $p < .001$).

Furthermore, combining any of the four pairs of factors led to a significant decrease in model fit

compared to the eight-factor model: student motivation ($\Delta\chi^2$ (7) = 376.17, $p < .001$), student

achievement ($\Delta\chi^2$ (7) = 520.83, $p < .001$), relationships with students ($\Delta\chi^2$ (7)= 243.06, $p < .001$),

and teaching ($\Delta\chi^2$ (7)= 307.33, $p < .001$). This supports *Hypothesis 2*, according to which the

responsibility and the efficacy scales measure empirically distinguishable constructs even after

holding the item content parallel in both scales.

Associations between responsibility and efficacy and the four domains of

educational outcomes. A 2 (*Teacher Beliefs*: Responsibility vs. Efficacy) x 4 (*Educational*

Outcomes: student motivation, student achievement, relationships with students, and teaching)

repeated measures multivariate analysis of variance (RM-MANOVA) was employed to test the

differences between responsibility and efficacy as a function of the four domains of educational

outcomes. Both factors were within-subject factors, since the same participants responded to all

items. The analyses indicated significant main effects for *Teacher Beliefs* (Wilk's $\Lambda = .90$, $F(1,$

$313) = 36.13$, $p < .001$, $\eta_p^2 = .10$) and for the four *Educational Outcomes* (Wilk's $\Lambda = .27$, $F(3,$

$311) = 278.07$, $p < .001$, $\eta_p^2 = .73$), as well as a significant interaction effect between the two

within-subject factors (Wilk's $\Lambda = .53$, $F(3, 311) = 90.90$, $p < .001$, $\eta_p^2 = .47$). These results

suggest that pre-service teachers' beliefs about their responsibility and their self-efficacy are not

equivalent, and that the relations between these two types of beliefs vary as a function of different educational outcomes.

Paired *t*-tests were employed to further examine the mean differences between responsibility and efficacy for each educational outcome (see Figure 2.3.). These analyses indicated that three of the four comparisons were significantly different: student motivation (M_{Resp} = 38.06, *SD* = 21.04, M_{Effic} = 55.33, *SD* = 19.36; *t*(313) = 14.50, *p* < .001, *d* = .82), student achievement (M_{Resp} = 51.47, *SD* = 18.18, M_{Effic} = 56.58, *SD* = 17.84; *t*(313) = 4.80, *p* < .001, *d* = .27), and teaching (M_{Resp} = 68.25, *SD* = 17.99, M_{Effic} = 65.44, *SD* = 17.34; *t*(313) = - 2.60, *p* = .017, *d* = .14). Sense of responsibility and efficacy with regard to relationships with students did not differ significantly (M_{Resp} = 72.63, *SD* = 17.14, M_{Effic} = 73.44, *SD* = 16.96; *t*(313) = .85, *p* = .396, *d* = .04). In sum, pre-service teachers' sense of responsibility was significantly lower than their sense of efficacy for student motivation and achievement (with moderate to strong effect sizes), but was slightly higher than efficacy for teaching (with a small effect size). These analyses suggest that the relations between efficacy and responsibility differ as a function of the specific educational outcome, in support of *Hypothesis 3*.

Insert Figure 2.3. about here.

Additional analyses. An important question regarding the presented analyses is whether the differences between the responsibility and the efficacy items may be attributable to the approach-avoidance orientation of the items, as opposed to conceptual differences between responsibility and efficacy. In order to examine this question, we compared whether efficacy items for negative outcomes (e.g., "I am confident that I can prevent any of my students from having very low achievement") are empirically distinguishable from responsibility items (e.g., "I would feel personally responsible if a student of mine had very low achievement"). We focused

in particular on responsibility and efficacy for student achievement, since two of the four efficacy items in this factor had an avoidance focus (to prevent an outcome), whereas the remaining two items had an approach focus (to produce an outcome). The tested models are illustrated in Figure 2.4. First, a baseline four-factor model (separating efficacy items with approach and avoidance focus, as well as their corresponding responsibility items) had a very good fit to the data (see Figure 2.4a, χ^2 (10, $N = 315$) = 8.62, CFI = 1.00, TLI = 1.00, RMSEA < .01, SRMR = .02).[14] Next, we tested a model combining the efficacy and responsibility items with matched content and matched avoidance focus (see Figure 2.4b), but found that this model had very poor overall fit (χ^2 (13, $N = 315$) = 191.67, CFI = .82, TLI = .61, RMSEA = .21, SRMR = .10), and was significantly worse than the baseline model ($\Delta\chi^2$ (3) = 183.05, $p < .001$). These analyses indicate that even when responsibility and efficacy items have the same valence orientation (here, avoidance focus), responsibility and efficacy remain empirically distinguishable.

Insert Figure 2.4. about here.

Study 2

Study 2 was conducted to test whether the TRS developed on a sample of pre-service teachers would be applicable to an independent sample of in-service teachers. For descriptive purposes, possible variation in responsibility was examined with regard to (a) gender, (b) school level (elementary versus secondary), and (c) teacher-reported school poverty (percentage of students eligible for free or reduced-price lunch).

Method

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[14] Similar to the previous analyses, we allowed residual variances of items with matched content to be correlated.

Sample. Data were collected from a convenience sample of kindergarten through 12th-grade (K-12) regular in-service teachers in the United States who were recruited from a national online survey panel. Registered members of this panel are invited to participate in online research surveys in exchange for monetary incentives. A careful screening process was implemented to ensure that only current K-12 in-service teachers were included. Overall, the survey system identified 736 potentially eligible cases, 324 of whom were excluded for the following reasons: 168 were excluded because they were not regular school teachers (e.g., tutors, student teachers, substitute teachers, day care professionals, paraeducators, special education teachers), 112 were excluded due to incomplete surveys, 20 had provided implausible data (e.g., that they teach 0 or 1 students), and 24 were identified as duplicate cases based on their IP addresses, panel identifiers, and demographic data.

The final sample thus consisted of 412 K-12 teachers (68% female, age range 20-67 years). Twenty-eight percent were currently teaching at the elementary level, 4% at the elementary and middle level, 9% only at the middle school level, 5% at the middle and high school level, 52% only at the high school level, and 2% were teaching grades K-12. Twenty-one percent reported that they were teaching in high-poverty schools (more than 75% of the students are eligible for free or reduced price lunch), and 34% in low-poverty schools (25% or less of the students are eligible for free or reduced price lunch).

Measures. The TRS developed with pre-service teachers was used in this study, with four modifications. First, a German-English translation and back-translation was performed.[15] Second, the item "I would feel personally responsible if a student of mine failed my class" was

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[15] This process included a translation by the first author who is fluent in both languages and, as one of the creators of the scale, was able to consider conceptual as well as linguistic equivalence. An expert panel of German and American researchers reviewed the translation and a back-translation was performed. German pre-service teachers and American in-service teachers were interviewed to ensure that the items are interpreted as intended (see Author 2 et al., 2007). This process was completed prior to Study 1.

excluded, resulting in a total of 12 items (see Appendix). This item was excluded because not all

students can fail a class (e.g., kindergarten) and because the formal criteria for failing a class

may vary greatly across schools regardless of the teacher's sense of personal responsibility.

Third, since teachers may teach different subject areas and grade levels, they were asked to think

about a specific "target class." This procedure was adapted from the Survey of Chicago Public

Schools, which is conducted by the Consortium on Chicago School Research. The instructions

were as follows:

> "For the next section of the survey, we would like for you to report on <u>ONE</u> specific class,
> which we will call your <u>TARGET CLASS</u>. Please report on this ONE class, even if it is not
> typical of the classes you teach.
> <u>How to determine your TARGET CLASS:</u> Your TARGET CLASS is your SECOND
> PERIOD class on Mondays. If you do not teach a class second period, or if second period is
> part of a double-period class, your TARGET CLASS is the next class you teach in the day. If
> you are a 'self-contained classroom teacher' this is your TARGET CLASS."

The participants were then asked to think of this target class when responding to the

responsibility items: "Imagine that the following situations would occur in your <u>TARGET</u>

<u>CLASS</u>. To what extent would you feel <u>PERSONALLY</u> responsible that you should have

prevented each of the following?" The fourth and final modification was that instead of an

eleven-point scale, we used a more common seven-point scale, ranging from 0 (*Not at all*) to 6

(*Completely*). All items were identical to Study 1.

Results

      Factorial structure of the Teacher Responsibility Scale (TRS). Each item was

answered by between 409 and 412 participants (i.e., maximum of 0.7% missing data on each

variable); 399 cases (97%) had no missing data. Items pertaining to responsibility for student

motivation and achievement were approximately normally distributed (skewness ranged from -

.57 to .04, and kurtosis ranged from -.88 to -.15), whereas items pertaining to responsibility for

relationships with students and for teaching were somewhat negatively skewed (skewness ranged from -1.52 to -1.03, and kurtosis ranged from .31 to 2.03).

A confirmatory factor analysis indicated that the expected four-factor structure had very good fit to the data, χ^2 (48, $N = 412$) = 106.48, CFI = .98, TLI = .97, RMSEA = .05, SRMR = .03 (see Figure 2.5). The internal consistencies of the four factors were also satisfactory: responsibility for student motivation ($\alpha = .88$), for student achievement ($\alpha = .86$), for relationships with students ($\alpha = .87$), and for teaching ($\alpha = .87$). Similar to Study 1, we tested alternative models, which however produced inferior fit to the data: a one-factor model ($\Delta\chi^2$ (6) = 1143.51, $p < .001$; one factor: χ^2 (54, $N = 412$) = 1249.99, CFI = .62, TLI = .53, RMSEA = .23, SRMR = .13), a model merging responsibility for student motivation and for student achievement into one factor ($\Delta\chi^2$ (3) = 177.53, $p < .001$; three factors: χ^2 (51, $N = 412$) = 284.01, CFI = .93, TLI = .90, RMSEA = .11, SRMR = .06), and a model with one higher-order responsibility factor. The model with one higher-order factor produced only marginally acceptable fit to the data and was significantly worse than a model with four first-order factors only, $\Delta\chi^2$ (2) = 113.54, $p < .001$; χ^2 (50, $N = 412$) = 220.02, CFI = .95, TLI = .93, RMSEA = .09, SRMR = .09. Analyses thus supported the hypothesized four-factor structure with an independent sample of in-service teachers.

Insert Figure 2.5. about here.

Additional analyses. Possible variation with regard to gender, school level, and teacher-reported school poverty were tested in a set of MANOVAs with the four responsibility factors as dependent variables. For school level, only elementary and secondary teachers were compared, excluding teachers providing instruction at multiple levels (6% excluded). Teachers reported

school poverty in four categories indicating the percentage of students eligible for free or reduced-price lunch: less than 25%, 26-50%, 51-75%, and more than 75% of the students. No significant differences were found with regard to gender (Wilk's $\Lambda = .98$, $F(4, 405) = 1.70$, $p = .149$, $\eta_p^2 = .02$) and school poverty (Wilk's $\Lambda = .96$, $F(12, 1053) = 1.51$, $p = .113$, $\eta_p^2 = .02$), but there was a significant difference with regard to school level (Wilk's $\Lambda = .97$, $F(4, 382) = 2.68$, $p = .032$, $\eta_p^2 = .03$). Elementary teachers reported somewhat higher responsibility for student achievement than secondary teachers ($M_{Elem} = 3.84$, $SD = 1.29$, $M_{Sec} = 3.55$, $SD = 1.31$; $F(1, 385) = 4.09$, $p = .044$, $\eta_p^2 = .01$), and there were no significant differences for the remaining responsibility factors.

Discussion

Our primary objective was to provide an important and necessary foundation for future research on teacher responsibility by clarifying its meaning and assessment. First, we provided a systematic analysis of different approaches to the definition and measure of teacher responsibility and specified existing ambiguity regarding the conceptualization and operationalization of the construct, as well as conceptual and methodological problems encountered in prior research. Second, we discussed five dimensions of scale design that described the development of a conceptually and empirically sound scale of teacher responsibility: target of responsibility, specificity, authenticity, time frame, and valence. These dimensions, along with our definition of responsibility (Lauermann & Karabenick, 2011), can serve as a guide to evaluate the potential and the limitations of existing assessments of responsibility (e.g., scope, area of applicability, reference point). For instance, whereas prior assessments have typically focused on single educational outcomes, the present scale is multi-dimensional. Similarly, whereas some researchers have utilized generic measures of

responsibility (low specificity), the present scale includes specific educational outcomes. Further, whereas prior assessments are often limited to past events (time frame), the present scale focuses on events that can occur in any classroom at any time, and that are applicable to both pre-service and in-service teachers. Third, the TRS closely followed our definition of personal responsibility (Lauermann & Karabenick, 2011) in a manner that carefully aligned the conceptualization and operationalization of the construct. Analyses demonstrated the scale's applicability to both pre-service and in-service teachers across two educational systems and determined its discriminant validity when compared with teacher efficacy, despite the fact that responsibility and efficacy have often been viewed as conceptually intertwined (e.g., see Guskey, 1987). The development of the TRS thus lays the foundation for examining several important issues, including a better understanding of: (a) the development of professional responsibility in pre-service and in-service teachers, (b) contextual influences on teachers' sense of responsibility, (c) the relations between personal responsibility and efficacy, and (d) the mechanisms through which responsibility influences the instructional process.

First, a better understanding of the concept of personal responsibility in educational contexts is important for both pre-service teachers, who are developing a sense of professional identity (What are my responsibilities as a teacher?), and in-service teachers, who face the challenge of reconciling their own views of responsibility with professional demands; these demands include meeting students' academic and social needs, as well as ensuring that they are providing the best possible instruction in accordance with professional norms and expectations (e.g., Dahlgren & Hammar Chiriac, 2009; Fischman, DiBara, & Gardner, 2006). The development of professional responsibility presents a challenge for pre-service and in-service teachers, which warrants further examination. For instance, in a qualitative study, Dahlgren and

colleagues (2009) concluded that teacher education programs seem to struggle with providing adequate support for pre-service teachers' identification with their professional role, including understanding and fulfilling their professional responsibility. This developmental process does not end with teacher education, as in-service teachers often struggle with inconsistencies between their own views of professional responsibility and formal professional requirements, as well as with fulfilling all of their responsibilities while receiving minimal guidance about how to carry out "good work" in their professional context (Fischman et al., 2006).

In order to aid further research in this area, an important objective here was to introduce a scale of teacher responsibility that is broadly applicable across educational settings and at different points in teachers' careers. Despite marked differences between the two samples used in the present study—pre-service teachers in Germany (Study 1) and in-service teachers in the USA (Study 2)—the TRS had very good psychometric properties and a replicable factor structure. This suggests that the scale is suitable for conducting research that examines different patterns of pre-service and in-service teachers' beliefs about responsibility. For example, teachers may have narrowly defined responsibility (e.g., responsibility only for students' academic, but not social needs, or responsibility only for own teaching, but not for actual student outcomes), or an inflated sense of responsibility that is difficult to fulfill and that may therefore cause psychological distress and a sense of being overburdened. It remains to be confirmed which set of beliefs is most beneficial for students' and teachers' well-being, as well as how teachers' responsibility beliefs may change throughout their careers with regard to the four responsibility factors identified in the present research.

Second, it is critical to recognize that teachers' professional responsibility is embedded in a variety of contexts; teachers may feel different degrees of responsibility depending on the

94

characteristics of their teacher education program, their students' characteristics, school characteristics, and characteristics of the education system. Results of Study 2, for instance, suggested that responsibility was not related to teacher-reported school poverty, but there were significant differences between elementary and secondary teachers in the amount of responsibility they were willing to assume for their students' achievement. Although poverty presents a challenge that likely influences teachers' ability to fulfill their professional responsibilities, evidence suggests that strong leadership and a positive organizational habitus can lead to a strong sense of teacher responsibility for students' learning, regardless of such challenging circumstances as poverty (Diamond, Randolph, & Spillane, 2004). Such moderating factors may explain the missing link between teacher responsibility and school-level poverty and indicate the need to examine the relation between school context and teacher responsibility further.

The identified differences between elementary and secondary teachers, on the other hand, are consistent with prior research on teacher efficacy, as secondary teachers often feel less efficacious than do elementary teachers to influence their students' learning. This decreased sense of efficacy from elementary to secondary schools has been attributed to teachers' beliefs that the learning habits of older students are more difficult to influence, to decreasing parental involvement as students become older, as well as to logistical barriers such as larger school size, departmentalization, ability grouping, and whole-group instruction (Eccles et al., 1993; Maehr & Midgley, 1996). It is unclear, however, whether these contextual influences affect responsibility independent of efficacy, or whether a decreased sense of efficacy also leads to teachers' decreased willingness to assume responsibility. In addition, these influences have not been studied with regard to the remaining educational outcomes considered in the present study—

student motivation, relationships, and teaching—for which no differences between elementary and secondary teachers were found. Finally, an important contextual factor that should be considered is the educational system in which teachers are expected to fulfill their professional obligations. Although the present study was not designed to compare different educational systems, it is noteworthy that despite critical differences between German pre-service and American in-service teachers (e.g., Bloemeke, 2006; Cooper & Alvarado, 2006), the same four dimensions of responsibility were identified. This suggests that the TRS is well suited for comparative research along these four dimensions.

Third, the distinction between responsibility and self-efficacy demonstrated in the present study has important implications for teachers because it suggests that teachers' confidence in their ability to produce designated outcomes does not necessarily imply a sense of responsibility for these outcomes. Accordingly, teachers may choose not to engage in behaviors for which they do not feel responsible, even if they feel efficacious (cf. Silverman, 2010). Research focusing on the teachers' role in producing desirable classroom outcomes should thus focus not only on teachers' capability to influence these outcomes, but also on their sense of responsibility, since one is not implied by the other—the belief that "I can" may not necessarily translate to "I should" and vice versa. The combination of high sense of responsibility but limited efficacy deserves special consideration since it may lead to a sense of helplessness and psychological distress as a consequence of perceived inability to fulfill one's professional responsibility.

Finally, a major challenge facing future research is to examine the mechanisms through which responsibility influences the instructional process. Recent reviews of the literature on personal responsibility indicate that existing theoretical frameworks have been applied to teachers only fragmentarily or not at all (Lauermann & Karabenick, 2011; in press). For instance,

attribution theory has focused almost exclusively on teachers' ascriptions of responsibility to their students but not their self-ascriptions (e.g., Weiner, 1995); self-discrepancy theory outlines important implications of one's "ought self"—responsibilities, duties and obligations of the self—for motivation, self-regulation, and emotions, but none of these relations have been tested with teachers (Higgins, 1997; Higgins et al., 1986); and despite consistent findings in the organizational literature relating responsibility to important outcomes such as job performance and job satisfaction (e.g., the job characteristics model; Hackman & Oldham, 1975, 1976; Humphrey et al., 2007; P. A. Winter et al., 2006), the empirical evidence with teachers is relatively scarce and has faced methodological challenges. The conceptual explications of teacher responsibility and its operationalization in the TRS provide an important step toward resolving such methodological challenges, clarifying the conceptualization of teacher responsibility, and providing the foundation for systematic and expanded research on teacher responsibility and its implications for student outcomes and teachers' professional lives.

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Table 2.1. Different approaches to the operationalization of teacher responsibility

Approach	Source	Scale description and sample items
Responsibility as internal locus of control	Responsibility for Student Achievement Scale (Guskey, 1981)	Teachers are asked to divide 100 percentage points between two alternative explanations for a positive or a negative classroom outcome that reflect either internal or external attributions. The scale consists of 30 forced-choice items, half of which are positive and the other half negative. Sample items: If a student does well in your class, would it probably be (a) because that student had the natural ability to do well, or (b) because of the encouragement you offered? When your students do poorly on a test, is it (a) because they didn't really expect to do well, or (b) because you didn't insist they prepare adequately? A total score is obtained by averaging the percentage points assigned to answers that reflect an internal attribution (that the outcome happened because of the teacher). In addition, two separate scores are computed for positive and negative items.
	Teacher Locus of Control Scale (Rose & Medway, 1981)	Teachers are asked to endorse one of two options indicating either internal or external attributions for positive or negative classroom events. The scale consists of 28 forced-choice items, half of which are positive and the other half negative. Sample items: When a student does better in school than he usually does, is it more likely (a) because the student was trying harder, or (b) because you tried hard to encourage the student to do better? Suppose your students did not appear to be benefitting from a more individualized method of instruction. The reason for this would probably be (a) because you were having some problems managing this type of instruction, or (b) because the students in your class were such that they needed a more traditional kind of approach. A total score is obtained as the number of items for which a teacher selects the alternative that indicates an internal attribution (i.e., that something happened because of the teacher). Two separate scores are computed for positive and negative items.
Single-item measures of teacher responsibility	Teacher responsibility for student failure (Matteucci & Gosling, 2004)	Teachers are asked to think of a student who is failing either due to lack of effort or lack of ability and to rate the extent to which they held themselves responsible for the student's failure on a 7-point scale ranging from 0 (*not at all*) to 6 (*very much*).
	Bipolar scale (Ames, 1975)	Instructors are asked to rate their responsibility for a student's task performance on a 43-point scale from 1 (*low*) to 43 (*high*).
	Washer Stacking Task (Ames, 1975)	Instructors are asked to distribute 100 washers among themselves, the student, and the situation according to each factor's relative responsibility for the student's task performance. Number of washers assigned to the self indicates the amount of perceived personal responsibility relative to the responsibility assigned to others.

Multi-item measures of teacher responsibility for specific educational outcomes/ domains	Responsibility to provide education about diversity and multiculturalism (Silverman, 2010)	Teacher responsibility is assessed as an underlying factor of five different constructs: culture, multiculturalism, diversity, advocacy, and efficacy (122 items total). Sample items for the subscale culture: The definition of 'culture' has become blurred It is my responsibility to ensure all forms of culture are valued in my classroom. Participants responded to all items on a scale from 1 (*Strongly disagree*) to 6 (*Strongly agree*).
	Inventory of Teacher Social Behavior Standards and Expectations (Kauffman, Wong, Lloyd, Hung, & Pullen, 1991; H. Walker, 1985; H. M. Walker & Rankin, 1983)	Teachers are presented with a list of 56 positive student behaviors (e.g., "Student follows classroom rules") and 51 negative behaviors (e.g., "Student is physically aggressive with others"), and are asked to mark positive student behaviors as *critical*, *desirable*, or *unimportant* and negative student behaviors as *unacceptable*, *tolerated*, or *acceptable*. For those items marked critical or unacceptable, teachers are asked to indicate whether: (a) The student would have to have mastered the critical skill or be within normal limits on the social behavior in question prior to entering the teacher's class, (b) The teacher would accept responsibility for dealing with the student's problem, so long as technical assistance were provided, (c) The teacher would take responsibility for dealing with the student's problem and would not require technical assistance. Teacher responsibility is assessed as the number of items for which the teacher chooses responses B or C, indicating that the teacher would be willing to accept the student in his or her class.
Generic measures of responsibility	Job Diagnostic Survey (Hackman & Oldham, 1975)	Participants are asked to indicate the extent to which they agree or disagree with 6 items, which form one factor. Sample items: I feel a very high degree of <u>personal</u> responsibility for the work I do on this job. I feel I should personally take the credit or blame for the results of my work on this job. Most people on this job feel a great deal of personal responsibility for the work they do. Four of the items refer to personal responsibility, and two items refer to the responsibility of "most people" on this job. Participants respond on a scale from 1 (*Disagree strongly*) to 7 (*Agree strongly*).
	Teacher Job Satisfaction Questionnaire (Lester, 1987)	Teacher responsibility is assessed as an eight-item scale that represents three different concepts: accountability for one's own work (3 items, e.g., "I do have responsibility for my teaching") student-teacher relationships (3 items, e.g., "I get along well with my students") participation in school policies (e.g., "I try to be aware of the policies of my school") Participants respond on a scale from 1 (*Strongly disagree*) to 5 (*Strongly agree*).

Collective teacher responsibility	Collective teacher responsibility (Bryk, Sebring, Allensworth, Luppescu, & Easton, 2010; Lee & Loeb, 2000)	Teachers' collective responsibility is assessed at the school level based on an aggregate score of teachers' evaluations of their colleagues. The scale includes 7 items, combined into one score. Sample items: How many teachers in this school feel responsible when students in the school fail? How many teachers in this school feel responsible to help each other do their best? Five response options are offered for each item: "none," "some," "about half," "most," and "nearly all."
	Collective teacher responsibility (Kardos & Johnson, 2007)	Teachers' collective responsibility is assessed based on teachers' responses to four items representing teachers' perceptions of their colleagues. It is assumed that the four items represent one construct, but statistics were reported only at the item-level. Sample items: Teachers act as if they are responsible for students' learning, even for those who are not in their classes. My colleagues think it is important for teachers to work together. Participants respond on a scale from 1 (*Disagree strongly*) to 6 (*Agree strongly*).
	Collective teacher responsibility (Lee & Smith, 1996)	Teachers' collective responsibility is assessed at the school level based on an aggregate score of teachers' self-evaluations. The scale includes 12 items, combined into one score. Sample items: I can get through to the most difficult student. Teachers make a difference in students' lives. Teachers are responsible for keeping students from dropping out. Participants respond on a scale from 1 (*Strongly disagree*) to 6 (*Strongly agree*).

Table 2.2. Correlations between latent responsibility and efficacy factors in Study 1

		Responsibility				Efficacy			
		(a)	(b)	(c)	(d)	(a)	(b)	(c)	(d)
Responsibility	(a) Student Motivation	(.84)							
	(b) Student Achievement	.70	(.84)						
	(c) Relationships with students	.36	.48	(.78)					
	(d) Teaching	.34	.40	.53	(.79)				
Efficacy	(a) Student Motivation	.52	.39	.26	.22	(.83)			
	(b) Student Achievement	.33	.49	.29	.22	.88	(.81)		
	(c) Relationships with students	.27	.30	.59	.21	.65	.72	(.78)	
	(d) Teaching	.28	.23	.25	.32	.79	.84	.62	(.82)

Note. All correlations are significant at *p* < .01. Internal consistencies are shown in parentheses.

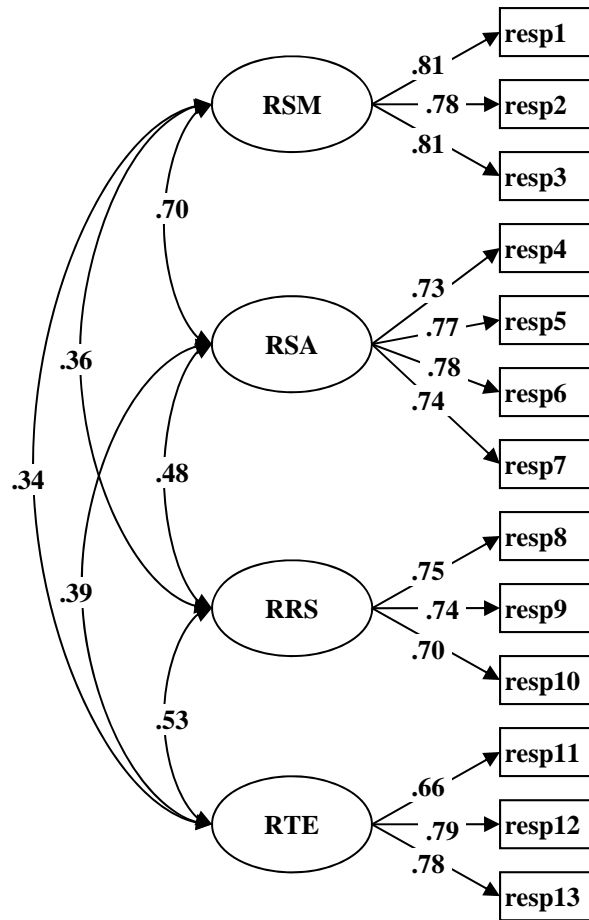Figure 2.1. Factorial structure of the teacher responsibility scale in Study 1. RSM =
responsibility for student motivation; RSA = responsibility for student achievement; RRS =
responsibility for relationships with students; RTE = responsibility for teaching. Exact wording
of each item is shown in the Appendix. All coefficients are standardized and are significant at the
$p < .001$ level. Residual terms are not shown in the figure.
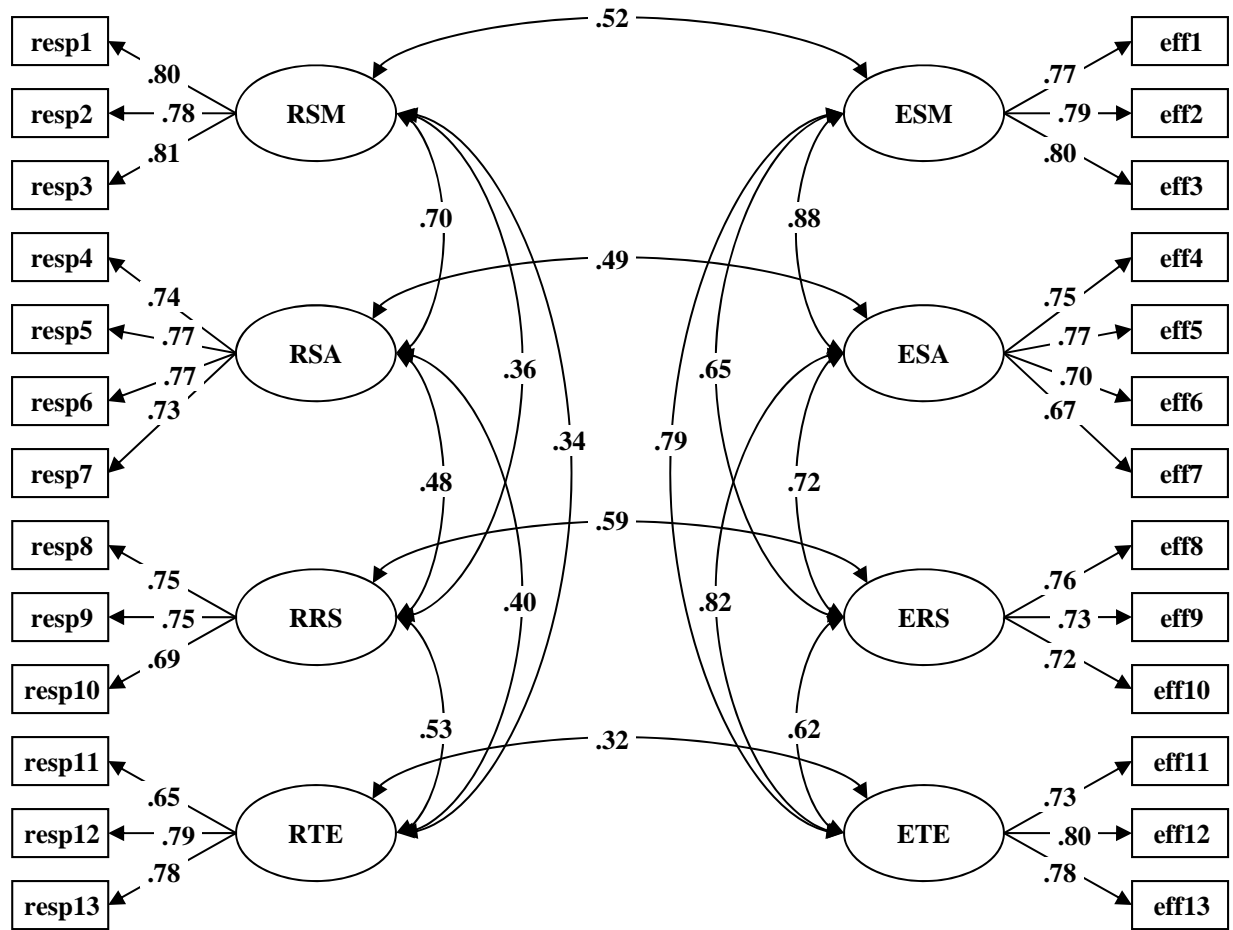
Figure 2.2. Eight-factor model distinguishing between responsibility and efficacy beliefs in Study 1. RSM/ESM = responsibility/ efficacy for student motivation; RSA/ESA = responsibility/ efficacy for student achievement; RRS/ERS = responsibility/ efficacy for relationships with students; RTE/ETE = responsibility/ efficacy for teaching. The content of each efficacy item is matched with the content of corresponding responsibility items (e.g., resp1 corresponds to eff1). The wording of each item is shown in the Appendix. Residual variances of observed variables and covariances between non-corresponding responsibility and efficacy factors were included but are not shown in the figure. All coefficients are standardized and are significant at the *p* < .001 level.

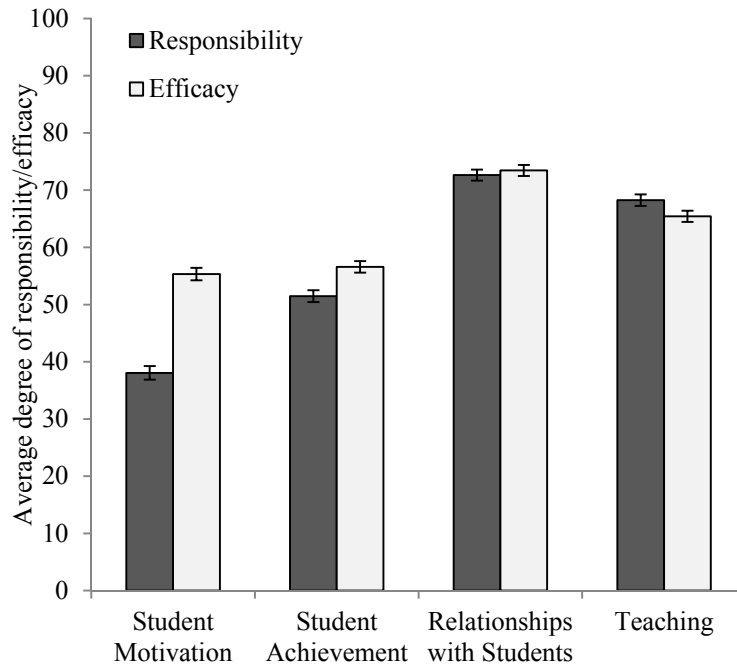Figure 2.3. Mean differences between responsibility and efficacy factors in Study 1. Error bars indicate one standard error above and below the mean. The responsibility and efficacy factors were measured on an 11-point scale ranging from 0 (*not at all responsible/confident*) to 100 (*completely responsible/confident*), in 10-point increments.
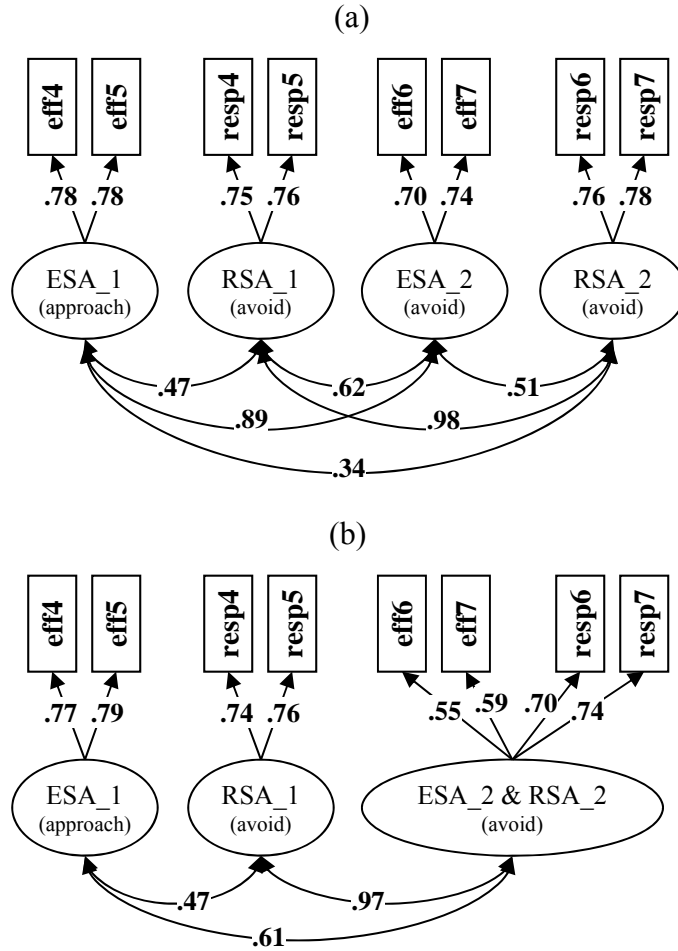
Figure 2.4. Comparison of responsibility and efficacy items in (a) a baseline model, and (b) a

model in which responsibility and efficacy items are matched with regard to content and

avoidance focus (to prevent an outcome) and are merged in one factor. ESA_1 = efficacy

items with approach focus; RSA_1 = responsibility items corresponding to ESA_1; ESA_2 =

efficacy items with avoidance focus; RSA_2 = responsibility items corresponding to ESA_2.

The items are shown in the Appendix. Residual variances are not shown in the figure. All

coefficients are standardized and are significant at the *p* < .001 level.

Figure 2.5. Factorial structure of the teacher responsibility scale in Study 2. RSM =
responsibility for student motivation; RSA = responsibility for student achievement; RRS =
responsibility for relationships with students; RTE = responsibility for teaching. Exact wording
of each item is shown in the Appendix. All coefficients are standardized and are significant at the
$p < .001$ level. Residual terms are not shown in the figure.

Appendix A. Teacher responsibility scale (TRS) and corresponding efficacy items

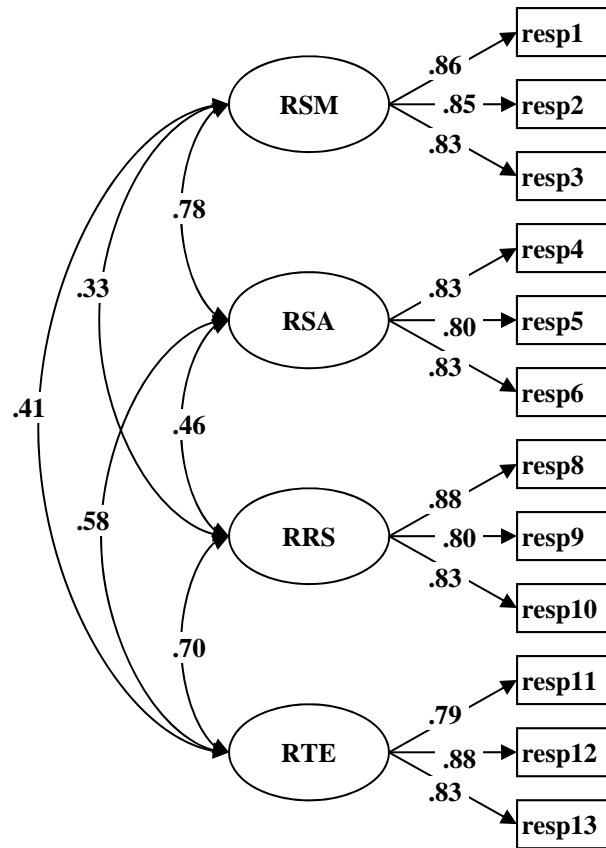|	Teacher Responsibility *I would feel personally responsible if...*	Teacher efficacy *I am confident that...*
Student Motivation	(resp1) …a student of mine was not interested in the subject I teach. (resp2) …a student of mine did not value learning the subject I teach. (resp3) …a student of mine disliked the subject I teach.	(eff1) …I can get any of my students interested in the subject I teach. (eff2) …I can get any of my students to value learning the subject I teach. (eff3) …I can get any of my students to like the subject I teach.
Student Achievement	(resp4) …a student of mine failed to make excellent progress throughout the school year. (resp5) …a student of mine failed to learn the required material. (resp6) …a student of mine had very low achievement. (resp7) …a student of mine failed my class. [†]	(eff4) …I can get any of my students to make excellent progress throughout the school year. (eff5) …I can get any of my students to learn the required material. (eff6) …I can prevent any of my students from having very low achievement. (eff7) …I can prevent any of my students from failing my class. [†]
Relationships with Students	(resp8) …a student of mine thought he/she could not count on me when he/she needed help with something. (resp9) …a student of mine did not think that he/she can trust me with his/her problems in or outside of school. (resp10) …a student of mine did not believe that I truly cared about him/her.	(eff8) …I can get any of my students to believe that he/she can count on me when he/she needs help with something. (eff9) …I can get any of my students to believe that he/she can trust me with his/her problems in or outside of school. (eff10) …I can get any of my students to believe that I truly care about him/her.
Teaching	(resp11) …a lesson I taught failed to reflect my highest ability as a teacher. (resp12) …a lesson I taught was not as effective for student learning as I could have possibly made it. (resp13) …a lesson I taught was not as engaging for students as I could have possibly made it.	(eff11) …I can teach any of my lessons so that it reflects my highest ability as a teacher. (eff12) …I can teach any of my lessons so that it is effective for student learning. (eff13) …I can teach any of my lessons so that it is engaging for students.

[†] Item included only in Study 1.

CHAPTER IV

Teacher Responsibility from the Teacher's Perspective [16]

Abstract

The present study employs an adaptation of Lenk's six-component model of responsibility to conduct a systematic analysis of teachers' conceptualizations of professional responsibility. A qualitative analysis of data from elementary and secondary teachers in the U.S. revealed specific categories of responsibility for each of the six components: who is responsible, for what, in view of whom, who is the judge of responsibility, according to what criteria, and in what realm of responsibility and action. Teachers' reports indicate that responsibility has important motivational implications in terms of effort investment, persistence, and commitment to students, but can also come at a personal cost such as hard work, lack of sleep, and less family time. Implications for teachers' professional lives are discussed.

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Teacher Responsibility from the Teacher's Perspective

Personal responsibility has important motivational implications, as individuals often engage in behaviors not because these behaviors are necessarily enjoyable, but because they feel an internal sense of obligation and duty to do so (Lauermann & Karabenick, 2011, in press). For instance, in order to fulfill their professional responsibilities, teachers may invest considerable effort to prepare high quality lessons, do their very best to help struggling students, and may continuously strive to improve their teaching to support student learning (Broadfoot, Osborn, Gilly, & Paillet, 1987; Fischman, DiBara, & Gardner, 2006; Halvorsen, Lee, & Andrade, 2009; Schalock, 1998). Although responsibility has been studied from a variety of perspectives, research focusing on teachers is scarce and often plagued by conceptual and operational ambiguity. For instance, recent reviews of the literature (Lauermann & Karabenick, 2011, in press) indicate that teacher responsibility has been operationalized in terms of internal locus of control—i.e., teachers' attributions of classroom outcomes to internal and presumably controllable factors such as the teacher's behavior (Guskey, 1981), and teacher efficacy—i.e., teachers' belief in their capability to influence classroom outcomes (Guskey, 1987; Lee & Smith, 1996). Yet responsibility is a distinct construct that has been defined as "a sense of internal obligation and commitment to produce or prevent designated outcomes or that these outcomes should have been produced or prevented" (Lauermann & Karabenick, 2011, p. 127). The distinction arises because neither the perceived control over an outcome nor the perceived capacity to influence an outcome necessarily imply a sense of responsibility to produce or prevent it (Ames, 1975; Lauermann & Karabenick, 2013, in press; Silverman, 2010; Weiner, 1995). Systematic reviews also indicate that existing theoretical frameworks of responsibility have not been sufficiently applied to teachers' self-ascribed responsibility, thus leaving

117

uncertainty regarding its conceptual status and educational implications (see review in Lauermann & Karabenick, 2011, in press).

To help resolve this ambiguity we recently adopted Lenk's six-component model of responsibility to organize the extant literature's relevance in educational contexts (Lauermann & Karabenick, 2011). Described subsequently, Lenk's model specifies the factors that should be taken into consideration when analyzing judgments of responsibility (e.g., who is responsible, for what, and according to what criteria). Although it provides a comprehensive analytical framework, the model requires additional considerations about how teachers themselves view their professional responsibilities. This includes such important questions as: For what types of outcomes are teachers willing to assume responsibility? What criteria do teachers use to determine whether they are responsible? What factors contribute to teachers' sense of responsibility? and What are the perceived consequences? Accordingly, the objectives of the present study were to understand: (a) how teachers conceptualize responsibility along each of the six components in Lenk's model, and (b) the perceived antecedents and consequences of responsibility. A qualitative approach was chosen to capture teachers' unique perspectives. We begin with an overview of our adaptation of Lenk's model, as well as a discussion of possible antecedents and consequences of teacher responsibility.

Conceptualization of Responsibility

Six Components of Responsibility

Lenk (1992) proposed one of the most comprehensive frameworks designed to examine the complexity of responsibility judgments. The model consist of six components: "*someone*: the subject or bearer of responsibility (a person or corporation), is responsible *for: something* (actions, consequences of actions, situations, tasks, etc.), *in view of: an addressee* ("object" of

118

responsibility), *under supervision or judgment of:* a judging or sanctioning *instance, in relation to:* a (prescriptive, normative) *criterion of attribution of accountability within: a specific realm of responsibility and action*" (Lenk, 2007, p. 180). Accordingly, our analysis of teachers' conceptions of responsibility included the following components: (1) a subject of responsibility (who is responsible), (2) an object of responsibility (for what), (3) an addressee of responsibility (for/to whom), (4) a judging or sanctioning instance, (5) a prescriptive/normative criterion of responsibility, and (6) a realm of responsibility and action. Although single components have been examined in prior research with teachers (e.g., Broadfoot et al., 1987; Broadfoot, Osborn, Gilly, & Paillet, 1988; Fischman et al., 2006; Halvorsen et al., 2009), there has been no systematic analysis of all six components focused on the teaching profession.

Component 1: Who Is Responsible? Who is responsible refers to a person or a group of individuals who assume responsibility or are being judged responsible; individuals (e.g., teachers) but not situations (e.g., the neighborhood) can bear or assume responsibility, since a situation cannot have intentions or implement actions (e.g., Weiner, 1995). Although our main focus is on teachers' *personal* sense of responsibility, they may also perceive their professional responsibility as *shared* with others. For instance, teachers' collective responsibility—i.e., teachers' beliefs that their colleagues feel responsible for students' educational outcomes—has been linked to student achievement (Lee & Loeb, 2000; Lee & Smith, 1996). Yet a qualitative study conducted by Fischman and colleagues (2006) found that teachers in high schools that were identified by educational experts as "exemplary" rarely ascribed responsibility for their students to others and felt personally responsible for a broad range of student needs. Some teachers viewed themselves as "a student's only salvation" (p. 386). The present study thus

119

examined both perspectives: teachers' self-ascriptions of responsibility and teachers' perceptions of other agents with whom they share responsibility.

Component 2: Responsible for What? Responsible "for what" incorporates a broad range of outcomes for which teachers feel responsible, such as actions, consequences of these actions, actions of others for whom one is vicariously responsible, and tasks. Examples of outcomes identified in prior research include teaching-related activities (being creative, having content knowledge, investing time in professional development, relating classroom material to the wider world), student outcomes (students' academic and social development), interactions with students (being a role model for students, having high expectations), classroom outcomes (providing a comfortable and supportive classroom atmosphere), and following contractual obligations (Broadfoot et al., 1988; Fischman et al., 2006; Halvorsen et al., 2009).

In addition to concrete educational outcomes for which teachers feel responsible, there are more general ways that outcomes can be categorized. These include distinctions between *feeling* responsible for something versus being *held* responsible for something, being responsible for a problem versus for finding a solution, and being responsible for positive versus negative outcomes. According to self-determination theory, the first distinction is important because someone who feels responsible is self-determined and likely to take personal initiative, whereas those who are held responsible but do not consider themselves as such are likely to invest minimal effort and to fulfill this responsibility only under the pressure of external control (Bacon, 1991; Bovens, 1998; Deci & Flaste, 1995; Lauermann & Karabenick, 2011). Second, teachers may feel responsible for causing a problem (e.g., student failure), for finding a solution (e.g., help a student to prevent academic failure), for neither or for both (Brickman et al., 1982). This implies that a teacher may reject responsibility for causing a problem (e.g., student failure),

while feeling highly responsible for finding a solution. Finally, although judgments of responsibility have been studied primarily in relation to negative outcomes (e.g., Bovens, 1998; Weiner, 1995), some research suggests that teachers are more likely to take credit for positive educational outcomes than to attribute negative outcomes to their own actions (Guskey, 1982, 1988), although the obverse has also been found (Ames, 1975; Ross, Bierbrauer, & Polly, 1974).

Ultimately, to provide a comprehensive list of responsibilities that represents the teacher's perspective, the present study included questions about feeling responsible and being held responsible, inquired about responsible behaviors that are likely to reference positive outcomes and irresponsible behaviors that are likely to reference negative outcomes, and examined the distinction between responsibility for problems versus solutions.

Component 3: Responsible for/to Whom? Teachers typically identify their students as the primary addressees of their professional responsibility, but they also feel responsible to parents, employers, colleagues, the community, their families, and themselves (Broadfoot et al., 1988; Fischman et al., 2006). This network of agents for or to whom teachers feel responsible often incorporates tensions as teachers attempt to compensate for others' lack of involvement, for instance, when they perceive that the family or the larger society cannot meet student needs, or when their own views of good work are not consistent with the requirements of others to whom they feel responsible, such as school, state, and national requirements (Fischman et al., 2006).

Identifying addressees of teacher responsibility is also important because they reflect how teachers conceptualize their professional roles. For instance, in a comparative study Broadfoot et al. (1988) found that whereas French teachers felt responsible almost exclusively to students, English teachers felt responsible to a range of addressees and perceived a need to justify their educational practices to parents and others. The difference was attributed to the fact that the

responsibility of French teachers was clearly defined by curricular standards and was generally limited to the educational needs of their students; English teachers, on the other hand, not only felt responsible for a much broader range of outcomes but also received very little guidance regarding their professional responsibilities, and thus needed to justify their self-chosen practices to others. Analyses with U.S. teachers indicated that their situation may be more similar to that of English than French teachers (Fischman et al., 2006).

Component 4: Who Is the Judge?   Different judges of responsibility may have different beliefs about what constitutes a teacher's professional responsibility. If there are any tensions between teachers' own perceptions of responsibility and others' judgments, it would be important to identify the specific judges associated with such tensions (Fischman et al., 2006). Therefore, although our main focus is on teachers' own perceptions of responsibility, teachers' beliefs about other judges' perceptions were also assessed.

Component 5: In Relation to What Criteria? The criteria according to which teachers are judged or judge themselves responsible constitute a critical component since they indicate possible reasons why a teacher may feel responsible for a particular outcome. Twiss (1977) proposed three types of responsibility, which are tied to different criteria: descriptive, normative and role responsibility. The primary criterion for *descriptive responsibility* is causality—i.e., whether one has caused an outcome for which one is judged responsible. Research in attribution theory has identified additional descriptive criteria such as intentionality, foreseeability, the actors' awareness of the consequences of their actions, and lack of coercion by external forces (for a review, see Weiner, 1995). The primary criterion for *normative responsibility* is adherence to a normative standard (e.g., a moral or legal standard of what is right or wrong). Normative standards are implicit or explicit behavioral expectations that guide one's values, beliefs, and

122

behaviors in a given context. The primary criterion for *role responsibility*, which is closely related to normative responsibility, is the fulfillment of a social role such as being a parent or a teacher, and social relations such as employer-employee and teacher-student. In sum, Twiss' analysis suggests that one may feel responsible because one has caused an outcome, because a normative standard applies in a given setting, or because it is the definition of one's social role. Since the focus of the present study was not on specific outcomes that are caused by teachers, but rather on outcomes for which teachers feel generally responsible, the last two types of criteria— norms and social roles—were of primary interest.

Component 6: In What Realm? The realm in which responsibility is judged is important since different sets of criteria may apply in different contexts. By definition of their social role, for example, teachers may be expected to help students during school time but not necessarily during their free time. Similarly, different norms may apply in the realm of the classroom, the broader realm of the school, and the realm of the profession. As an employee in a particular school, a teacher may have a specific set of responsibilities, such as being on time and following school rules, but as a professional, a teacher also has obligations toward the ethics and standards of the profession (e.g., what constitutes good teaching, as discussed in Fischman et al., 2006). Thus, different criteria may guide teachers in different realms of professional responsibility.

Antecedents and Consequences of Responsibility

Different operationalizations of teacher responsibility have been linked to such important variables as general teacher efficacy, willingness to implement innovative instructional practices, and positive affect toward teaching (responsibility as internal locus of control; Guskey, 1981, 1984, 1988), job autonomy and job satisfaction (generic assessment of work responsibility not

123

specific to the teaching profession; Winter, Brenner, & Petrosko, 2006), organizational norms (observations of "responsible" teacher behaviors such as having high expectations for students; Diamond, Randolph, & Spillane, 2004), and student achievement (collective teacher responsibility; Lee & Loeb, 2000; Lee & Smith, 1996). Outside of research with teachers, personal responsibility has also been associated with intrinsic work motivation and job performance (Hackman & Oldham, 1976; Humphrey, Nahrgang, & Morgeson, 2007), goal commitment to accomplishing a challenging task, and achievement motivation (Bierhoff et al., 2005). Among these factors, job autonomy and organizational norms are typically considered to be antecedents of responsibility, whereas intrinsic work motivation, job performance, job satisfaction and student achievement are considered to be consequences. Although these variables constitute desirable outcomes, qualitative research also suggests that teachers' perceptions of having too many responsibilities and the perceived inability to fulfill these responsibilities can lead to tension, stress, and feelings of guilt (Broadfoot et al., 1988; Fischman et al., 2006).

In order to contribute to a better understanding and possible expansion of this network of associations, an important objective in the present study was to identify factors that teachers perceive as influential in shaping their sense of responsibility (i.e., what factors make them feel responsible), as well as the perceived consequences of being a responsible teacher (e.g., what are some of the perceived costs and benefits). Acknowledging and understanding the teacher's perspective is important since subjective perceptions may not always correspond to objective characteristics of the work environment.

Present Study

In sum, the present study applied Lenk's six-component model to understand: (a) how teachers conceptualize their professional responsibility along these six components, and (b) the perceived antecedents and consequences of responsibility. A qualitative approach was deemed appropriate to most effectively capture the nuances of teachers' beliefs about responsibility (e.g., for what they feel responsible), since our objective was to examine teachers' unique perspectives.

Method

Participants

Twenty-five teachers from one elementary school ($n = 11$, 64% female) and one high school ($n = 14$, 50% female) in a metropolitan area in the United States voluntarily participated in the study. Teaching experience ranged from 1 to 41 years (*Mean* = 10, *SD* = 10, *Median* = 8). Most (76%) of the teachers indicated that they taught a subject matter/special class.[17] The elementary school (grades K-8) was a Title I charter school with a student/teacher ratio of 23.4 and 99% African-American students.[18] The high school (grades 9-12) was not a Title I school and had a student/teacher ratio of 19.4, with 82% White students, 12% African-American, 4% Asian, and 2% other. The survey was distributed by a regional administrator who was familiar with and had worked with teachers in both schools. The two schools allowed us to implement the same recruitment strategy (through the same district administrator), and to obtain information from both elementary and secondary teachers.[19] The teachers were allowed to take the survey home and were asked to return it in a sealed envelope without any identifying information. No

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[17] The specific subject area and grade level were not asked in order to protect the teachers' anonymity.
[18] Title I is a federally funded program in the United States that assists schools with high percentages of children from low-income families.
[19] Unless noted otherwise, responsibility categories discussed in our results were mentioned by teachers from both schools.

incentives were offered for participation. Twenty-five percent of all invited teachers returned the survey.

Survey Design and Response Coding

Questionnaire. A self-report survey was designed to ensure anonymity and to encourage teachers to respond honestly to questions about responsibility, as the topic can be socially desirable and thus susceptible to self-presentation (cf. Bierhoff et al., 2005). A similar approach has been used successfully in prior research (Broadfoot et al., 1988). The survey began with a series of open-ended questions to elicit information concerning each component of responsibility (provided in the Appendix). Additional questions explored what teachers believed were the consequences of responsible and irresponsible teacher behaviors, as well as what factors or conditions influenced teachers' sense of responsibility. Basic demographic information was asked at the end of the questionnaire.

Qualitative coding procedure. Data obtained on open-ended questions were analyzed using a predefined schema that represented the six-component structure of responsibility. Two additional categories were included to assess the determinants and consequences of responsibility as perceived by teachers. The unit of analysis consisted of single ideas; for instance, the statement "I feel responsible to provide high quality lessons and to ensure that students learn the material" expresses two ideas: (a) responsibility to prepare high quality lessons and (b) responsibility for student learning. Each unit of analysis was assigned to one or more of the eight predefined categories. Subcategories such as "responsibility for student learning" were also created within each of the overarching categories, using thematic content analysis (Krippendorff, 2012). A coding system was developed to identify each response. For example,

126

the code (#14HSq1) indicates the participant number (#14), the sample—high school teacher (HS) versus elementary school teacher (ES)—and the specific question (q1).

Coding and inter-rater agreement. Once the data were categorized by the first author, the categories were reviewed by two researchers for consistency, and revisions were implemented until full agreement was reached. Each categorized statement was then reviewed by two independent raters for how accurately it represented the category to which it was assigned, from 1 (*not at all*) to 5 (*completely*). The average rating was 4.87 (*SD* = .42); 89% of all statements received a perfect score. Statements that did not receive a perfect score were discussed with a third rater until agreement was reached about whether to exclude the statement or modify the description of the category to which it was assigned. Finally, 30 statements were randomly selected and coded independently by two raters (the first author and a rater unfamiliar with the data), resulting in only three disagreements (90% agreement).[20]

Results and Discussion

In the following sections, we discuss the six components of responsibility reviewed previously and corresponding findings, then provide an overview of identified antecedents and consequences.

Six Components of Responsibility from the Teacher's Perspective

All six components of Lenk's model could be identified, as well as a wide variety of subcategories. Categories, number of teachers mentioning each category, and sample statements are provided in Table 3.1.

Table 3.1.

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[20] Statements for which both raters did not assign a category were not counted as agreement in order to obtain a lower bound of agreement of 90%. Statements that did not require any interpretation were also excluded in order to provide a more conservative measure of agreement (e.g., Statements in the dimension "Who is responsible?" were categorized by simply listing teachers' responses such as "parents," "students," and "teachers.").

Who is responsible. In order to inquire about the individual and shared responsibility for student learning and performance, teachers were asked who they believe is/are "responsible" for the performance of their students, and who is/are to blame if their students don't "measure up."[21] Teachers identified a broad network of responsible agents, such as teachers, parents, school administration, counselors, social workers, policy makers, and students. In addition to individual agents of responsibility, teachers identified a larger network of influences such as students' friends outside school, youth organizations, churches, and the broader context that included school, home environment, and the neighborhood. Furthermore, a few teachers mentioned that additional factors such as testing bias and available state funding for education can be viewed as "responsible" or "to blame" for students' academic performance.

Two conclusions can be drawn from these results. First, although prior research suggests that teachers in "exemplary" schools rarely ascribe responsibility for their students to others (see above, Fischman et al., 2006), some teachers in the present study viewed their responsibility as dependent on and even limited by other responsibility agents and the context in which they are expected to fulfill this responsibility. For example, one of the teachers explained that "Peers I think have a significant influence on a student. Just look at all the high ACT scores in areas with high SES. Peers in high SES areas do not talk about if they are going to college, they talk about what college they plan to attend. It also helps if parents can pay!" (#02HSq13). The consideration of limitations is reflected in particular in a somewhat sarcastic comment made by this teacher: "Teacher responsibility can only go so far. If you wish to test teacher responsibility, just select the 'best' teachers from the 'best' school (say from [high SES area]) and place them in

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[21] Because teachers were asked to identify multiple responsibility agents, we chose to focus on student achievement so that all agents are judged responsible for the same outcome. Student performance was defined in the survey as "what students know and can do."

128

a school like [low SES area]. I would love to see the results." Accordingly, whereas Lee and colleagues' (1996, 2000) analyses, discussed above, indicate that collective responsibility can be an important resource, this teacher's response also suggests that the belief in "shared responsibility" may be a limitation if other agents (e.g., teachers from the "best" schools, parents from low SES areas) are perceived as unable to fulfill their responsibility.

Second, teachers' responses referenced a wide variety of influencing factors and responsible agents for student achievement that are associated with such criteria of responsibility as social roles (e.g., teachers, school administrators, students) and causal influences (e.g., peer influences, testing bias, neighborhood). Our findings thus suggest that the question "who is responsible" was often interpreted as "which factors have an influence." This is at odds with theoretical conceptualizations of the construct, which distinguish it from causal influences (Ames, 1975; Weiner, 1995). It seems therefore necessary when assessing responsibility to provide more specific instructions regarding the intended meaning of "who is responsible," since teachers' answers were not always consistent with theoretical considerations (for further discussion of responsibility assessments, see Lauermann & Karabenick, 2013, in press).

Responsible for what. The second component, and by far the most complex, was "responsible for what." In order to capture a broad spectrum of responsibilities, teachers were asked to list up to five important things for which they feel responsible and to explain why they feel responsible, as well as to list up to five important things for which they are held responsible and to indicate by whom they are held responsible. In addition, teachers were asked about things for which they feel responsible but cannot carry out, as well as things for which they feel responsible but that go beyond their formal obligations or "job description." For each of these, teachers were asked to explain why they felt responsible.

129

As shown in Table 3.1., seven general areas of teacher responsibility could be identified: teaching-related activities (e.g., prepare high quality lessons), student outcomes (e.g., student learning and engagement), interactions with students (e.g., fairness, being a role model), positive classroom atmosphere (e.g., create a comfortable and orderly classroom environment), interactions with others involved in students' education (e.g., parents, administration, and other teachers), school policies and external regulations (e.g., following state and district standards), as well as other duties and voluntary work (e.g., punctuality, community involvement). According to these categories, teacher responsibility may encompass such outcomes as being skillful, effective, and knowledgeable with respect to teaching, giving your best constantly and trying to improve your instruction even if it is going well. With respect to students, it may include feeling responsible for *all* students, for student learning progress, safety and well-being, and for creating a safe and welcoming classroom atmosphere where students are "comfortable to learn, take risks, ask questions" (#04HSq7). Some teachers also emphasized that being responsible implies taking responsibility for both success and failure and not limiting one's professional responsibility to students' learning outcomes, but also helping students become positive members of society.

Teacher responsibility is not necessarily limited to students, as teachers may also feel responsible to develop positive relations with students' parents, their colleagues and administration, so that parents feel "welcomed" and "want to become involved" (#17ESq3), colleagues have "a good working relationship" (#15ESq3), and the administration can "do their job, so that the school runs smoothly" (#13HSq7). Finally, consistent with self-determination theory, some participants characterized responsible teachers as being self-determined and showing initiative such that they do their "job every day not just when being observed" (#04HSq1). This included not only formal duties such as being on time, but also voluntary

130

engagement: a responsible teacher "comes early, stays late and is never totally done with work" (#13HSq2). Moreover, some teachers extended their responsibilities well beyond the context of school, such as "feeding students and finding them homes" (#08HSq10) or "providing lunch, dinner, supplies – students may not be provided for these at home" (#10HSq10). Irresponsible teachers, on the other hand, were characterized by work avoidance: they do "as little work as possible" (#03HSq4) and "they are late, demonstrate a lack of caring, make excuses and model inappropriate attitudes and actions. It is always someone else's job or not important to take initiative, follow through on communication such as talks with parents, notes home, lesson plans, etc." (#20ESq1B). Another characteristic of irresponsible teachers, as identified in teachers' statements, was absenteeism.

Teachers referenced the need to balance a variety of professional responsibilities as both a responsibility in itself and a challenge. For example, while being caring and compassionate was mentioned as a key responsibility by nearly three quarters of the teachers, a few also indicated that it is important to balance compassion with some "tough love" (#03HSq7) and not to try to be the students' "buddy" (#13HSq1) or to give students "any fun stuff instead of making the required stuff as fun as possible" (#13HSq3). Teachers' ability to find such balance differed, however, and some reported tending to "overextend themselves" (#03HSq4) to the point that it limited their ability to fulfill their responsibilities.

Several barriers were identified that sometimes made it difficult for teachers to carry out their responsibilities. For example, teachers mentioned lack of time and supplies such as computers and books (#19ESq5), which makes it difficult for them to adjust their teaching according to student needs or to teach students about technology (#13HSq9; #24ESq5). Some teachers identified the curriculum as problematic; one complained that "I am not provided with

131

the materials to teach the curriculum, nor with the time. It forces me to spend my personal money and time because the students deserve the opportunity to learn" (#11HSq9). Some teachers also mentioned that it was difficult to reach "all" students; for example, "I feel I can affect most students but 5% of students are difficult to reach" (#14HSq9). Lack of parental involvement and lack of time for communication with parents were additional difficulties mentioned by teachers. One concluded that "there doesn't ever seem to be enough time" (#08HSq9).

Administrative and organizational problems were also perceived as limitations: lack of support for "community involvement" (#20ESq5), lack of "information about students," because "the office is too bust sometimes" (#24ESq5), lack of teacher involvement in the development of educational plans for students with special needs (#19ESq5), and the fact that some school rules such as attendance were perceived as "not enforceable" by teachers (#06HSq9). However, almost one-fourth of the teachers said that there was nothing for which they feel responsible but cannot carry out, and almost one-third did not respond to this question. Furthermore, even those teachers who responded to the question were describing difficulties rather than insuperable obstacles. For instance, one teacher who characterized attendance rules as not enforceable also stated that he nevertheless felt responsible for attendance, because it was important for student safety (#06HSq7). In view of the high personal involvement and motivation portrayed in teachers' statements (e.g., hardworking, comes early, leaves late), it is possible that personal sense of responsibility increases the motivation to overcome faced difficulties, for example, by working hard or investing personal resources. Possible reasons why teachers assume such high degree of responsibility are discussed subsequently (see Criteria of Responsibility).

With regard to identified categories, feeling and being held responsible almost completely overlapped; teachers felt responsible for following the state curriculum and other state, district, and school regulations, as well as for holding students to school rules. One teacher explained that, from her perspective, teacher responsibility means "fulfilling all the duties that are expected of educators" (#10HSq1). Another teacher summarized that "I do feel responsible for everything that occurs in this school in my presence. We (staff, administration, students, parents) are all responsible" (#02HSq10). In addition, for about half of the statements in this category the teachers indicated that they held *themselves* responsible, and two teachers stated that they felt and were held responsible for the same things. However, although all of the subcategories referring to "being held responsible" were also mentioned under the category of "feeling responsible," feeling responsible was a broader category (e.g., it included voluntary work, being hardworking, exceeding expectations; see Table 3.1.), and teachers generally used more formal language when referring to "being held responsible." For example, one teacher said that she felt responsible for being on time (#25ESq1A), but that she was held responsible for "punching in" (#25ESq4). These findings are consistent with prior research, which suggests that teachers (in the U.S. and England) tend to define their responsibility much more broadly than the areas for which they are held responsible by others, and strive to fulfill their self-set goals while also aiming to satisfy external expectations (Broadfoot et al., 1988; Fischman et al., 2006).These studies caution, however, that teachers often worry about not being able to sustain such high levels of commitment without support from the field—a concern that we address in the present study as well (see Realm of Responsibility, as well as Antecedents and Consequences of Teacher Responsibility).

Three additional caveats apply regarding the high degree of overlap between feeling and being held responsible. First, teachers were asked to indicate *important* things for which they feel or are held responsible. It is possible that for less important outcomes the two areas diverge more. Second, based on the present data, only inferences about teachers' own perceptions are possible. Others—school administration, other teachers, parents, students—may not share these perceptions such that different areas and duties might be considered more important, which can potentially create conflicting goals and tensions (cf. Fischman et al., 2006; Halvorsen et al., 2009). Finally, if responsible teachers generally integrate both areas of responsibility—formal and personal—but have only limited resources in terms of time and materials, one area of responsibility might be prioritized at the expense of the other.

With regard to the remaining two dimensions considered in our review—responsible for positive versus negative outcomes, as well as responsible for causing a problem or for finding a solution—teachers indicated that responsibility incorporates both: a responsible teacher "owns success and failure" (#04HSq2), "accept[s] fault for mistakes" (#13HSq2), and "takes ownership – right or wrong for what they have done" (#19ESq1A).

Overall, our findings replicate and go beyond prior analyses of outcomes for which teachers feel or are held responsible, as we outline not only general categories but also a comprehensive list of subcategories of teacher responsibility. Examining teacher responsibility as a multi-dimensional rather than a single-outcome or a generic construct by focusing on a variety of outcomes more accurately represents the teacher's perspective, since different teachers may feel responsible to the same degree but not for the same outcomes (see Lauermann & Karabenick, 2013).

Responsible for/to whom. In order to identify addressees of teacher responsibility—the third dimension in Lenk's model—teachers were asked to indicate to whom they felt responsible for their students' achievement. Most often, teachers (about two-thirds) said that they felt responsible to their students and to parents/guardians. In addition, about one third of the teachers felt responsible to the school, state and district administration, to their colleagues, to the larger community, as well as to themselves. Individual teachers also mentioned taxpayers, future generations, and future employers. Consistent with prior research (e.g., Broadfoot et al., 1988; Fischman et al., 2006), this implies that, although teachers are primarily accountable to administrators, their personal sense of responsibility for student achievement may be most strongly associated with students and parents. Also consistent was the finding that none of the teachers limited their responsibility to a single addressee, even though we focused our analysis on a single outcome (student achievement), thus holding other components of responsibility constant. This illustrates the complexity of the construct, as teachers not only assumed responsibility for a variety of outcomes (see responsible "for what") but also toward multiple addressees.

Judging or sanctioning instance. The fourth component of the model—who is the judge of responsibility—was examined in the context of being held responsible for something. As mentioned previously, teachers were asked not only about important areas for which they are held responsible, but also by whom they are held responsible. Not surprisingly, the majority of teachers (almost three-fourths) identified the school administration as a judging instance, but a quarter to a third of them also mentioned students, parents, other teachers, and themselves. Overall, teachers indicated being held responsible by the school administration for almost all school-, teaching-, and student-related outcomes (e.g., student achievement, preparing lesson

plans, being on time, relationship with staff, etc.), whereas parents and students held them responsible only for those outcomes that are more immediately related to student learning (e.g., accurate assessment of student work, students' self-esteem, students' learning progress) as well as for contacts with parents. Thus, although the data did not indicate substantial discrepancies between different judges in terms of outcomes for which teachers are held responsible, it suggests that different judges may assign different priorities.

Criteria of responsibility. Criteria according to which teachers determined their responsibilities included their own work ethic and personal integrity, as well as state/district regulations, school regulations and administrative rules. Both external (e.g., school regulations) and internal (e.g., work ethics and values) criteria of responsibility were deemed critical. For example, one teacher explained that teachers need to know what their responsibilities are because irresponsible behaviors may be simply the result of not being aware of expectations and rules (#20ESq2). Another teacher further stated that "it's my responsibility to teach what the state/school require" (#16ESq3), and at the same time the teacher viewed responsibility as something that is highly internally determined: "I really believe most of the time it's the teacher's personal work ethics/values that determine whether or not a teacher is responsible" (#16ESq2).

Teachers' statements about for what they feel responsible and why referred to such perceived social roles as being an employee, a professional, a colleague, a friend, a parent, a missionary, and a learner themselves. As *employees*, teachers felt responsible for following state, district, and school regulations (e.g., "It is my job to teach the state approved curriculum and [to be] information provider" #01HSq7). As *professionals*, teachers described themselves as role models (e.g., "I believe I need to handle myself professionally to show the importance of my

job" #14HSq7; "I can't expect them [students] to act professionally if I don't" #20ESq3). As *colleagues*, teachers felt responsible for contributing to a positive working atmosphere and school climate (e.g., "Picking up colleagues is key to a good working relationship" #15ESq3; "Working well with others is key to a successful school" #24ESq3). As *friends* for colleagues and students, teachers felt responsible for being committed, loyal, reliable, and caring (e.g., "Commitment increases support and loyalty from within administration framework" #23ESq3; "If you keep your word and can be reliable, others will accept you and keep that bond going," #19ESq3; "they [students] often need someone to talk to about problems" #10HSq10).

As *parents* themselves, teachers were trying to make sure that they treat their students the same way they would like their children to be treated in school (e.g., "As a parent, I want to know how things are going so each student gets progress reports etc. every time [every quarter]. (…) If I was their parent I would want to know where they were at all times. Sometimes a B or C isn't their best and therefore they have the right to know" #13HSq10; "Being a parent first, I trusted my daughter to her school and would want to keep the trust of the parent – their child is safe" #19ESq3). As *missionaries*, teachers felt a moral obligation to help students in many areas beyond school and to change their students' lives; they expressed concern for the broader impact of students' education on society, and saw themselves as the only person who could help their students (e.g., "You may be the only person in this child's life who even cares about them" #03HSq7; "I became a teacher to help kids learn and become better people" #14HSq7; "Someone must set the example of proper behavior - it is not happening with the general public" #07HSq7; "A teacher must be confident and sincere about changing the lives of a student" #23ESq3). Finally, in addition to being educators, teachers perceived themselves as *learners* (e.g., "I myself am learning every year and developing my confidence" #09HSq7). This set of

social roles factors into how teachers determine for what they are responsible and reveals that responsibility can go far beyond the context of the school or the profession.

An additional criterion of responsibility not anticipated in our theoretical review was identified in teachers' explanations of why they felt responsible for different outcomes. In addition to normative standards and social roles, teachers were motivated to assume responsibility for certain outcomes and tasks if they believed that this would help them to fulfill an overarching responsibility. There were several examples of such hierarchically structured responsibilities. For instance, in order to ensure student learning and success, teachers felt responsible for preparing high quality lesson plans, delivering their lessons with passion, providing a comfortable classroom atmosphere, being a role model, teaching to different learning styles, returning assignments quickly, and communicating effectively with others involved in students' education. Similarly, in order to ensure that their teaching has implications for student success beyond the context of the classroom, teachers felt responsible for teaching "life experiences" such as the ability to work together, for demonstrating creativity and critical thinking, which would stimulate students' own creativity, for providing emotional support and for exposing students to new situations. Outcomes mentioned as justifications for assuming other responsibilities included: student learning, students' developmental needs (e.g., learning how to be contributing members of society, learning "real life" skills), providing high quality teaching, the desire to demonstrate care and compassion for students, to support parental involvement, to support the school, and in a few cases, to fulfill formal job requirements. A critical implication of such hierarchically structured responsibilities is that even when teachers feel highly responsible for a given outcome (e.g., student learning), they may choose different paths toward fulfilling this responsibility, some of which may be more or less effective. An examination of such

hierarchies is therefore critical for a better understanding of how teacher responsibility may influence the instructional process.

  Realm of responsibility. The realm of teacher responsibility—the last component of Lenk's model—included not only the context of school and professional duties but also teachers' free time and resources, as well as personal standards of responsible behaviors. In some cases teachers referenced criteria of responsibility associated with specific realms such as their job description, the school or the profession. However, analogous to prior research (Fischman et al., 2006), different realms were not always easily distinguishable in the present study. As one teacher indicated, she was unable to answer questions about her "job description" because she did not understand the term (#22ESq6). Another teacher stated that "Teacher responsibility doesn't end after school and after the students go home – it's an accumulation of being the best teacher by professional development and learning about oneself each day as a teacher" (#23ESq9), which suggests that responsibility cuts across multiple realms, such as the school, the profession, and the teacher's personal standards. Yet another teacher indicated that teacher responsibility means "fulfilling all the duties that are expected of educators" (#10HSq1), extended his responsibility not only to the school context, but also to "Providing lunch, dinner, supplies – students may not be provided for these at home" (#10HSq10), and stated that there were no responsibilities that he felt he could not carry out (#10HSq9).

  There are several implications of such broadly defined responsibility. First, when the parameters of teachers' job description are blurred, it can be difficult to determine whether voluntary work is included in or goes beyond a teacher's professional responsibility. As discussed previously, teachers justified feeling responsible for an outcome by simply referencing student needs, including not only academic, developmental, and emotional needs, but also

material needs such as school supplies. For some teachers, responsibility seemed to encompass all those outcomes and tasks that they perceived as necessary to meet student needs. Second, teachers seemed to set their own goals and standards of professional behavior, as reflected in the range of responsibility criteria that clearly went beyond the context of educating children (e.g., being a missionary). Finally, if some criteria of responsibility are not limited to a specific realm (e.g., within the school), it is unclear how teachers determine boundaries and set priorities, especially since in the present study teachers were explicitly asked to list "important" responsibilities, and thus all criteria mentioned in the present analyses are likely to have high relevance for teachers' professional lives. In the following section, we outline and discuss the driving forces behind and the implications of teacher responsibility for students and teachers.

Perceived Antecedents and Consequences of Teacher Responsibility

In order to identify influences and possible repercussions of teacher responsibility, teachers were asked about influencing factors or conditions as well as about the consequences of responsible and irresponsible teacher behaviors. Two major determinants of teacher responsibility were discerned: personal characteristics such as teachers' own work ethics and the organizational climate. As shown in Figure 3.1., teachers' personal characteristics mentioned by the participants were intrinsic motivation (e.g., "committed to teaching, like children, like their profession (rather than job)" #22ESq2; "I have the inner drive that makes me work hard to be better." #03HSq6), personal integrity, values and work ethic (e.g., "most of the time it's the teacher's personal work ethics/values that determine whether or not a teacher is responsible" #16ESq2), perseverance (e.g., "A responsible teacher is always prepared to teach against all odds, and keep on going" #02HSq6; "Knowing that despite not having the greatest of conditions the teacher will continue to do his/her best" #23ESq2A), and self-control (e.g., "They

[responsible teachers] are in control of themselves" #13HSq2). Important skills teachers reported as necessary to fulfill their responsibilities were general skills obtained through their education, expertise in their subject area, and good organizational skills (e.g., time management). Both the "inner drive" to be responsible and having the skills to manage this responsibility were seen as important. In the words of one teacher: "I personally feel there are two major contributors [to irresponsible teacher behaviors]. One is that the person has a terrible work ethic. They do this for the payment June, July and August. They do as little work as possible and don't have a love for what they do. The second is the opposite. You have the teachers that overextend themselves, and take on so many responsibilities that they can't possibly have enough time to do them all well" (#03HSq4). This indicates that a teacher not only needs to want to take responsibility, but also needs to know how to carry out this responsibility.

Figure 3.1.

Some teachers described responsibility as a trait, but the majority of teachers (about 80%) also stressed the influence of contextual factors such as the organizational climate. Teachers who viewed responsibility as a relatively stable personality characteristic stated, for example, that responsibility is an "inner drive" (#03HSq4), that "inner character is the big determinant" (#05HSq4), and that it "depends on the particular person," "personal upbringing" (#07HSq4; #13HSq4) and "personal work ethics" (#16ESq2). One teacher even stated that "Some people grow up and are very responsible – others are just the opposite and no matter what you do, you are not going to change them very much" (#07HSq4). The majority of teachers (80%), however, emphasized the importance of context such as organizational climate, the role of other bearers of responsibility (administration, colleagues, parents, students), and their personal life

141

circumstances such as health or personal hardships. The organizational climate included: (a) support and guidance by the administration (e.g., "Whether or not a teacher behaves in a responsible manner is usually determined by criteria set up by their administrative leaders. The teachers who go above and beyond the call of duty are further recognized as responsible" #15ESq2); (b) colleagues' behaviors and expectations (e.g., "What/how your boss and co-workers behave – if high expectations then better behavior" #13HSq4; "Support from the administration, others around them act responsible, recognition for others" #24ESq2); (c) the teacher's mentor ("Your mentor and their expectations – if you are paired up with a poor teacher, you will take on a lot of their traits" #13HSq4); and (d) school regulations (e.g., "consequences established for those who are not 'responsible'" #12HSq4). Teachers also mentioned that their sense of responsibility is influenced by other agents such as parents ("Do they care?" #01HSq4) and students (#23ESq2). Finally, a few teachers mentioned that their personal life outside school—such as personal hardships (#16ESq2), illness (#08HSq4), and home life in general ("family, bills, health, etc." #04HSq4)—can influence their sense of responsibility.

In addition to these influencing factors, teachers identified positive as well as negative consequences of responsibility for themselves, as well as positive consequences for students and other agents (see Figure 3.1.). The personal cost that can result from responsibility was described as: "a ton of hard work" (#01HSq5), "lack of sleep some nights, less family time" (#03HSq5), but also with the acknowledgement that such investment returns personal and job satisfaction, a longer career, and respect and recognition by students, parents, and colleagues. Interestingly, a few teachers stated that being responsible is associated with *less* stress because "the job is easier – things flow" (#20ESq2A) and because irresponsible teachers "always have to hide/lie/cover up deficiencies" (#13HSq6), and may have "inner feelings of guilt over not carrying out their

responsibilities" (#05HSq6). At the same time, some teachers mentioned that if you are irresponsible "you get to leave at 2:30 every day without any papers to grade" (#08HSq6) and that an irresponsible teacher "makes it harder for the person who is responsible" (#07HSq6).

As for the consequences for others, the major consequences of teacher responsibility were student success and positive relationships with students, parents and colleagues. For example, one teacher stated that "a teacher who is not responsible consistently should get administrative discipline, because it is not just them who are suffering, it is the students" (#09HSq6). Generally, responsibility was viewed as a process whereby "when a teacher displays responsibility, students tend to respond more (in a positive way), teachers are content, teachers will receive positive treatment from administration, classes tend to be more productive and effective" (#12HSq5). Similarly, "when an administration is not responsible, teachers tend not to be and then it follows to the students" (#18ESq2).

Teachers from the elementary school sample also pointed to extrinsic rewards for being responsible such as teaching awards and monetary incentives (e.g., "You might achieve teacher of the month, year, raises" #19ESq2A). Extrinsic rewards, however, might be a double-edged sword as they can negatively affect the organizational climate, which is one of the major determinants of responsibility. For example, one teacher said that "Here it seems that administration rewards those teachers that do not act responsible by nominating them for staff member of the month" (#25ESq2B) and that "Not all teachers are rewarded for responsibility here. Some are but most are not, I feel that teachers who are responsible should be praised" (#25ESq2A). An inherent problem associated with extrinsic rewards is that they can only be given to a few teachers thereby separating teachers into winners and losers (e.g., Maehr &

143

Midgley, 1996; Midgley, 2002). Such strategies can therefore jeopardize the organizational climate, which was identified as an important determinant of responsibility.

Conclusions

An important objective of the present study was to provide a systematic analysis of teachers' beliefs about responsibility and its perceived antecedents and consequences, and thus to contribute to a better understanding of this important topic. Despite a relatively small sample, we were able not only to replicate but also expand upon prior research by conducting a detailed analysis of the multiple components of responsibility. Analyses suggested that teachers' sense of responsibility has important implications for their motivation to invest hard work and provide students with high quality education. Teachers' statements revealed a broad range of responsibility areas ranging from fulfilling state and district requirements to voluntary after school and community work. In addition, whereas prior research has typically focused on single influencing factors (e.g., job autonomy or organizational norms) and consequences (e.g., job satisfaction and student achievement), the present study revealed a much broader network of factors, which provides a rich foundation for future research.

Three main avenues for future research are related to (a) assessment challenges, (b) the connection between teachers' beliefs about responsibility and educational outcomes, and (c) the mechanisms through which teacher responsibility influences the instructional process. First, future research on teacher responsibility will need to overcome assessment challenges not only because the operationalization of teacher responsibility has been inconsistent in prior research, but also because questions of "who is responsible" or "are you responsible" are subject to multiple interpretations. A focus on concrete outcomes—for instance, the outcomes identified in the present study—may provide more specific instructions and reduce ambiguity (e.g., questions

144

about the extent to which teachers feel personally responsible to produce or prevent designated outcomes, as proposed by Lauermann and Karabenick, 2013). Second, the present study focused on antecedents and consequences perceived by teachers. Although the results are generally consistent with the extant literature, available evidence regarding the links between teachers' beliefs and such educational outcomes as students' academic success and students' and teachers' general well-being is still very limited and requires further attention. Finally, one of the main challenges facing research on teacher responsibility is to understand the psychological principles through which responsibility influences teachers and consequently the instructional process. For instance, teachers in the present study suggested that students benefit from having responsible teachers because such teachers serve as positive role models, work long hours, and are highly motivated and committed to helping their students succeed. However, why and how responsibility may lead teachers to engage in such behaviors is less clear. The network of identified antecedents and consequences indicates possible underlying factors such as anticipated benefits (e.g., pride, personal satisfaction, respect and recognition from others, including a "positive image to public"), as well as the desire to avoid feelings of guilt and stress that may result from having to "hide deficiencies" when one is being irresponsible. Overall, the present findings indicate the potential of teacher responsibility to instigate and channel positive educational outcomes. The results thus warrant further examination of teacher responsibility as an outcome in its own right, and how it is influenced by other factors such as teachers' personal characteristics and characteristics of the organizational environment.

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Table 3.1. Teacher responses within the six components of teacher responsibility

Responsibility Component	Response Categories	Sample Quotes
(1) Subject of responsibility (who is)	*Bearers of responsibility* The teacher (25), students (17), parents/guardians/other family (22), school administration (19), other teachers and staff (12), counselors (5), social workers (1[HS]), community (7), state and district administration (5), policy makers (6) *Other influences mentioned* Friends outside school/peers (4), youth organizations and churches (1[ES]), the broader context: school, home, neighborhood (4), other school personnel not mentioned above (1[HS]), teachers' unions (1[HS]), testing bias (1[ES]), state funding for education (1[HS])	"Parents" (#01HSq11; #15ESq7); "Teachers" (#06HSq11; #20ESq7); "Students" (#11HSq11; #16ESq7) "Peers I think have a significant influence on a student. Just look at all the high ACT scores in areas with high SES. Peers in high SES areas do not talk about if they are going to college, they talk about what college they plan to attend. It also helps if parents can pay!" (#02HSq13)
(2) Object of responsibility (for what)	Feel Responsible *Teaching-related activities:* • Prepare high quality/effective/engaging lessons and good lesson plans (10) • Always prepared for class (14) • Knowledgeable in subject matter/ material / qualified (7) • Give their best constantly/Hardworking (8) • Try to adapt/improve teaching constantly/Improve oneself as a teacher (6) • Critical self-judgment/ Self-evaluation/ Own success and failure/ Accountable (5) • Careful assessment of student work and quick return/ Grading (4[HS]) • Provide diverse experiences in school/ Having a holistic approach (incl. teaching well-rounded, balanced individuals) (5) *Student outcomes:* • Student success and learning/ Make sure that ALL students learn (19) • Student engagement/interest (3) • Student safety and well-being in school (8) • Student discipline & attendance (6)	"A teacher's responsibility is to prepare quality lessons in order to promote student learning in a classroom" (#03HSq1); "Comes to work every day on time and is prepared to teach and also to be flexible if change need to be made." (#16ESq1A); "Knows material being taught inside and out." (#06HSq2); "They must evaluate what they are doing all the time, and seek better ways to bring information to students." (#03HSq2); "Owns success and failure (accountable)." (#04HSq2); "Honest, hard-working, takes ownership – right or wrong for what they have done." (#19ESq1A); "Careful assessment of student work." (#11HSq2); "Exposing students to new situations. I want my students to have as many experiences as possible." (#25ESq3) "I want each of my students to be successful." (#25ESq3); "It also means to help all students achieve the most they can out of their schooling." (#10 HSq1); "[irresponsible teacher] Does not engage students." (#21ESq1B); "Providing a safe/nurturing environment. The kids will have difficulty learning if they don't feel safe." (#16ESq3); "The development of discipline. Discipline holds it all together. Ultimately self-discipline will

- Preparation for the 'real' world outside and after school/ Develop students' life skills (3)
- Help students be positive members of society/ Become a successful person (5)
- Help students develop specific skills: creativity, critical thinking, teamwork, technology skills (5)

Classroom atmosphere:

- Comfortable and supportive classroom environment (9)
- Classroom management/ Teacher control (5)

Interactions with students:

- Role model for students / Lead by example (8)
- Teacher fairness (especially with grading) (4)
- Be upfront and clear with expectations/ Process execution of procedures/ Follow through/ Be honest and trustworthy (11)
- Show leadership and authority/ Be demanding (4[HS])
- Be caring and compassionate (18)
- Balancing teacher role (authority) and compassion/ Tough love (3)
- Support students' self-esteem/ Encouragement/ Empowerment of students (4)
- Put students first/ Do everything possible to meet student needs (4[HS])
- Be approachable and help students when needed/ Counsel, consult, guide students (5[HS])

Communication/ Interaction with others involved:

- Communication with students, parents, colleagues, administration (15)
- Positive relations/collaboration with colleagues (11)
- Communicate with and support administration (6)

School policies and external regulations:

- Follow state and district standards/ Follow the curriculum (10)
- Follow school regulations and administrative rules (4)
- Apply school policies to students (1[HS])

make them more effective people." (#05HSq7); "I want my students to be productive members of the community." (#25 ESq3); "Help students be masters of technology" (#01HSq2); "Demonstrating creativity and critical thinking. They [students] can develop their own creative potential and critical thinking, so they can think for themselves, become leaders." (#20ESq3)

"…providing an open classroom that encourages questions and involves participation." (#09HSq1); "Without classroom management skills, a teacher loses interests in all of the students" (#23ESq3)

"I can't expect students to give their best if I don't do it first" (#13HSq7); "When an administration is not responsible, teachers tend not to be and then it follows to the students." (#18ESq2); "The responsible teacher can be counted on to follow through on what they communicate" (#20ESq1A); "Working to ensure students learn material. Setting high standards will make student work to succeed." (#06HSq7); "Getting to know each student. It's important that the kids know I care about them no matter how they perform in class." (#16ESq3); "Be willing to listen and be considerate of feelings." (#01HSq2); "They are approachable but not try to be the students' 'buddy'." (#13HSq2); "The teacher is always prepared for class, comes through when he/she says they will and do everything in their power to meet the needs of their students." (#18ESq1A); "They [students] need teachers who can listen and guide them in positive ways. Intervention is important on many levels." (#08HSq7)

"Communication effectively with student, parents and staff. The students will be more successful if everyone knows what's going on." (#16ESq3); "A highly responsible teacher is one who follows and supports administration" (#09HSq2)

"A responsible teacher follows the curriculum needs and standards recommended by the state." (#08HSq2); "Teaching what the kids need to know/curriculum. It's my responsibility to teach what the state/school require." (#16ESq3)

	School activities / Duties/ Job involvement: • Punctuality (12) • Work until late (4) • Dress appropriately/ Professional attire (3[HS]) • Fulfill professional duties (7) • Exceed formal professional requirements (5) • Participate in after-school activities (2[HS]) • Irresponsible teachers – work avoidance and absenteeism (12)	"[A responsible teacher] comes early, stays late and is never totally done with work" (#13HSq2); "Professional attire; I believe that as role models we should dress as professionals – so we should lead by example and not through words." (#12HSq7); "Completes tasks that are required and sometimes not required of her" (#16 ESq1A); "Community involvement; because this district is so diverse, teachers need to understand the differences within cultures." (#12HSq7)
	Being Held Responsible By Others * • Same as feeling responsible (2[HS]) • Teaching/ Quality instruction/ Lesson planning (8) • Follow curriculum (3) • Be prepared (1[ES]) • Knowledgeable in subject matter (2[ES]) • Certification/ Professional development/ Continuing education (4) • Grading/ Report cards/ Test scores/ Testing (5) • Accurate assessment (1[ES]) • Student achievement/learning/success/progress (4) • Student safety (1[HS]) • Develop life skills/ Student growth (2) • Student discipline & attendance (5) • Classroom management/ discipline/ monitoring/ observations (5[HS]) • Communication with parents, students, and staff (6[ES]) • Follow school regulations and administrative rules/ Professional duties: punctuality/punching in, student supervision, setting up classroom, security of materials (9) • Ensuring that rules are followed (1[HS])	"I think the same as question seven [feel responsible]." (#02HSq8); "Preparing effective and creative lesson plans." (#20ESq4); "Quality instruction" (#05HSq8); "Teaching curriculum effectively" (#16 ESq4); "Certification and professional development" (#10 HSq8); "Knowledgeable in subject matter." (#23ESq4); "Student achievement" (#09HSq8); "Test scores" (#06HSq8); "Safety of all students." (#05HSq8); "Ensuring students grow in their abilities and develop skills and self-awareness and awareness of the field." (#20ESq4); "Punching in" (#25ESq4); "Quality supervision of class and halls." (#05HSq8); "Relationship with staff." (#24ESq4); "Collaboration." (#20ESq4); "Parent contacts" (#12HSq8); "Keeping the student and families happy, content, satisfied with the school" (#19ESq4); "Handling student/parent problems." (#23ESq4); "Connection of home and school." (#22ESq4)
(3) Addressee of responsibility	Students (15), parents/guardians (17), administration/school board/curriculum director/ state/ district (9), other teachers and staff (7), community/society (9), tax payers/future generations/future employers (2[HS]), myself (6)	"Parents" (#11HSq12; #22ESq8); "Students" (#02HSq12; #25ESq8); "Myself" (#05HSq12; #24ESq8)
(4) Judging or sanctioning instance	Administration, state and district (20), students (6), parents/guardians (8), other teachers, peers, union (2[HS]), myself (10), everyone/all stakeholders (3)	"Administration" (#17ESq4; #09HSq8); "Students" (#05HSq8; #22ESq4); "Myself" (#12HSq8; #23ESq4)

153

(5) Criteria of responsibility	*Personal characteristics such as integrity, upbringing/values and work ethic* (10)	"I believe that this [responsibility] is something that depends on the particular person. This is something that is not easy to answer. A lot of it has to do with their upbringing I think. Some people grow up and are very responsible – others are just the opposite and no matter what you do, you are not going to change them very much." (#07HSq4); "I really believe most of the time it's the teacher's personal work ethics/values that determine whether or not a teacher is responsible." (#16ESq2)
	State/district/school regulations (12)	"They [teachers] need to know what their responsibilities are; if they are not acting responsible for some actions – it may not be clear to them, what or when they need to – show up, write something, whatever." (#20 ESq2); "A responsible teacher follows the curriculum needs and standards recommended by the state." (#08 HSq2)
	Social roles: • Employee (8) • Professional (8) • Colleague/ Team player (10) • Friend (emotional support, loyalty, being reliable and trustworthy) (7) • Parent (2) • Missionary (change students' lives) (9) • Learner (6)	"It is my job to teach the state approved curriculum and [to be] information provider." (#01HSq7); "I believe I need to handle myself professionally to show the importance of my job." (#14HSq7); "Team morale. Picking up colleagues is key to a good working relationship." (#15ESq3); "Making sure my kids are ok and attending to their emotional needs. My students are important to me." (#16ESq6); "Progress reports for every student every quarter. If I was their parent I would want to know where they were at all times." (#13HSq10); "A teacher must be confident and sincere about changing the lives of a student." (#23ESq3); "I myself am learning every year and developing my confidence." (#09HSq7)
(6) Realm of responsibility and action	*School / Education system/ Profession* (24)	"I do feel responsible for everything that occurs in this school in my presence." (#02 HSq10); "What duties each professional must perform to ensure success." (#08HSq1); "It's my responsibility to teach what the state/school require." (#16ESq3)
	Personal views and standards (20)	"Having integrity and doing your job every day not just when being observed." (#04HSq1); "[Held responsible for] being organized, lesson plan in order. [By whom are you held responsible?] My personal beliefs." (#19ESq4)
	Voluntary work/ Out-of-school context (18)	"Feeding students and finding them homes." (#08HSq10); "Providing lunch, dinner, supplies – students may not be provided for these at home" (#10HSq10); "Teacher responsibility doesn't end after school and after the students go home – it's an accumulation of being the best teacher by professional development and learning about oneself each day as a teacher." (#23 ESq9)

Note. Number of teachers who mentioned each category is indicated in parentheses. Due to length considerations, sample quotes are included only for main categories and selected subcategories. A complete list of quotes illustrating all subcategories for both elementary and secondary teachers is available from the first author.
HS = Mentioned only by high school teachers; ES = Mentioned only by elementary school teachers.
* Excludes teachers who stated that they held themselves responsible without mentioning any other judges of responsibility

Teachers' Personal Characteristics	Teachers' Skills	Teachers' Personal Life Outside School	Other Bearers of Responsibility	Organizational Climate
• Intrinsic motivation • Personal integrity • Work ethic • Perseverance • Self-control	• Training • Expertise in subject area • Experience • Org. skills	• Personal hardships • Health	• Students • Parents • School personnel	*Interpersonal Relations* • Administration • Colleagues • Mentor *School Regulations*

TEACHER RESPONSIBILITY

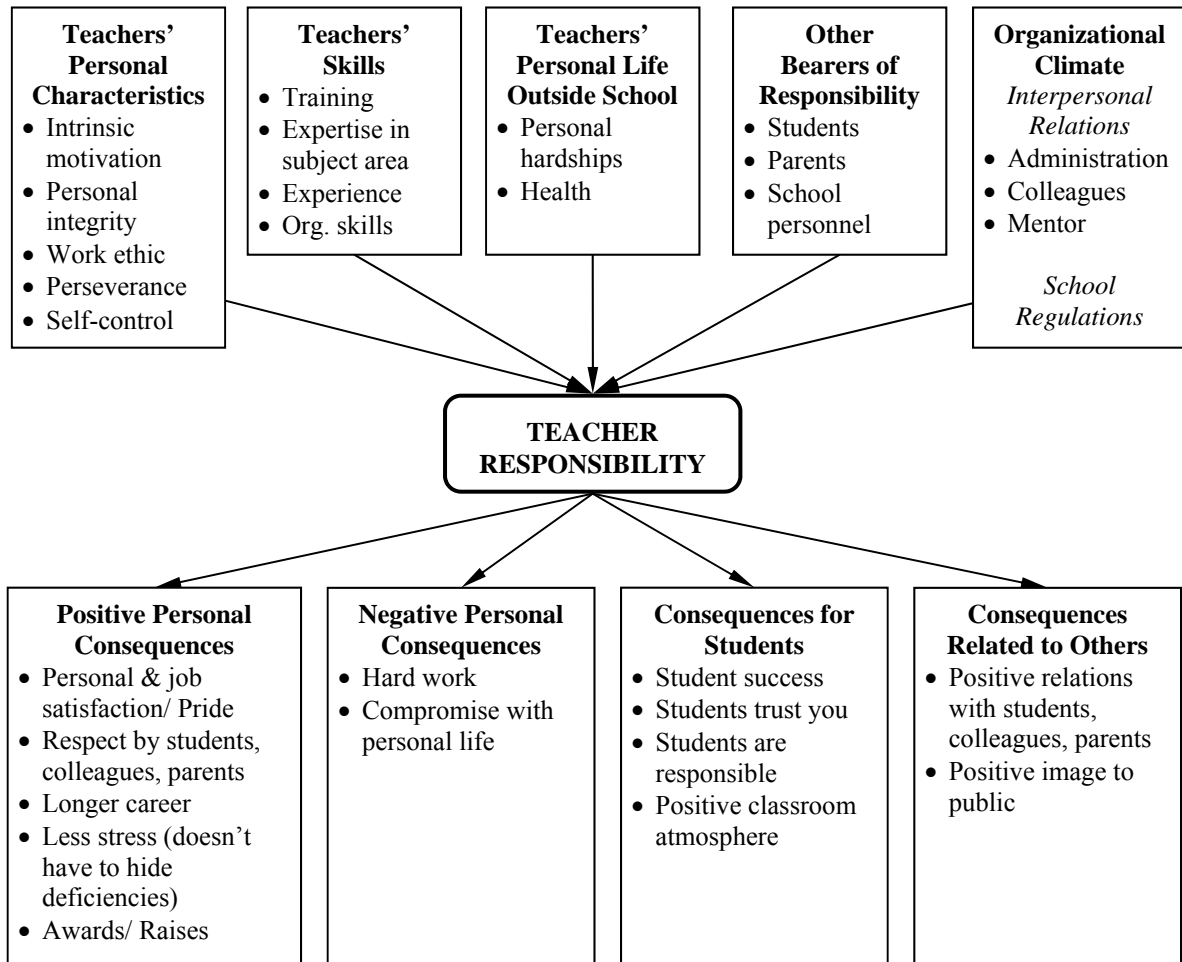| Positive Personal Consequences	Negative Personal Consequences	Consequences for Students	Consequences Related to Others
• Personal & job satisfaction/ Pride • Respect by students, colleagues, parents • Longer career • Less stress (doesn't have to hide deficiencies) • Awards/ Raises	• Hard work • Compromise with personal life	• Student success • Students trust you • Students are responsible • Positive classroom atmosphere	• Positive relations with students, colleagues, parents • Positive image to public

Figure 3.1. Network of teacher responsibility: Influencing factors and consequences

Appendix B. Open-ended questions

High school teacher sample (Identification numbers #1 through #14)	Elementary school teacher sample (Identification numbers #15 through #25)
HSq1: What does "teacher responsibility" mean to you?	*--not asked, question was identified as redundant in addition to the following two questions--*
HSq2: What are the characteristics of a teacher who is highly responsible?	ESq1A: What are the characteristics and typical behaviors of a teacher who is responsible?
HSq3: What are the characteristics of a teacher who is not responsible?	ESq1B: What are the characteristics and typical behaviors of a teacher who is not responsible?
HSq4: What factors or conditions influence whether or not a teacher is responsible, or behaves in a responsible manner?	ESq2: What factors or conditions influence whether or not a teacher is responsible, or behaves in a responsible manner?
HSq5: What are the consequences of being a teacher who is responsible, or who behaves in a responsible manner?	ESq2A: What are the consequences of being a teacher who is responsible, or who behaves in a responsible manner?
HSq6: What are the consequences of being a teacher who is not responsible, or who does not behave in a responsible manner?	ESq2B: What are the consequences of being a teacher who is not responsible, or who does not behave in a responsible manner?
HSq7: List up to five important things/activities for which you feel responsible as a teacher? Why is each of these things/activities important to you?	ESq3: List up to five things/activities for which you feel most responsible as a teacher? Why do each of these things/activities feel important to you?
HSq8: List up to five important things/activities for which you are held responsible as a teacher? By whom are you held responsible for each of these things/activities?	ESq4: List up to five things/activities for which you are held most responsible as a teacher? By whom are you held responsible for each of these things/activities?
HSq9: Are there any areas in your work for which you feel responsible but cannot carry out that responsibility for some reason? Please make a list and explain why.	ESq5: Are there any areas in your work for which you feel responsible but cannot fulfill that responsibility for some reason? Please list them and explain why.
HSq10: Are there things you feel responsible for in your work that are not a part of your formal obligations or "job description"? If so, why do you feel responsible for them?	ESq6: Are there things for which you feel responsible in your work that are not a part of your formal obligations or "job description?" If so, why do you feel responsible for them?
HSq11: In addition to yourself, who do you believe is/are "responsible" for the academic achievement of your students, and who is/are to blame if they don't "measure up"? Please list up to 10 sources below in any order that you wish.	ESq7: In addition to yourself, who do you believe is/are "responsible" for the academic achievement of your students, and to blame if they don't "measure up"? Please list up to 10 sources below in any order that you wish.
HSq12: To whom do you feel responsible as a teacher for your students' performance? Please list up to 10 below in any order that you wish.	ESq8: To whom do you feel responsible as a teacher for your students' performance? Please list up to 10 below in any order that you wish.
HSq13: If there is anything else about "teacher responsibility" you would like to tell us, you can do it here.	ESq9: If there is anything else about "teacher responsibility" you would like to tell us, you can do it here.

Note: The high school teachers were surveyed about one month before the elementary school teachers. Based on these interviews, the questionnaire for the elementary school teachers was slightly modified to avoid redundancy.

CHAPTER V

Conclusions and Outlook

As discussed in the previous chapters, extant research has established links between teacher responsibility and such desirable educational outcomes as teachers' professional well-being (e.g., job satisfaction) and students' academic success. However, that evidence is based on inconsistent conceptualizations and operationalizations of teachers' professional sense of responsibility, thus leaving its theoretical and empirical status in need of further explication and research. Accordingly, the purpose of this dissertation was to present a systematic analysis of the key elements of teachers' professional sense of responsibility in terms of its definition and measurement, and to provide the foundation for programmatic research on this topic. Across three research papers presented in Chapters II, III, and IV, I discussed: why responsibility matters for teachers and students, especially in the context of increasing emphasis on educational accountability; what considerations are important when we select or develop measures of teacher responsibility; and to what extent teachers' perspectives on their professional responsibility match our conceptual models. Within each of the previous three chapters I discussed directions for future research. This final chapter expands upon these considerations to provide additional discussion of what I consider to be the most important next steps for teacher responsibility research, focusing in particular on: (a) the need for further analysis of the conceptual and empirical links between responsibility and accountability; (b) the need for theory-driven

research; and (c) the need for methodology that is appropriate for understanding the causal network of antecedents and consequences of teacher responsibility.

The Link Between Responsibility and Accountability

In the context of current education policy that places great emphasis on teacher accountability, it is critical to understand the ways that teachers reconcile their sense of personal responsibility for students' educational outcomes. Evidence presented in this series of dissertation studies indicates that responsibility should not be equated with formal accountability. Rather, personal responsibility is an internal source of motivation that implies internal regulation and self-determination and may not necessarily overlap with a list of formal duties and obligations. Whereas the focus of this dissertation is on personal responsibility, the ways in which accountability has been conceptualized and operationalized in the literature is also important, since the two beliefs may influence each other in many ways. Possible links include: (a) referencing accountability as a criterion for personal responsibility ("what is my job"), (b) viewing accountability as a limitation to one's autonomy and thus to one's degree of personal responsibility (as discussed in Chapters II and IV), and (c) viewing accountability for the outcomes of one's work as the price one has to pay for having autonomy over, and personal responsibility for, *how* one carries out work tasks (Lerner & Tetlock, 1999).

Individual accountability has been defined as "an implicit or explicit expectation that one's decisions or actions will be subject to evaluation by some salient audience(s) with the belief that there exists the potential for one to receive either rewards or sanctions based on this expected evaluation" (Hall & Ferris, 2011, p. 134). Unlike personal responsibility, a key characteristic of accountability is the anticipated evaluation from external audience(s) rather than the self. This is evident from the ways in which accountability has been manipulated in research

settings, namely through the presence of an observer, the expected identifiability of one's actions

or statements (as opposed to anonymity), the expected evaluation according to normative rules

with implied consequences, and the requirement to give reasons for one's actions or statements

(see review in Lerner & Tetlock, 1999). [22]

In the organizational literature, personal responsibility has been generally linked to

desirable outcomes such as job satisfaction, intrinsic job motivation, and job performance

(Hackman, 1980; Humphrey, Nahrgang, & Morgeson, 2007), constructive change-oriented

communication and proactive role performance (Fuller, Marler, & Hester, 2006), as well as goal

commitment (Bierhoff et al., 2005).[23] Accountability, on the other hand, can have both positive

and negative effects on decision-making and psychological well-being (e.g., anxiety), which

largely depends on which type of accountability is implemented (Frink & Klimoski, 2004;

Lerner & Tetlock, 1999; Siegel-Jacobs & Yates, 1996). Although there are some exceptions

(Langhe, van Osselaer, & Wierenga, 2011), the preponderance of evidence—mainly laboratory

studies—suggests that positive outcomes such as self-critical thinking and effort investment are

associated with accountability to an audience that has unknown views [24], that focuses on

accuracy and on how decisions are made rather than on what was decided, that provides

information relevant for the task at hand, and that has legitimate authority (Lerner & Tetlock,

1999). Accountability can also function as a stressor, however, if it exceeds one's perceived

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[22] Some researchers have proposed that one can be accountable to oneself, but have only assessed accountability to others with such items as "Top management holds me accountable for all of my decisions" and "I am held very accountable for my actions at work" and have argued that "appraisal by an external audience is a critical component of accountability" (Hall et al., 2006, p. 88).

[23] In the social psychological literature, perceived discrepancies between one's current self and one's "ought" self (the kind of person one has an obligation, responsibility, and duty to be) have been associated with psychological distress (Higgins, 1987, 1997). Such negative affect is not caused by responsibility per se, but rather by the perceived failure to fulfill responsibilities that are integral to one's sense of self.

[24] Experimental research suggests that when an audience has known views or views that can be guessed, cognitive effort is spent to please others and to conform to expectations, which may distract from the task at hand (Lerner & Tetlock, 1999). Thus, individuals may simply adopt the views of those to whom they are accountable, rather than engage in thoughtful, self-critical, and effortful decision-making.

capabilities, if it results in role overload and/or conflict, and if the individual lacks structure and autonomy (Frink & Klimoski, 2004; Hall et al., 2006; Schlenker, Weigold, & Doherty, 1991). Given such implications for decision-making, emotions, and behavior, the links between different types of accountability and personal responsibility warrant careful consideration. This includes such questions as which types of accountability are most likely to foster an internal sense of responsibility, under what circumstances are accountability and responsibility aligned, and how do individuals resolve potential conflicts between accountability and their internal sense of responsibility?

The Need for Theory-Driven Research on Teacher Responsibility

The mechanisms through which teacher responsibility influences the instructional process is among the most critical questions facing teacher responsibility research, and was therefore mentioned across all three papers presented in Chapters II, III, and IV. An underlying assumption of this work is that individuals are motivated to engage in various behaviors out of a sense of responsibility and obligation. Such activities as working long hours, persisting in the face of difficulty, providing extensive feedback to students, and trying to educate students when they lack high-quality engagement and needed resources, are not always enjoyable and are not always subject to formal rewards. Teachers may nevertheless engage in such behaviors in order to fulfill their professional responsibilities.

The underlying mechanisms—i.e., *how* responsibility influences the individual—are not entirely clear. To address this question and to derive meaningful hypotheses, it is necessary to consider theoretical frameworks of responsibility (e.g., attribution theory, self-discrepancy theory, and the job characteristics model), as well as relevant psychological principles (e.g., the principle of reciprocity). However, a recent review of major theoretical frameworks featuring

responsibility (Lauermann and Karabenick, in press)—personality research, attribution theory, the job characteristics model, self-determination theory, and self-discrepancy theory—as well as the review presented in Chapter II concluded that these frameworks have been applied to teachers only fragmentarily or not at all, and argued that there is a need to adjust these frameworks to specific characteristics of the teaching profession. For instance, attribution theory research has focused almost exclusively on ascriptions of responsibility to others and not the self, research in self-determination theory has failed to provide a clear definition and assessment of personal responsibility, the assumptions of self-discrepancy theory have not been examined with regard to teachers' professional selves, and studies using the job characteristics model with teachers have faced methodological challenges. Further analysis of these frameworks is therefore necessary. Special considerations about the teaching profession are also needed, and include the fact that teachers are not only responsible for own actions, but also for their students, as well as the fact that teaching represents a professional context, so that personal views must be discussed in the context of professional obligations.

In addition to theoretical frameworks, psychological principles that may explain the motivational potential of felt responsibility include the desire to reciprocate perceived organizational support (principle of reciprocity), the desire to avoid feelings of guilt (avoidance orientation), and the anticipated pleasure from a job well done, from doing what is "right," and from others' recognition (approach orientation; see Chapters II, III and IV). Furthermore, the review presented in Chapter II suggests that teacher responsibility may be a consequence of contextual and personal factors such as job autonomy, position in the organizational hierarchy, availability and distribution of resources and information, role clarity, perceived organizational support, proactive personality, internal locus of control, self-efficacy, trust, work ethic, and

162

professional learning. Whereas contextual factors (especially job autonomy) provide

opportunities to assume responsibility, personal factors may determine whether or not an

individual will take advantage of such opportunities. This was largely reflected in research

presented in Chapter IV, according to which teachers see responsibility as both a feature of the

individual and a consequence of organizational/school characteristics.

Finally, in order to more fully understand responsibility as a motivational construct, it is

important to consider the following scenarios in which responsibility may fail to produce desired

outcomes, despite serving as a motivational factor. First, a teacher may feel highly responsible,

but may not know how to fulfill this responsibility, or may choose ineffective instructional

strategies. Under these circumstances it is unlikely that teacher responsibility will lead to

desirable educational outcomes, even though teachers may invest considerable effort. Second, it

is possible that teachers are unable to fulfill some of their responsibilities due to limited

resources and time. Accordingly, it is possible that teachers fail to invest effort despite their

sense of personal responsibility, since some responsibilities must be prioritized over others. In

such cases responsibility is unlikely to result in effort investment, and may lead to frustration

consistent with the perception of role conflict and role overload discussed in Chapter II. These

scenarios illustrate some of the challenges facing teacher responsibility research and the need to

consider moderating factors such as available knowledge and resources.

The Need for Appropriate Methodology to Understand Causality

In addition to the development and use of sound theoretical frameworks of teacher

responsibility, it is important to select appropriate methodologies that afford causal inferences

about personal responsibility and its antecedents and consequences. Although cross-sectional

data and field studies provide valuable information, there is a need for longitudinal and

experimental studies in order to reveal the causal links behind correlational evidence. Furthermore, in order to avoid biases due to social desirability (Bierhoff et al., 2005), which may affect self-report data, it may be useful to incorporate data from multiple sources (e.g., observations), and from implicit assessments (e.g., TAT).

Longitudinal designs could reveal how teachers' sense of responsibility develops across different time points in their careers and across different contexts. As discussed in Chapters II and IV, some researchers as well as teachers themselves view teacher responsibility as a relatively stable trait, but there is a strong rationale to support the view that responsibility also varies across situations. For instance, as noted in Chapters II and IV, responsibility is often defined by situation-specific criteria and norms, and teachers believe that their sense of responsibility is influenced not only by personal, but also by organizational factors. Given the relation between responsibility and efficacy discussed in Chapter III, it is possible that teacher responsibility follows a similar trajectory as teacher efficacy, such that it varies across different subject areas taught by the same teacher (Raudenbush, Rowan, & Cheong, 1992), as well as across different stages of teachers' careers (Woolfolk Hoy & Spero, 2005). If such fluctuation in responsibility exists, it would provide an opportunity to examine if there are analogous fluctuations in teachers' effort investment and professional commitment.

Experimental and quasi-experimental studies also can provide valuable information regarding the causal links between responsibility and its hypothesized antecedents and consequences. This may include experimental manipulations of work conditions such as job autonomy (Deci, Spiegel, Ryan, Koestner, & Kauffman, 1982) and accountability (Lerner & Tetlock, 1999), as well as observations of possible changes in teacher responsibility as a function

of naturally occurring changes in their work environments such as their work with different

students, colleagues, classrooms, and schools.

Finally, data from multiple sources can contribute to greater validity of responsibility

assessments and their relations with hypothesized antecedents and consequences. This may

include not only teachers' self-reports (e.g., see Chapter III), but also observational data

(Diamond, Randolph, & Spillane, 2004) and implicit assessments (Winter, 1992). For instance,

data from the qualitative study presented in Chapter IV provides a rich database of characteristics

and behaviors of responsible and irresponsible teachers that can inform observational research.

Such data can complement self-report assessments discussed in Chapter III.

Outlook

Overall, the work presented in this dissertation outlines exciting avenues for future

research on a topic that constitutes an integral part of teachers' professional lives. Teacher

responsibility is an important area of research, first, because it has critical implications for

teacher motivation and, second, because it plays a central role in current educational policy that

focuses on teachers' formal accountability for students' performance. Indeed, research on teacher

responsibility contributes to a growing body of literature on teacher motivation. In a commentary

for a special issue on teacher motivation, Woolfolk Hoy (2008) pointed out that "Even though

there are thousands of publications about motivation, few have addressed the motivation of

teachers, with the exception of writings about teachers' sense of efficacy or teachers' job

satisfaction." (p. 492). In recent years, however, there has been renewed interest in this topic,

including research focusing on teachers' achievement goals (Butler, 2007), their expectancies

and values with regard to choosing teaching as a career (Watt & Richardson, 2008, 2010),

teacher enthusiasm (Kunter, Frenzel, Nagy, Baumert, & Pekrun, 2011), and autonomous

motivation for teaching (Roth, Assor, Kanat-Maymon, & Kaplan, 2007). Responsibility research complements these perspectives by focusing on an important source of motivation that is not captured in the extant literature, namely teachers' sense of internal obligation and duty.

Increasing interest in teacher motivation coincides with the current public policy emphasis on educational accountability in which teachers' motivation and ability to improve students' educational outcomes are the subject of heated debate (cf. Linn, 2006; Schalock, 1998). This debate targets mainly teachers' *formal* accountability for student performance (see Chapter II), whereas teachers' *internal* sense of responsibility and the conditions under which teachers are willing to accept responsibility for educational outcomes are not well understood. It is typically assumed that making teachers and schools accountable for student performance will lead to productive instructional practices and increased teacher effort that will result in improved student outcomes. Although there is some evidence to support this claim (e.g., Rouse, Hannaway, Goldhaber, & Figlio, 2007), available research also reveals unintended side effects of strong accountability such as cheating and teaching to the test (see review in Chapter II). As discussed previously, an inherent limitation of formal accountability systems is that they rely on external monitoring and on the implementation of external rewards and sanctions to motivate teachers. In order to avoid sanctions teachers may engage in such undesirable behaviors as cheating and teaching to the test—behaviors that pose a threat to core educational values. Such unintended side effects indicate that formal accountability is not an adequate substitute for personal responsibility and highlight the need to examine conditions under which teachers are willing to assume responsibility in the absence of external monitoring and control. Thus, teacher responsibility constitutes an important and exciting area of research, with key implications for teachers' professional lives.

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