Task demands and test expectations. Theory and empirical research on students' preparation for a teacher-made test

Broekkamp, H.

Citation for published version (APA):
CHAPTER 1

INTRODUCTION

1 DO STUDENTS WHO PREPARE FOR A CLASSROOM TEST HAVE A CLEAR PERCEPTION OF TASK DEMANDS?

"Will that be on the test?" Without doubt, this is one of the most frequent questions students ask in education. Even so, teachers will rarely answer it directly, because they do not want to give away the test questions. Students know this and still try to obtain the most specific information possible about the forthcoming test (Doyle, 1983; Miller & Parlett, 1974; Ramsden, 1988; Van Etten, Freebern, & Pressley, 1997). This "game" has been considered by some as an artifact in education, which has more to do with students' test-orientation than with learning (see Entwistle & Entwistle, 1991). However, considering contemporary theories of learning, this game has important consequences. Clear knowledge about task demands is an important prerequisite for students to learn in a self-regulated and effective way (Brown, Bransford, Ferrara, & Campione, 1983; Butler & Winne, 1995; Flavell, 1987; Nist & Simpson, 2000; Thomas & Rohwer, 1986). With respect to studying, a clear perception of task demands allows students to focus their attention on task-relevant information and to choose appropriate strategies to learn this information (Anderson & Armbruster, 1984; Van Etten et al., 1997).

Several studies have shown that secondary school students and even university students mostly use nonselective and reproductive study methods when studying in preparation for a test (cf. Thomas, Bol, Warkentin, Wilson, Strage, & Rohwer, 1993; Thomas & Rohwer, 1987; Vermetten, Vermunt, & Lodewijks 2002). One of the possible explanations for this apparently unstrategic way of studying is that students do not have a clear perception of task demands (Pressley, Yokoi, Van Meter, Van Etten & Freebern, 1997). In the empirical study that constitutes the body of this dissertation, we compared secondary school students’ perception of task demands (i.e., their test expectations) with the task demands as indicated by their teachers’ intentions, and also with the test that these teachers actually gave to the students. Moreover, we examined whether the correspondence between students’ test expectations and teachers’ intended task demands was related to students’ test performance. By examining these relations, we tried to answer our main research question: Do students who prepare for a classroom test have a clear perception of task demands?
Our empirical investigation consists of four related studies, each providing a different perspective on the data. The studies, which constitute the main chapters of this dissertation, were submitted to and/or published in international scientific journals in the field of educational psychology. They can be read separately, but build on each other. To strengthen the relations among the studies and to provide additional background information, this introduction chapter includes a theoretical and empirical review of previous research and an overview of the four chapters. Furthermore, the discussion chapter that closes off the dissertation provides an evaluation of the four studies as well as suggestions for future studies and educational practice.

2 A THEORETICAL DESCRIPTION OF THE ROLE OF TASK DEMANDS IN STUDY-TEST EPISODES

Contemporary theories about academic studying emphasize the importance of task demands and students' perception of these demands. In the following theoretical description it will be argued that a clear perception of task demands is not a matter of course. The theoretical description can be considered as a review of the literature that was collected in the course of the dissertation project.

2.1 Studying in preparation for a test

Studying can be defined as self-directed learning undertaken in anticipation of a future performance event (Thomas & Rohwer, 1993b, p. 241; Anderson & Armbruster, 1984, p. 657). In secondary school settings, preparing for a test is a frequent form of studying (Lorch, Lorch & Klusewitz, 1993). This task generally includes independent processing of reading materials (typically a textbook chapter) as well as engaging in activities that support or extend individual reading. For instance, in relation to instructional texts, students make exercises, attend classroom lectures or take part in discussions with their teacher and their peers (cf. Alvermann & Moore, 1991; Barr, 1987; Green & Weade, 1987; Smith & Feathers, 1983b; Wade & Moje, 2000). The instructional-learning process that is associated with this kind of task can be referred to as a study-test episode (cf. Aulls, 1998; Brookhart, 1997; Elshout-Mohr, Van Hout-Wolters, & Broekkamp, 1999; Thomas & Rohwer, 1986). A study-test episode consists of a study episode in which students prepare for a test, and a test episode, in which students actually take this test.

Although students receive a considerable amount of practice in test preparation, this type of study task remains very difficult (Pressley et al., 1997). Pressley et al. explain students' difficulties in test preparation by three major factors: inconsiderate text, inadequate teaching and "not so-good information processing by students". Inconsiderate text refers to qualities of textbooks that make them hard for students to learn from. Textbook content, for instance, may be illogical, unorganized or dull. Inadequate teaching refers to teachers who are unstructured in their lectures and therefore make it hard for their students to take useful notes. Another flaw in teaching stressed by Pressley et al., is that teachers give insufficient information about task demands, leaving students in the dark about what and how to study. "Not so-
INTRODUCTION

good information processing by students” comprises nonselective reading strategies (i.e., paying equal attention to important and unimportant content), background knowledge deficiencies, failures to use prior knowledge, task-inappropriate processing (i.e., deficiencies in attuning processing strategies to the expected type of test questions), mismonitoring understanding, mismonitoring test-preparedness (i.e., not knowing when one has studied enough to perform well at the exam) and search inefficiencies (not knowing when, where and how to seek relevant information). In addition, the category of not so-good information processing encompasses affective problems: anxiety and low motivation.

Plainly, the factors mentioned by Pressley et al. (1997) are related. In the following three sections, we will make clear that the effectiveness and efficiency of selective reading strategies, monitoring test preparedness, task-appropriate processing as well as the experience of affective problems may be influenced by the information that teachers provide about the task demands and by the way students make use of this information.

2.2 Attuning to task demands

According to theories of self-regulated learning (Brown et al., 1983; Butler & Winne, 1995; Flavell, 1987; Jenkins, 1979), the effectiveness of a learning strategy depends on how well it is attuned conditions of the learner (e.g., prior knowledge, learning style) and the task environment (e.g., learning materials, task demands, quality of instruction). Learners attune their learning to learner and task conditions by engaging in a complete cycle of self-regulated or metacognitive processes such as “analyzing tasks, setting goals, planning, selecting and implementing strategies, monitoring progress, redressing observed gaps in performance and managing motivation and emotions” (Butler, 1998a, p. 287; see also Brown et al., 1983; Butler & Winne, 1995; Zimmerman, 2000). Of all the self-regulated processes, Butler (1998a) stresses the importance of analyzing task demands: “understanding task demands is pivotal in strategic learning because students base all further efforts on the demands they perceive” (p. 288).

In these theoretical accounts of self-regulated learning, the concept of task demands is generally used to indicate the products of a task that students are to pursue. These products can be observable, such as the text produced in a writing task, or cognitive, such as the knowledge and skills acquired in a study task. For tasks with observable products, task demands may also be referred to as performance criteria. For tasks with cognitive products, task demands are synonymous with the term learning goals (cf. Winne & Hadwin, 1998, p. 282). Note that task demands concern a special kind of learning goal. Task demands are learning goals that pertain to a specific task and that are formulated externally, i.e., by others than the learner. Task demands, therefore, are to be distinguished from internal or personal learning goals, which are defined by the learner himself.

“Tasks regulate the selection of information and the choice of strategies for processing that information” (Doyle, 1983, p. 161). A distinction, then, can be made between two types of task demands: content demands and processing demands.
Content demands refer to the specific information that students are to acquire. Processing demands denote the processing activities that students should be able to demonstrate to show that the information has been mastered (Anderson & Armbruster, p. 568).

Like the more general theories of self-regulated learning, models of academic studying emphasize the conditional nature of studying and the need to adapt study activities to task demands (Entwistle, 1987; Nist & Simpson, 2000; Strage, Tyler, Rohwer, Thomas, 1987; Ramsden, 1988; Winne & Hadwin, 1998; Zimmermann, 1998). To attune studying to task demands, two strategies are of special importance: attending selectively to task-relevant information and task-appropriate processing.

2.2.1 Selective attention

The first theoretical models of “the selective attention strategy” in text processing focused on students’ ability to increase their attention to more important information at the cost of attention to less important information (e.g., R. C. Anderson, 1982). Later models also include students’ ability to determine criteria for selective processing (Hidi, 1995; Reynolds, 1992; Thomas & Rohwer, 1986).

In determining the importance of information, students may use three kinds of criteria (cf. Alexander & Jetton 1996; Reynolds, 1992; Schellings, 1995; Van Hout-Wolters, 1986). First, students can consider textual information important, because it has been given a salient or prominent position within the structure of the text (author-based or constructed importance). Second, students may perceive textual information important, because they assign personal relevance or interest to this type of information (reader-based or constructed importance). Third, students’ perceptions of relevance may follow from the task demands that are defined in relation to the study text (task-based or instructional importance). These three criteria do not necessarily converge. For instance, students may assign high importance to a text unit that received a lot of attention in the classroom and for which they expect at least some questions in an upcoming test; this unit, however, may occupy a subordinate position in the text. Students may apply the three criteria simultaneously, but when attuning studying to content demands, they especially have to take care that they emphasize information that they perceive as task-relevant (i.e., instructionally important).

Selective attention is not an all-or-none phenomenon (Reynolds, 1992, p. 386). Instead, it should be considered as a dimension varying from hyperselective processing (e.g., searching out definitions in a text that are printed in italics; e.g., see Dreher & Guthrie, 1990) to “nonselective” processing (e.g., simple beginning-to-end reading and rereading; see Van Etten et al., 1997). On this dimension, “nonselective processing” still requires that learners allocate their attention selectively to some extent, in order to obtain a meaningful and structured representation of the learning content (Mayer, 1987). Subsequently, more selective processing is needed when time pressure increases and the amount of information become too large to be mastered in the available time (Rohwer, 1984). Although selective attention in reading has received most attention from research, selective attention may also pertain to
other activities involved in studying, such as students' note-taking during lectures (Van Meter, Yokoi & Pressley, 1994).

2.2.2 **Task-appropriate processing**

Task-appropriate processing means that students process the information selected for studying in such ways that they are able to produce this information in desired forms when carrying out a performance task (cf. Anderson & Armbuster, 1984; Morris, Bransford & Franks, 1977; Pressley et al., 1997). For instance, when memory of verbatim information is required, students may rehearse information or use keyword methods. In contrast, when integration or deep comprehension of the reading materials is required, students may self-generate questions or deliberately relate the learning materials to prior knowledge (see Hadwin, Winne, Stockley, Nesbit, & Woszczyka, 2001). Task-appropriate processing also applies to other study activities than reading. Concerning students' note-taking, for instance, students may attempt to take verbatim notes when verbatim recall is required in a test. In contrast, if the test stresses understanding, students may paraphrase as they take notes (see Van Meter et al., 1994). The opposite of task-appropriate processing is uniform processing: the student uses the same processing strategies, regardless of changing task demands (see Thomas & Rohwer, 1987).

To classify processing strategies, Thomas and Rohwer (1986) distinguished between duplicative processing, which is aimed at reproducing information in the same form as it was encoded, and generative processing, which is aimed at transforming, reorganizing or elaborating information for the use of personal understanding or to apply the information in new contexts. Similar distinctions have been made by other researchers (see Carrier & Fautsch-Partridge, 1981; Elshout-Mohr et al., 1999): e.g., surface versus deep learning approaches (Marton & Säljö, 1976); rote versus meaningful learning (Ausubel, 1963); and memory versus comprehension learning (Doyle, 1983). According to Doyle (1983), these distinctions should be considered as a continuum. For instance, paraphrasing text or recognizing text in paraphrased form to some degree involves transformation of information, but does not involve the production of new ideas. Therefore, it can be considered as lying somewhere between reproductive and generative processing.

2.3 **Factors influencing effective attuning to task demands**

Effective attuning to task demands depends on various skills associated with analyzing tasks, allocating differential attention to content elements and carrying out specific processing activities in effective ways. In addition, students should be able to self-regulate these activities. For instance, students have to determine their test preparedness, take into account whether study time is still sufficient, and encourage themselves to stay on the task. A common element of the activities associated with attuning to task demands is that their effectiveness or efficiency is related to the degree to which students have a clear perception of the task demands (cf. Brookhart, 1997; Maki, 1998; Winne & Hadwin, 1998).
“Clear perception of task demands” denotes several qualities (cf. Butler, 1998b), including the degree in which perceived demands correspond with the actual demands (accuracy), the level of certainty that students experience regarding this correspondence, and the comprehensiveness of the perception (i.e., the degree of coverage and the level of detail).

A clear perception of task demands is dependent on both the information that is provided about the task demands and the way students make use of this information to develop a perception of the demands. The task environment provides “cues” that enable the learner to predict what the performance task (i.e., the test) will be like (Balzer, Doherty, & O’Connor, 1989; cited in Butler & Winne, 1995). The number and predictive value of such cues may vary considerably between study episodes. Furthermore, cues can be presented in a more or less direct way. A direct or explicit way of giving cues, for instance, is stating objectives before a study task (see Lundeberg & Fox, 1991). A more indirect or implicit way of providing cues is to insert practice questions in a study text that students are to read in preparation for a test. When students succeed in discerning the implicit cues, such adjunct questions may create expectations about the content, format and cognitive level of questions included in the test (see Hamaker, 1986; Reynolds, 1992). Students’ ability to discern and interpret cues depends in part on the knowledge and beliefs that they developed in previous tasks. This metacognitive task knowledge “filters” students’ use of task cues (cf. Doyle, 1992; Green & Weade, 1987; Nist & Simpson, 2000; Winne & Hadwin, 1998). Like other kinds of metacognitive knowledge, task knowledge can be more or less specific to a domain (Butler, 1998a). As examples of general task knowledge, students develop general beliefs about the nature of knowledge and learning (Schommer, 1994) or about typical tests that are given in academic contexts. Similarly, students may develop beliefs about the necessity to attend to both explicit and implicit task cues (see Butler, 1998a). More specific task conceptions may include students’ knowledge about the tests that a particular teacher usually gives or knowledge about ways in which this teacher tends to provide implicit cues (cf. Tittle, 1994, p. 142).

Based on their task knowledge and task cues provided during a study episode, students actively construct a perception of the demands of a study task. This perception can be considered as a mental representation that develops during the study process and may be more or less activated during that process (see Winne & Hadwin, 1998). Attuning to task demands results from complex interactions between the task environment and the learner. Hence, it is evident that, for a particular study task, differences exist between learners with regard to the degree to which their perceptions and strategies are attuned to task demands (cf. Winne & Hadwin, 1998).

\[Note that the format of test questions does not necessarily define the cognitive level (i.e., the required processing activities) of these questions. For instance, a multiple choice question may demand integration of information whereas a recall question may require reproduction of information (see Crooks, 1988, p. 448; Lundeberg & Fox, 1991, p. 102). Nonetheless, in particular contexts, students’ knowledge about the format of test questions may help them to predict the cognitive level of test questions.\]
2.4 Evaluating the role of task demands

Clear information about task demands can be crucial for students to increase the effectivity and efficiency of their learning performance (Anderson & Armbruster, 1984). As Ramsden (1992) notes, “students sometimes waste valuable time trying to discover the implicit criteria” (p. 128). Apart from the cognitive consequences, the clarity of task demands has affective consequences. In a study by Duckworth, Fielding, & Shaughnessy (1986; cited in Thomas & Rohwer, 1993a) the clarity of task demands as reported by students was positively related to their ratings of effort as well as their rated feelings of self-efficacy in a course. Similarly, a study by Wong, Wong, and Le Mare (1982) showed that an unclear perception of task demands may cause students to experience emotional distress. The importance of clear task demands is closely connected with the role that is assigned to task demands in academic contexts.

Some researchers have associated attuning to task demands with external motivation and a cynical, test-oriented way of learning (see Entwistle & Entwistle, 1991, p. 208). Moreover, these researchers have de-emphasized the importance of task demands because task demands would impede self-regulated and independent learning and would lead to surface oriented learning strategies. In the following paragraphs, we will refute such claims. Moreover, we will argue that task demands may fulfill positive influences in learning and instruction.

In educational contexts, students have to meet external goals in order to obtain good grades (Doyle, 1992; Nolen & Haladyna, 1990; Winne & Hadwin, 1998; Pressley et al., 1997). This does not imply that the regulation of their learning and the underlying motivation is entirely external. First, although demands that teachers set may vary widely according to their comprehensiveness, “students always have latitude to select goals, both within the confines of an assigned task and orthogonally to that task” (Butler & Winne, 1995, p. 256). Second, external and personal learning goals can coincide when students internalize external learning goals. This is, for instance, the case when students personally experience a topic as interesting or relevant because the teacher has talked enthusiastically about it (Hodgson, 1997; Schraw, Flowerday, & Lehman, 2001). According to Butler and Winne’s model of self-regulated learning (Butler & Winne, 1995), the internalization of external goals, to a certain extent, is necessary when academic learning is to take place deliberately and effectively (see also De Corte, 1996). The acceptance and adoption of external goals is dependent on a clear perception of these goals (see also Winne & Hadwin, 1998, p. 283).

In particular school contexts, attuning to task demands indeed will exclusively lead to reproductive ways of learning. But the primary cause for such learning is the nature of these contexts and the reproductive demands they impose upon the students. To encourage more generative study strategies, these contexts should be changed in a way that students are rewarded for using such strategies (Van Hout-Wolters, 1992). In ideal instructional contexts, students develop an arsenal of study strategies that they can employ in a wide range of situations. Furthermore, they learn how to select or construct strategies in the face of new task situations. Such a flexible task approach is important not only for academic learning, but also for perform-

From the perspective of teachers, setting task demands is an important instrument to guide students’ learning and enable the classroom to pursue learning goals in a collaborative fashion. Moreover, defining task demands will help teachers to make decisions regarding teaching contents and instructional methods. As is acknowledged in teacher planning research, the definition of task demands is not only dependent on teacher characteristics (e.g., their knowledge, beliefs and teaching style), but also on their instructional context. Contextual influences, for instance, involve the role of departments, state curriculum requirements or interactions between teachers and students (Calderhead, 1996; Clark & Peterson, 1986; Shavelson & Stern, 1981; Stark, 2000). Nevertheless, the final responsibility that teachers have in formulating classroom task and test demands gives them a dominant influence on how these demands are defined. This teacher role is part of the inherent structures of classroom learning (cf. Doyle, 1992; Gehrke, Knapp, & Sirotnik, 1992; Nolen & Haladyna, 1990; Winne & Hadwin, 1998).

2.5 Task demands and test demands in classroom contexts

Because the demands of a task are formulated in relation to each other, they constitute a value system, whereby each demand has a relative importance (cf. Alexander & Jetton, 1996, p. 95; McConkie, 1977, p. 21). For instance, students get an assignment to read topics A-F; however, the teacher indicates that it is more important to know about topic A than topic C, etc. Similarly, a teacher may require both a precise definition and an example of a concept but may consider the ability to give an example as more important.

The relative importance of classroom demands is often weighted according to their significance in the testing and grading system (Doyle, 1983, p. 182). When students prepare for a test this fact is evident. Students will interpret the importance of a task demand as the probability that the demand is tested and/or the expected weight that the demand has when being tested. Students’ perceptions of task demands, then, coincide with their expectations of upcoming test demands. Teachers know this and choose to present task demands to their students as those topics and processing capabilities that are likely to be asked or stressed in the test.

The dominant influence of anticipated test demands on the perceived relevance of task demands follows from the principle that students tend to take seriously only those demands for which they are held accountable. Grades provide this accountability because they represent the academic success that the students try to achieve. Because the teacher generally is responsible for making (or choosing) and evaluating the test, students often see the teacher as mediator for reaching high grades. Consequently, students attune their learning to those topics and processing capabilities that their teacher considers important (cf. Alexander & Jetton, 1996, p. 95; Doyle, 1983, p. 185-186; Nolen & Haladyna, 1990, p. 118; Ramsden, 1992, p. 63-64; Thomas & Rohwer, 1993a, p. 17).
Although the *task demands* (the learning goals that students have to pursue) and the *test demands* (what is actually tested and how it is tested) may be closely related, we want to stress the difference between these two concepts in the context of study-test episodes. The test demands will at best represent a sample of the task demands. That is, the test usually cannot cover all information that students are required to learn. Moreover, when questions demand application of information, the test cannot include all possible application questions. The difference between task demands and test demands becomes even more apparent when test demands are inconsistent with the task demands. This is, for instance, the case when the test includes unimportant topics while excluding important topics or when the test stresses reproduction whereas students were led to expect generative test questions. As suggested by several authors, such discrepancies may be quite common in classrooms (Airasian, 1996; Canady & Hotchkiss, 1989; Thomas & Rohwer, 1986). These authors have argued that, in order to obtain valid test scores, teachers’ tests should consist of a representative sample of their task demands. Moreover, to this end, teachers have to communicate the task demands to their students in effective ways (cf. Dochy & Moerkerke, 1997, p. 420).

### 2.6 Communicating task demands

When communicating task demands to their students, teachers face a dilemma. To keep up the accountability of task demands, teachers will tend to provide not too specific information about test questions (Thomas & Rohwer, 1993a). On the other hand, they will have to give information that is specific enough when they want to convey their emphasis on some parts of the learning content over other parts, or to stress some types of processing over other types of processing. Thomas and Rohwer suggest that teachers vary in their willingness to convey test-related task information to their students, with some teachers even purposely misleading their students to “surprise” them and “keep them on their toes” (p. 20).

Also for students, the distinction between task and test demands may be problematic. Since they generally do not know the test questions in advance, they are dependent on the task information that their teacher gives. However, information that a teacher provides about task demands may be incomplete, unclear and even misleading (see Canady & Hotchkiss, 1989; Thomas & Rohwer, 1993a). In addition to explicit information given by the teacher, students may use at least four alternative sources (cf. Alexander & Jetton, 1996; Doyle, 1983; Schraw, Wade & Kardash, 1993; Van Etten et al., 1997). First, they can use implicit task information that the teacher provides. For instance, when teachers ask many verbatim oral questions during teacher-led classroom discussions, the student may infer that such questions will be important on the test as well. Second, students can rely on the learning materials. A topic that is accompanied by a relatively large number of practice questions in the chapter text will probably receive more attention in the end test. Third, students can rely on their experiences with previous tasks, in particular their experiences with the tests that the particular teacher has given. Fourth, students can obtain task information indirectly from peers. By using these four alternative sources, the students may
compensate or complement teachers' explicit information about the task demands. However, students should take into account that the alternative sources can be incomplete or misleading as well.

The possibility that students successfully compensate for differences between teachers' intended task demands and the actual test demands, implies that we cannot equate the task demands with teachers' intended task demands. For instance, when the test is restricted to reproduction questions and the large majority of students have expectations that are congruent with this test, it makes sense to describe the task demands in this class as reproductive, even when the teacher has intended to define higher order processing demands (cf. Crooks, 1988, Ramsden, 1988; Doyle, 1983).

To determine whether students have a clear perception of task demands, we have to take into account at least three variables: students' perceptions of task demands (i.e., their test expectations), teachers' intended task demands and the actual test demands. Figure 1 depicts these three variables as a triangle (cf. Rijlaarsdam & Janssen, 1996). In ideal instructional contexts, the three variables will be perfectly aligned. As follows from our theoretical description, however, discrepancies among the three variables can be expected in classroom practice, at least to some degree.

Figure 1. Three crucial variables to determine whether students, who prepare for a test, have a clear perception of task demands

3 FINDINGS OF PREVIOUS RESEARCH

In this section, we discuss several studies that provide answers to the question to what degree students who prepare for a test have a clear perception of task demands. First, we describe experimental studies, mostly carried out in laboratory contexts. Subsequently, we discuss descriptive studies, generally carried out in classroom settings. The experimental studies and the first part of the descriptive studies that we discuss, have examined students' ability to attune study strategies (i.e., study activities or study approaches) to task demands. These studies indirectly provide answers to our question, assuming that successful attuning to task demands requires a clear
perception of task demands. Finally, we discuss descriptive studies that have directly examined students' perceptions of content demands and processing demands, respectively.

The literature that is included in the review is has been accumulated in the course of the dissertation project. The representativeness of our review is supported by describing outcomes of previous reviews of the empirical literature. In the cases for which such reviews could not be found, we provide short descriptions of single studies.

3.1 Experimental research

There is a long tradition of experimental research that examines the effect of expected test demands on learning performance (e.g., Meyer, 1936; Feldt, 1990). Findings of these studies have been summarized by several review studies (R.C. Anderson & Biddle, 1975; Anderson & Armbruster, 1984; Crooks, 1988; Fredrickson, 1984; McConkie, 1977; Reynolds, 1992) some of them using meta-analysis as an aggregation method (Hamaker, 1986; Lundeberg & Fox, 1991). According to the basic design of the experimental studies, specific information or specific types of processing are made important by task manipulations, mostly by adding questions to the study text and/or by stating study objectives or test characteristics at the beginning of the study task. Consequently, the study task is followed by a test that determines the learning performance, both regarding “targeted” and “non-targeted” contents and processing demands. Some of the experiments that manipulated content demands used process measures, such as reading times, to determine students’ allocation of attention and conducted retrospective interviews to determine students’ perception of task demands (e.g., Reynolds, 1992). Similarly, some experiments that manipulated processing demands, have conducted retrospective interviews to determine students’ processing strategies (Hakstian, 1971; Feldt, 1990) or perceptions of task demands (Marton & Säljö, 1976).

In general, the studies indicate that students of various ages and academic ability are to some degree capable to attune study activities to task demands. Concerning content demands, students are more likely to learn targeted information than non-targeted information (e.g., see Hamaker, 1986; Reynolds, 1992). Concerning processing demands, findings are more heterogeneous but tend to show that students perform better in the type or format of test that they were led to expect (e.g., see Hamaker, 1986; Lundeberg & Fox, 1991). Retrospective interviews indicate that students' ability to attune to task demands is closely related to their perception of those demands. This is the case for content demands (see Reynolds, 1992) as well as for processing demands (Marton & Säljö, 1976).

The experimental studies that we discuss here have not always been described in terms of test expectations. For instance, many researchers departing from the adjunct questions paradigm, were foremost interested in the effect of inserted questions as an adjunct study aid (see Hamaker, 1986). Nonetheless, effects of adjunct questions have been explained by the test expectations that student developed in response to these questions (see Hamaker, 1986, p. 215; Marton & Säljö, 1976, p. 116). Similarly, the effects of study objectives, can be explained by the “test expectancy effect” (see Lundeberg & Fox, 1991, p. 94).
3.2 Descriptive research

3.2.1 Students' beliefs about studying

To examine how students are able to deal with the varying study demands of courses, Pressley and associates interviewed college students about the way they generally studied in preparation for tests (Van Etten et al., 1997) and took notes during lectures (Van Meter et al., 1994). The inventory of study goals and study strategies that resulted from these interviews indicates that students (a) focus on content and processing demands that are likely to be tested in order to achieve the primary goal of getting a good grade, (b) actively seek cues about these demands, and (c) select from a large repertory of strategies to attune their studying to task demands.

Pressley et al. did not pursue the matter of individual differences. However, in an interview study by Miller and Parlett (1974) a distinction was made between three types among the 30 university students that were examined: (a) cue seekers: 5 students who actively sought cues about upcoming test demands, (b) cue conscious: 11 students who used cues when provided but did not actively seek cues, and (c) cue deaf: 14 students who were not aware of the possibility to attune studying to upcoming test demands. Although the sample of students was rather small, the findings suggest a relationship between cue seeking behavior and test performance with cue seekers obtaining the highest marks.

Pressley and associates and Miller and Parlett examined students' beliefs about attuning study strategies to the study environment. In the following section, we will discuss studies that have examined whether students' self-reported strategies indeed vary when examined across contexts.

3.3 Students' self-reported use of study strategies examined across contexts

Several studies have examined the relationship between study strategies and relatively gross contextual characteristics. These studies mostly involved questionnaires administered to a large number of university students to determine their typical ways of studying in different contexts (see Thomas et al., 1991, p. 281). Students' self-reports of strategy use have been compared between academic disciplines (Vander-Stoep, Pintrich & Fagerlin, 1996; Lonka & Lindblom-Ylänne, 1996), departments (Ramsden & Entwistle, 1983), grade levels (Thomas & Rohwer, 1987), courses (Vermetten, Lodewijks & Vermunt, 1999; Vermetten et al., 2002; Thomas & Rohwer, 1987; Thomas et al., 1993), teachers with different approaches of teaching (Nolen & Haladyna, 1990; Trigwell, Prosser, & Waterhouse, 1999) and different study tasks within courses (Hadwin et al., 2001). A major finding of these studies is that study approaches are both consistent and variable across contexts (disciplines, departments, grade levels, courses, teachers, tasks) suggesting that students have stylistic preferences but also strategically adapt their studying to contexts (see Vermetten, 1999). Concerning students' consistency in strategy use, students across grade levels and courses report using uniform, reproductive and nonselective study activities most often (cf. Thomas & Rohwer, 1987; Thomas et al., 1993; Vermetten et al., 2002).
In an extensive investigation by Thomas and Rohwer (1987), students' self-reported strategies in social studies courses have been examined in relation to test demands as a separate course characteristic. Between grade levels, a general increase of generative test demands was accompanied by an increase of generative study strategies. However, between courses within grade levels, no significant relations between test demands and study activities could be observed. Moreover, when test performance was included in the analysis, it could not be demonstrated that attuning to test demands yielded a higher test grade. These negative findings were replicated in a follow up study involving university biology courses (Thomas et al., 1993). On the other hand, P. R. Thomas and Bain (1984) did find a relation between reported study activities and test demands. In their study, university students of an introductory psychology course reported using deep level learning activities more often for open questions and surface level learning activities more often for closed questions (multiple choice format). However, whereas Thomas and associates required students to complete questionnaires before the test, P. R. Thomas and Bain (1984) required students to complete questionnaires after taking the test. Taking the test, then, may have influenced students' reports of strategy use.

Thomas and associates have pointed to the fact that effects of course demands are necessarily mediated by students' perceptions (Christopoulos, Rohwer, & Thomas, 1987, p. 322). It is possible, then, that in the classrooms they examined, students' test expectations were not in tune with the test demands. The three studies that examined the relation between study strategies and test demands, however, did not include students' perceptions of these test demands.

Studies that did examine students' study strategies in relation to the perceived study environment, involved perceptions of broad contextual characteristics. For instance, students' study approaches have been examined in relation to the perceived quality of instruction concerning departments (Ramsden & Entwistle, 1983), courses (Lawless & Richardson, 2002; Meyer & Parsons, 1989; Trigwell & Prosser, 1991) or study tasks given within courses (Eley, 1992). The most consistent finding in these studies is that perceptions of a heavy workload are related to a surface approach to studying. Other relations involving perceptions of good teaching, clear study goals, appropriate assessment and emphasis of individual independence have been reported less consistently (see Lizzio, Wilson, & Simons, 2002). Note that appropriate assessment here refers to students' global judgment regarding whether tests measured more than memory for verbatim information. In the following, we discuss studies that have included students' perception of task demands at a more specific level.

3.3.1 Students' perceptions of content demands

Some studies have examined the instructional importance that students and teachers assign to textual topics when a teacher-made test has been set (Alexander, Jetton, Kulikowich, & Woehler, 1994; Jetton & Alexander, 1997; Schellings & Van Hout-Wolters, 1994, 1995; Van Hout-Wolters, 1990a, 1990b/1997). These studies suggest that a limited correspondence exists between teachers, between students, and be-
between teachers and their students with respect to their perception of content demands. However, to what degree this correspondence is limited remains unclear. For instance, whereas the studies by Alexander and her colleagues suggest a reasonably high correspondence between students and their teachers (Alexander & Jetton, 2000, p. 291), the studies by Van Hout-Wolters and colleagues suggest that this correspondence is in fact rather low (Schellings, Van Hout-Wolters, Vermunt, 1996b, p. 371). The conflicting conclusions might follow from methodological differences. For instance, whereas in the studies of Van Hout-Wolters and colleagues, participants selected task-relevant text units by underlining, in the study by Alexander and associates, participants assigned importance by giving ratings to text units or writing questions.

The study by Jetton and Alexander (1997) was a case study that involved three ninth-grade science classes and included an analysis of the teacher-made tests. The test content showed only a limited correspondence with the importance ratings that the individual teachers gave. Interestingly, student ratings in one class did show a reasonable correspondence with the test although their ratings were unrelated with their teachers' ratings. This finding could mean that students compensated for differences between the teacher's intended demands and the test demands by using task cues derived from sources other than the teacher's explicit task information (e.g., previous tests, text materials).

3.3.2 Students' perceptions of processing demands

We are aware of only two studies on test preparation study tasks that included perceptions of specific processing demands (Simpson & Nist, 1997) or course objectives (Smith & Feathers, 1983a) — which can be considered as indicative for task demands. Smith and Feathers (1983a) conducted an interview study in which they compared perceptions of three social studies teachers and their eighth-grade students concerning course objectives, such as good citizenship, higher order thinking skills or factual knowledge. In addition, the tests that teachers gave to their students were analyzed according to the level of processing that was required by the test items. Teachers' objectives showed large discrepancies with their test demands. Whereas according to their reports, teachers demanded higher order thinking, their tests mainly required reproduction of factual information. Such discrepancies have also been found in other studies that included teachers' course objectives and test demands — but not students' perceptions (Ball, Doss, & Dewalt, 1986; Bol & Strage, 1996). Interestingly, Smith and Feathers found that students' perceptions of course objectives did correspond with the test demands instead of with their teachers' objectives. Like in the study of Jetton and Alexander (1997), this could mean that students compensated for discrepancies between the teacher's intended demands and the test demands by using other sources than the teacher's explicit task information.

Simpson and Nist (1997) performed a case study in which they examined university students' perceptions of processing demands pertaining to separate tasks of a social study course. Apart from perceptions of task demands, the researchers examined students' strategies and their beliefs about learning and history. Interviews with
the teacher, lesson observations and analysis of the teacher’s tests showed that the teacher demanded various types of processing from his students, such as “thinking in conceptual terms” or “answering test questions in a precise manner”. However, not all students held perceptions that were congruent with the demands intended by their teacher. The researchers were able to distinguish between 3 types among the 10 students examined: (a) 3 students attuned to their teacher’s task demands from the start, (b) 3 students learned to attune to the teacher’s task demands during the course and (c) 4 students were not attuned to the teacher’s task demands throughout the course. Moreover, the case study suggests an almost perfect correspondence between task perceptions, beliefs, strategies, and test performance, with the group that was not attuned obtaining the lowest grades. The distinction between three types of students is reminiscent of the typology of Miller and Parlett (1974). However, Miller and Parlett (1974) based their typology on the students’ self-reported use of task cues, Simpson and Nist (1997) on students’ actual perceptions of task demands.

3.4 Summary of the research findings

The experimental research shows that students of various ages and academic ability, in principle, are capable of attuning their studying to task demands and to perceive task demands in an accurate way, at least to some degree (e.g., see Hamaker, 1986; Reynolds, 1992). By showing that demands considerably vary across courses/teachers (e.g. Thomas & Rohwer, 1987; Thomas et al., 1993; Jetton & Alexander, 1997), the descriptive classroom research underlines the necessity for students to attune to task demands. Moreover, many students acknowledge the importance of clear task demands and the need to attune their learning to these demands (e.g., Van Etten et al., 1997). On the other hand, students report especially using, uniform, nonselective and reproductive strategies (e.g., Thomas & Rohwer, 1987; Thomas et al., 1993). Moreover, although self-reported strategies do vary between contexts, they often do not match with the demands of courses (e.g., Thomas & Rohwer, 1987; Thomas et al., 1993). A possible explanation for the discrepancies between self-reported strategies and task demands is that there is no one-to-one correspondence between students’ perception of task demands and the task demands as intended by the teacher (e.g., Schellings & Van Hout-Wolters, 1995; Simpson & Nist, 1997). This explanation, however, should be qualified by the finding that some students have a more accurate perception of the teacher’s intended task demands than other students have (e.g., Schellings & Van Hout-Wolters, 1995; Simpson & Nist, 1997). Moreover, teachers’ intended task demands may be discrepant with their test demands (e.g., Jetton & Alexander, 1997; Smith & Feathers, 1983a). Finally, students’ perceptions of task demands may show compensations for these discrepancies between teachers’ intended task demands and actual test demands (e.g., Jetton & Alexander, 1997; Smith & Feathers, 1983a).
LIMITATIONS OF THE PREVIOUS RESEARCH

The conclusions derived from the previous research should be considered in relation to the methodological limitations of this research in answering our research question: Do students who prepare for a classroom test have a clear perception of task demands? We discuss limitations concerning (a) the role of context and student perceptions, (b) the grain size of measurement and data-analysis, and (c) qualitative versus quantitative approaches.

4.1 The role of context and student perceptions

Traditionally, research on students' attuning to task demands has involved experimental designs and often laboratory settings (see Lundeberg & Fox, 1991; Crooks, 1988). The context of the experimental research, whether conducted in laboratories or classrooms, generally differed from realistic classroom settings in at least four ways (cf. Alvermann & Moore, 1991; Crooks, 1988; Lundeberg & Fox, 1991; Nist, Simpson, & Olejnik, 1995; Thomas & Rohwer, 1986; Wade & Moje, 2000). First, because studying was not embedded in the regular curriculum it was not accompanied by other activities such as following lectures or doing exercises. Second, task demands were defined by the experimenter and not by the teacher. Third, the experimentally manipulated task demands were typically more clearly defined than task demands in realistic classroom contexts, where criteria of studying can be "shrouded in secrecy" (Thomas & Rohwer, 1986, p. 21). Fourth, demands in the experiments were mostly of one type or format (e.g., only lower order multiple choice items), whereas classroom tests often combine different types of questions and formats.

Given these differences, we cannot assume that the findings from the experimental studies can be applied in classroom contexts. Certainly, the experiments show that students of various ages are able to develop a clear perception of task demands. However, the question of whether students are generally able to do so in realistic classroom contexts should be answered by descriptive classroom research.

In the last two decades, the experimental studies on studying have made room for an increasing number of studies that build "a base of descriptive data" on studying in classroom contexts (Thomas et al., 1993b, p. 243; cf. Rohwer, 1984, p. 110). This trend is part of a broader movement in educational psychology that stresses the situated character of learning (see Doyle, 1992; Anderman & Anderman, 2000; Doyle, 1992; Shuell, 1996). Along with the attention to realistic classroom contexts, the research on learning and instruction has become more focused on how students experience these classroom environments. Moreover, researchers have showed increasing interest in how student perceptions mediate the effects of instruction (Doyle, 1992; Anderman & Anderman, 2000; Luyten, Lowyck, & Tuerlinckx, 2001). This interest in student perceptions has been stimulated by research approaches such as constructivism (Shuell, 1988), fenomenography (Marton & Säljö, 1976) and the cognitive mediational paradigm (Doyle, 1983; Winne & Marx, 1977).

Although all the descriptive studies that we mention were performed in classrooms, some were not conducted under fully realistic conditions. Despite the fact
that research on instructional importance involved real classes of teachers and stu-
dents, only Jetton and Alexander (1997) examined a study task that was part of the
regular curriculum.

Studies on academic studying that have examined the relation between the per-
ceived or the actual study environment often involved broad contextual characteris-
tics, such as the quality of teaching in departments (e.g., Ramsden & Entwistle,
1983) or courses (e.g., Trigwell & Prosser, 1991). Moreover, in some of these studi-
es, perceptions had an evaluative nature and concerned students’ appreciation of the
study environment (e.g., Entwistle & Tait, 1990; Nuy, 1991; Vermetten, Lodewijks,
& Vermunt, 1997). Relatively few descriptive classroom studies have focused on
task demands as a separate contextual characteristic and examined students’ non-
evaluative perceptions of these demands. The focus on broad versus specific contex-
tual characteristics pertains to the issue of grain size.

4.2 The grain size of measurement and data-analysis

Grain size refers to the scale level of measurements and the aggregation of meas-
urements when analyzing data (cf. Anderman & Anderman, 2000; Winne & Perry,
2000). Measurements of cognitive products or processes, for instance, may pertain
to a single event within a study task (e.g., the student attends to the teachers who
says that a certain topic is important and is likely to be tested), various events of a
study task (e.g., students’ perception of task demands that is acquired during a study
episode), a range of similar study tasks within a certain type of context (e.g., the
knowledge about the type of tests a teacher usually gives) or a range of study tasks
across different contexts (e.g., the perceived frequency of strategies that one usually
undertakes in studying). Measurements may be aggregated within individual (e.g., a
student is characterized by the strategies that he most consistently uses during sev-
eral study tasks) or across individuals (e.g., the average importance that students
within a class assign to a particular topic).

The experimental studies described in our review, usually involved single study
tasks. The descriptive studies, on the other hand, have focused mostly on a general
description of a range of study tasks. At the most global task level, Pressley and as-
soociates (Van Etten et al., 1997; Van Meter et al., 1994) have examined students’
perceptions of typical study tasks in university. More specifically, Smith and
Feathers (1983a), for instance, have focused on teachers’ and students’ perceptions
regarding the objectives of a single course, comprising several study tasks. The grain
size of the studies on instructional importance appears to be more specific in the
sense that students and their teacher rated the importance of text units of a single
text. However, in most of these studies, participants were asked to assign importance
to text units in the context of a regular classroom test by this teacher – which in the
end was not given to the students. This instruction meant that participants had to
think of the regularities among a range of study tasks given by the particular teacher.
An exception is the study of Jetton and Alexander, in which the study task was fol-
lowed by a real classroom test. By assigning importance to text units, students ex-
pressed their expectations regarding this specific test. Considering the descriptive
studies that examined processing demands, only Simpson and Nist (1997) focused at the level of single study tasks – this enabled them to show variation in students' perceptions across tasks within a course.

Concerning the aggregation of measurements, some studies have focused their analyses on aggregated data pertaining to classrooms (e.g., Jetton & Alexander, 1997; Thomas & Rohwer, 1987), grade levels (Thomas & Rohwer, 1987) or departments (Ramsden & Entwistle, 1983). Findings obtained in these studies cannot be directly generalized to the individual level. For instance, relationships between study approaches and perceived context characteristics have been reported more consistently at the aggregated level (courses and departments) than at the individual level (e.g., cf. Meyer & Parsons, 1989, and Ramsden & Entwistle, 1983; see Entwistle, 1989). Similarly, the studies of Alexander and associates (e.g., Jetton & Alexander, 1997) generally found a reasonably high correlation between classes and their teachers regarding importance judgments of text elements. Schellings and colleagues (e.g., Schellings & Van Hout-Wolters, 1995), on the contrary, examined importance assignment at the individual level and generally found large discrepancies between students and their own teacher.

The appropriate level of grain size depends on the research question. To examine the degree in which individual students' strategies and perceptions are attuned to task demands, measurements at the level of single study tasks are most suited. Furthermore, these measurements preferably are aggregated across students of different classes without losing information about the variation between and within classes (cf. Ryan, 2000). A sound quantitative method to aggregate data at various hierarchical levels, with accurate estimation of the variation at these levels, requires multilevel modeling techniques (see Bryk & Raudenbush, 1992; Goldstein, 1996). Only one of the quantitative studies we reviewed included such techniques (Thomas et al., 1993). Still, in this study, the techniques served the purpose of analyzing higher order interactions between study activities, course demands, students' characteristics and performance. Regarding the correspondence between study activities and demands, the authors did not report the variation among courses and students within these courses.

4.3 Qualitative versus quantitative approaches

Whereas, in our review, practically all experimental studies employed a quantitative approach (for an exception, see Marton & Säljö, 1976), a large part of the descriptive classroom studies took a qualitative approach. For instance, in the interview studies of Pressley and associates (Van Etten et al., 1997; Van Meter et al., 1994) and in the case studies of Smith and Feathers (1983a) and Simpson and Nist (1997) no quantitative data are reported. In contrast, Thomas and associates (Thomas & Rohwer, 1987; Thomas et al., 1993) report findings exclusively in a quantitative way. Some studies have chosen a mixed approach and reported quantitative and qualitative data. For instance, Jetton and Alexander (1997) performed case studies with three classes and presented correlations to indicate the correspondence between importance judgments of classes and teachers. For other relationships, such as the
correspondence between teachers’ communication of task demands and teachers’ background knowledge they provide qualitative descriptions.

An important contribution of the qualitative studies is that they demonstrated that discrepancies exist between teachers’ intended task demands, students’ test expectations and the test demands. Furthermore, these studies have revealed that students may compensate for differences between teachers’ intended task demands and actual test demands (Jetton & Alexander, 1997; Smith & Feathers, 1983a). A major limitation of these studies, however, concerns the sample size. As most of the qualitative studies are case studies involving only one or a few classes, we cannot assume that findings are representative for other classes (cf. Wineburg, 1996, p. 432). To examine the generalizability of these findings, quantitative studies seem more suitable. However, as appears from the preceding evaluation, previous quantitative studies have other limitations that prevent them from indicating the degree to which individual students generally have a clear perception of classroom task demands. For this reason, we conducted a new empirical investigation.

**5 OVERVIEW OF THE PRESENT EMPIRICAL INVESTIGATION**

Our theoretical review indicated that students’ perception of task demands may play a central role in study-test episodes, but that a clear perception of task demands is not a matter of course. Our empirical review of previous research confirmed this latter conclusion by showing that there is no one-to-one correspondence between students’ perception of task demands, teachers’ intended task demands and the test demands. However, to what degree discrepancies generally appear remained unclear. For this reason, we conducted a new empirical investigation, consisting of four related studies.

In setting up our investigation we connected closely with previous research on instructional importance (e.g., Jetton & Alexander, 1997; Schillings & Van Hout-Wolters, 1995). As is shown by the foregoing review, instructional importance research fulfills a pioneering role in systematically comparing perceptions pertaining to the demands of specific classroom study tasks.

We attempted to obviate some of the limitations of previous research. First, we examined classroom contexts in which the study text and a teacher-made test were integral parts of the regular curriculum. Second, we examined students’ perception of task demand in relation to their teachers’ perceptions as well as to the teacher-made test. Third, we extended the previous studies by examining both content and processing demands. Fourth, we used multilevel techniques that allowed us to analyze the correspondence between individual participants in their perceptions of task demands, as well as the variance of this correspondence at different hierarchical levels.

**5.1 General goals**

Underlying the studies are three general goals. First, we attempted to build on a theoretical framework that describes the role of task demands in study-test episodes. This
framework eventually should be helpful in shaping the role of task demands in a way that increases the effectiveness, efficiency and pleasure of studying in these episodes. Second, we wanted to contribute to the base of descriptive data about studying in relation to contextual influences (cf. Thomas & Rohwer, 1993b, p. 241). Third, we tried to develop quantitative instruments by which such data can be pursued. These goals, in various degrees, were addressed by reviewing the extant literature. In the present investigation, we pursued these goals further.

5.2 Research questions

The main question of our investigation is: *Do students who prepare for a classroom test have a clear perception of task demands?* A clear or accurate perception of task demands is operationalized as a fair correspondence between students' test expectations and the actual task demands. In describing our research findings, we will use the more general term “clear” and the more specific term “accurate” interchangeably.

To answer our main question we examined five related questions. Below, explanations are given that anticipate possible answers to these research questions.

1. **To what degree do teachers, who give a teacher-made test about the same learning materials, vary in their intended task demands regarding students’ test preparation?**

Differences between teachers — with respect not only to their knowledge, skills and teaching styles, but also to their instructional context — may result in differences in teachers’ intended task demands, even when their teaching and testing pertain to the same learning materials. Larger differences among teachers seem to increase the necessity for students to attune to their own teacher.

2. **To what degree do teacher-made tests correspond with teachers’ intended task demands?**

Teachers may test a more or less sharp selection of their task demands. Moreover, test demands may be discrepant with teachers’ intended task demands. Highly selective tests or tests that show serious discrepancies with teachers’ task demands may stress the need for students to complement or replace explicit task information that teachers provide with other sources (e.g., previous tests) to obtain realistic expectations of the test demands.

3. **To what degree do individual students’ test expectations correspond with their teachers’ intended task demands?**

When students’ test expectations, on average, show little correspondence with their teachers’ intended task demands this suggests that students generally have an unclear perception of these task demands. However, given that students use task information in different ways, students will differ in their perceptions, with some students possibly having a more accurate perception of their teachers’ intended task demands than other students. Moreover, classes may differ regarding the average
correspondence that individual students show with their teachers' intended task demands, suggesting that task information is clearer in one class than in another class. Finally, we should take into account the possibility that teachers' intended task demands may differ from the test demands (see question 2).

4. To what degree do students' test expectations correspond with the actual test demands?
Given that students may compensate for differences between their teachers' intended task demands and the actual test demands, students' test expectations may show better alignment with the test demands than with their teachers' intended task demands. However, such compensation is only possible when students anticipate differences between teachers' intended task demands and the test demands and dispose of valid sources of task information that enable them to complement or substitute teachers' explicit information about task demands.

5. Is a closer correspondence between individual students' test expectations and the teachers' intended task demands related to a higher test performance?
When the degree of correspondence of individual students' test expectations with teachers' intended task demands is positively related with test performance, this suggests that, at least for some students, the teacher's intended task demands were sufficiently clear to help them obtaining a higher grade. Nevertheless, we should also take into account a possible non-causal relation between test expectations and test performance.

5.3 Relation between the studies
The four studies each provide a different perspective on the empirical data we have collected from one sample of teachers and students. At the heart of the four studies are three variables that are crucial in determining whether students have a clear perception of task demands: students' test expectations, teachers' intended task demands and the actual test demands (see Figure 1). In addition, we examined students' test performance (i.e., test grades). The four studies differ with regard to their inclusion of the four variables. Moreover, whereas the first three studies focus on content demands (i.e., the importance of textual topics), the fourth study focuses on processing demands (i.e., the importance of various test types).

In study 1, we examined the relations among teachers' intended content demands and students' expectations of content demands. This allowed us to determine both the variation between teachers regarding their intended task demands (Question 1) and the degree to which students' test expectations correspond with their teachers' intended task demands (Question 3). We examined the average degree of this correspondence as well as the differences between students and between classes regarding this correspondence.
In study 2, we included test performance as an additional variable to examine whether a relatively close correspondence of individual students’ test expectations with the teacher’s intended content demands was associated with a higher test grade (Question 5).

In study 3, we compared students’ expectations of content demands, teachers’ intended content demands and the actual content demands of the test. This comparison allowed us to determine possible differences between teachers’ task demands and the test demands (Question 2) and possible compensations for these differences by the student (Question 4).

In study 4, we examined the relations among teachers’ intended processing demands, students’ test expectations of processing demands and the processing demands required by the actual test items. These comparisons allowed us to directly examine research questions 1–4, now with regard to processing demands. As appears from the findings of this study, Question 5 could not be examined in a meaningful way.